Do Banks Charge a Moral Premium? International Evidence from Syndicated Loan Contracts of Sin Firms

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Abstract

We examine whether sin firms, those operating in the alcohol, tobacco, and gambling industries, face differential financing conditions in the loan market and, if so, whether societal norms shape banks' pricing decisions. Using a global sample of syndicated loans, we combine detailed borrower- and loan-level data with two measures of social norms: a survey-based moral-values indicator and a multidimensional proxy derived from principal component analysis of moral values, consumption patterns, health burdens, and religious composition. We find that sin firms do not pay higher loan spreads when borrowing from banks headquartered in norm-neutral environments. However, banks headquartered in countries with stricter societal norms charge sin firms significantly higher spreads. This effect is not driven by information asymmetry or borrower risk but reflects a normative surcharge associated with lending to stigmatised industries. Our results provide the first evidence on the price of sin in the bank loan market and highlight the importance of cultural forces in shaping global credit conditions.

Keywords: Sin Firms, Debt, Banks, Social Norms, Loan Pricing

JEL classification: G21, G32, Z12, G15

1. Introduction

Classical asset-pricing models assume that investors are driven solely by risk and return. Yet research in economics and moral philosophy has long recognised that social norms shape individual decision-making. Smith (1759) highlighted the role of moral sentiments in guiding human behaviour, while Becker (1957) and Akerlof (1980) demonstrated that economic agents need not act purely on profit motives. Despite these early insights, sociological and financial research remained largely disconnected until the late twentieth century (Fauver & McDonald, 2014). Only in the 2000s did a systematic effort emerge to incorporate cultural and normative factors into finance (Hong & Kacperczyk, 2009; McGuire et al., 2012; Renneboog et al., 2008). This literature establishes two central insights: investors may deviate from strict material self-interest due to social preferences (Fehr & Gächter, 2000), and such deviations can meaningfully reshape economic and financial outcomes (Gächter & Fehr, 1999).

One facet that gained particular interest is the human vice and, therefore, the effect of social norms on immoral companies. These so-called sin stocks are companies involved in the production of tobacco, alcohol, and gambling. The rise of socially responsible investing (SRI), a form of norm-constrained behaviour in financial markets, reinforced academic interest in these industries. Hong and Kacperczyk (2009) show that norm-constrained institutions such as pension funds, endowments, and insurance companies systematically avoid sin stocks. In the equity market, this shunning results in valuation discounts of 15–20% and excess returns of roughly 2.5% per year, consistent with Merton's (1987) theory of neglected stocks. While debate continues over the magnitude and universality of the sin premium (Blitz & Fabozzi, 2017; Sagbakken & Zhang, 2022), most studies confirm its existence, with its strength varying across cultural environments (Chang & Krueger, 2013; Chong et al., 2006; Fabozzi et al., 2008; Fauver & McDonald, 2014; Hamdan et al., 2023; Sovbetov, 2025).

The stigma attached to sin firms in equity markets suggests that they may turn toward less transparent financing channels where investors and intermediaries face reduced public scrutiny (Hong & Kacperczyk, 2009). Consistent with this idea, the authors show that sin firms exhibit leverage ratios approximately 20% higher than otherwise comparable firms. Without explicitly examining the underlying financing channels, Fabozzi et al. (2019) similarly find that sin-firm bonds are overvalued, leading to lower yields. Syndicated loans, highly opaque private contractual arrangements that are difficult for outsiders to monitor, thus offer a natural setting in which to test whether social norms affect lending behaviour.

Although several studies examine environmental and social considerations in credit markets (Chava, 2014; Goss & Roberts, 2011; Kim et al., 2014), these analyses focus on broad

ESG characteristics and do not isolate societal views toward human vice. Consequently, we still know remarkably little about whether and why sin firms face differential borrowing conditions in the sizeable and globally important syndicated loan market.

This study addresses this gap by examining whether sin firms receive different loan terms in international syndicated lending and whether cross-country variation in cultural norms shapes these outcomes. If banks are not norm-constrained, sin firms should receive loan terms comparable to those of non-sin firms. If banks are norm-constrained, sin firms should face higher borrowing costs, even in an opaque market where reputational exposure is limited, because lenders must be compensated with additional returns to be willing to violate their norms.

We focus on the "Triumvirate of Sin", alcohol, tobacco, and gambling, and construct a global sample of syndicated loans funded by banks headquartered in 74 countries over the period 1988 to 2025. After controlling for an extensive set of borrower-, loan-, and country-level characteristics, we find no pricing differences between sin and comparable firms. However, once cross-country variation in social norms is taken into account, restricting the regression sample to banks headquartered in 40 countries reveals a striking pattern. Using two complementary measures of societal aversion, a survey-based moral-values indicator derived from the Integrated Values Survey (IVS) and a multidimensional principal-component index combining moral values from the IVS, sin consumption patterns, health burdens, and dominant religion, we find that sin firms do not face higher spreads when borrowing from banks headquartered in norm-neutral environments. In contrast, banks located in countries with stricter societal norms charge sin firms significantly higher spreads. Using our primary IVS-based measure, sin firms borrowing from norm-conservative banks pay spreads that are 40.68 basis points (bps) higher than comparable firms. Relative to the average loan spread in this subsample of 205.98 bps, this differential corresponds to an approximately 20% increase in financing costs. For the average loan size extended to sin firms (USD 501.81 million), this implies an additional annual interest expense of approximately USD 2.04 million. Additional analyses suggest that these pricing effects are unlikely to reflect heightened credit risk or information asymmetry; rather, they appear to constitute a normative surcharge demanded by banks operating in adverse cultural environments.

This study makes several contributions to the literature on social norms and financial intermediation. First, it provides the first comprehensive analysis of syndicated loan pricing for sin firms, thereby bridging the gap between the well-developed equity-market literature on sin stigma (Chang & Krueger, 2013; Chong et al., 2006; Fabozzi et al., 2008; Fauver & McDonald,

2014; Hamdan et al., 2023; Hong & Kacperczyk, 2009; Sovbetov, 2025) and the broader ESG-focused research on credit markets (Chava, 2014; Goss & Roberts, 2011; Kim et al., 2014). Second, in alignment with the notion that cultural norms at banks' headquarters play a central role in shaping loan contract terms (Pappas & Xu, 2023), and that lender preferences are formed mainly at the parent-bank level and transmitted to foreign affiliates (Ashraf & Arshad, 2017), we show that the "price of sin" in lending markets is not universal but culturally contingent: sin firms face higher borrowing costs only when contracting with banks headquartered in countries characterised by strong normative opposition to sin industries. Third, our evidence supports the long-standing notion, traced back to Smith (1759), that social norms influence economic behaviour, demonstrating that norm-driven preferences can meaningfully affect loan pricing even in opaque, relationship-based lending environments. Finally, our findings contribute to a broader body of work documenting the influence of culture on financial decision-making (Dyck et al., 2019; Guiso et al., 2006), underscoring the importance of accounting for cross-country differences in normative environments rather than assuming homogeneous investor motives across global financial markets.

The remainder of this article is structured as follows. Section 2 outlines the theoretical background and develops our hypotheses. Section 3 describes the empirical models. Section 4 introduces the variable definitions, while Section 5 presents the sample and descriptive statistics. Section 6 presents the empirical results, and Section 7 concludes.

2. Related Literature and Hypotheses

Social norms are "rules and standards that are understood by members of a group, and that guide or constrain social behaviour without the force of law" (Cialdini & Trost, 1998, p. 152). They help individuals coordinate behaviour toward shared goals (Roos et al., 2015), which are embedded in broader cultural structures, defined as "communities of people with uniquely shared communication characteristics, perceptions, values, beliefs, and practices" (Liu et al., 2021). Within such communities, norms shape behaviour by rewarding conformity and punishing deviance through mechanisms such as shame, guilt, or social exclusion (Festre, 2010; Leventis et al., 2013). Sensitivity to others' expectations is a core element of many economic models of behaviour (Akerlof & Kranton, 2000; Andreoni & Bernheim, 2009; Krupka & Weber, 2013), and experiments show that even though individuals often perceive themselves as autonomous decision makers, they frequently conform to normative expectations even in private settings (Perkins, 2002).

Although descriptive norms (beliefs about what people typically do) and injunctive norms (beliefs about what people approve of) are conceptually distinct (Eriksson et al., 2015), they often coincide. For example, people remain quiet during an opera performance both because others do so (descriptive) and because speaking would violate social expectations (injunctive). The mind's tendency to associate commonness with moral correctness (Eriksson et al., 2015) reinforces this alignment. Over time, many such norms become internalised, generating ethical obligations that meaningfully influence behaviour across domains, including environmental conduct, health behaviours, and altruistic actions (Shulman et al., 2017). In extreme cases, norms induce individuals to act contrary to material self-interest (Nosenzo & Görges, 2020) or to override profit motives (Sunder, 2005).

Financial markets are no exception. Investors are likewise shaped by normative considerations (Sovbetov, 2025). The growth of SRI illustrates how normative preferences affect capital allocation. Although SRI policies do not universally require the exclusion of sin stocks, alcohol, tobacco, and gambling account for the largest share of negatively screened assets (Salaber, 2007). Building on this observation, Derwall et al. (2011) develop the "shunned-stock hypothesis," combining Merton's (1987) model of incomplete information with market segmentation literature. They posit two conditions for a sin discount to arise: (i) investor shunning, i.e. their willingness to prioritise moral considerations over profits, and (ii) a sufficiently large pool of value-driven (norm-constrained) investors. The rapid expansion of sustainable investing suggests that these conditions are increasingly satisfied. In the United States alone, professionally managed assets explicitly marketed as ESG, or sustainability-focused investments amount to $6.5 trillion (US SIF, 2025).

Empirical evidence supports this view. Using US data, Hong and Kacperczyk (2009) show that banks, insurance firms, pension funds, and university endowments systematically avoid sin stocks. After controlling for standard risk factors, sin firms trade at 15-20% lower valuations and yield annual abnormal returns of roughly 2.5%. These pricing effects do not stem from higher information risk: sin firms report higher financial disclosure quality than comparable firms (Kim & Venkatachalam, 2011). Experiments further show that many investors willingly forgo returns to avoid morally controversial investments (Niszczota et al., 2024). Consistent with the shunned-stock hypothesis, constrained investor demand produces persistent return premiums (Chang & Krueger, 2013; Chong et al., 2006; Fabozzi et al., 2008; Hamdan et al., 2023; Perez et al., 2010). While the magnitude and universality of the sin premium are being debated (Blitz & Fabozzi, 2017; Sagbakken & Zhang, 2022), its qualitative existence is widely documented.

If equity investors shun sin firms, equity issuance becomes relatively costly. Hong and Kacperczyk (2009) show that sin firms therefore rely more heavily on debt, exhibiting leverage ratios roughly 20% above those of comparable firms. Evidence from the corporate bond market complicates this picture: Fabozzi et al. (2019) find that sin bonds are priced favourably, with lower yields than those of comparable issuers. This discrepancy may reflect differences in transparency: public bond markets are more opaque than equity markets, reducing reputational concerns for investors. At the extreme end of opacity lie syndicated loans, bilateral, privately negotiated contracts with limited public visibility, raising the question of whether bank lenders behave differently.

Although evidence on debt-market stigma is limited, existing studies show that ethics can generally influence bank lending behaviour (Cornée & Szafarz, 2024; Kitson, 1996). Chava (2014) finds that banks' environmental norms lead them to charge higher spreads to borrowers with weaker environmental performance, while Becchetti and Manfredonia's (2022) document that media-driven reputational concerns lead banks to charge higher spreads for borrowers with high ESG risks. Taking the borrower's perspective, Kuzey et al. (2024) find that borrowers with a weaker social reputation regarding CSR pay a higher cost of bank debt.

These results suggest that sin firms might face stigma in the loan market, possibly because of their poor reputations or banks' norms. This leaves us with open questions: Do banks themselves exhibit norm-constrained behaviour when lending to sin firms? If banks are not norm-constrained, the opacity of the syndicated loan market should shield lending decisions from public scrutiny, implying equal pricing for sin and non-sin firms. If banks are norm-constrained, sin firms should face economically meaningful spread premia. In alignment with existing evidence, we propose the following hypothesis:

Hypothesis 1: Banks charge sin firms a significantly higher loan spread than comparable firms.

While social norms are a universal feature of human societies, their form, strength, and enforcement are culturally bound and vary substantially across groups (Balliet & Van Lange, 2013; Gelfand et al., 2011; Heinrichs et al., 2006; Liu et al., 2021; Roos et al., 2015). In empirical work, countries are therefore commonly used as cultural units (Cialdini et al., 1999; Schaffer & Riordan, 2003). This heterogeneity has direct implications for the treatment of sin industries. A central critique of Hong and Kacperczyk (2009) is their implicit assumption of global homogeneity, namely, that sin stocks face identical stigma across countries (Fauver &

McDonald, 2014). In reality, societies differ widely in how they morally evaluate industries such as alcohol, gambling, and tobacco. Alcohol consumption, for example, is prohibited on religious grounds in Saudi Arabia, whereas in Germany it is legal from age sixteen and deeply embedded in cultural practices. Consequently, alcohol producers are viewed as sinful in some societies but not in others. Empirical studies confirm this cross-country heterogeneity in moral perceptions (Durand et al., 2013; Heinrichs et al., 2006; Kumar et al., 2011). The implication is straightforward: unequal treatment of sin firms should arise primarily in societies where the underlying activities are normatively condemned, whereas such differences should diminish or disappear in more permissive environments.

Importantly, normative attitudes also evolve within societies over time. Tobacco provides a striking illustration. In the mid-20th century, smoking was widely accepted, heavily advertised, and socially integrated across many Western societies. As medical evidence accumulated, public attitudes shifted dramatically, and today tobacco is subject to advertising restrictions, consumption bans, and significant social disapproval. Industries regarded as ordinary in one era may become morally contested in another (Fauver & McDonald, 2014), implying that stigma and its financial implications are neither fixed nor universal but dynamic.

To understand why social norms differ across societies and evolve over time, it is necessary to examine the mechanisms that shape their development. From an evolutionary perspective, societies facing greater environmental and social threats tend to develop stronger, more rigid norms to facilitate coordination and survival (Roos et al., 2015). Gelfand et al. (2011) distinguish between "tight" societies, those confronting higher historical territorial threats, elevated natural disaster risks, and scarce resources, and "loose" societies with fewer such pressures. Tight societies enforce strict norms and show low tolerance for deviant behaviour, whereas looser societies adopt more flexible, permissive normative structures.

Mead et al.'s (2014) social exposure model provides a comprehensive framework for these processes. According to the model, norm internalisation arises through the interplay of three environments: the social, physical, and symbolic. The social environment consists of interpersonal networks whose behaviours and attitudes transmit descriptive ("people do this") and injunctive ("people approve of this") signals (Alexander et al., 2001; Ennett et al., 2010; Hall & Valente, 2007). Observing family or peers smoke or drink reinforces their perceived normality; when they quit, it indicates a decline in acceptance (Mead et al., 2014). The physical environment, workplaces, schools, neighbourhood social spaces, and retail settings affect visibility and the cues people receive. Research shows, for instance, that the density and proximity of tobacco retailers strongly influence youth smoking behaviour (Novak et al., 2006;

West et al., 2010). The symbolic environment, constituted by media, advertising, and cultural narratives, further shapes normative perceptions, particularly among adolescents (Dalton et al., 2009; Gerbner et al., 2002; Henriksen et al., 2010; Lovato et al., 2011; McCombs & Shaw, 1993; Wakefield et al., 2006). Together, these environments generate systematic cross-cultural variation in moral attitudes toward sin industries.

A growing body of research documents that such cultural and religious variation meaningfully influences financial behaviour across countries. Stulz and Williamson (2003) show that cultural traditions, particularly a country's dominant religions, shape societal values, legal systems, and institutional arrangements, and are strong predictors of cross-country variation in creditor rights. These cultural foundations similarly shape perceptions of the moral acceptability of alcohol, gambling, and tobacco. Islam prohibits all three (Salaber, 2007), whereas Christian denominations vary considerably: Protestant traditions typically endorse stricter behavioural norms, while Catholic traditions are more permissive (Engs & Mullen, 1999; Fairbanks, 1977; Mullen et al., 1996). Such heterogeneity implies that sin firms cannot be meaningfully treated as a uniform global category.

Empirical evidence confirms these theoretical expectations. Salaber (2007) finds that European sin stock returns vary systematically with country-level moral attitudes: stronger religious or ethical norms are associated with higher abnormal returns, reflecting greater investor avoidance. Durand et al. (2013) report analogous results in Pacific-Basin countries, where stronger societal disapproval correlates with higher required returns. In a global setting, Fauver and McDonald (2014) show that sin premiums materialise only in countries where the underlying products or services are socially condemned. Sovbetov (2025) extends this perspective, demonstrating that sin stocks from societies with strong Abrahamic religious presence earn monthly abnormal returns of 71-79 bps, while those from secular or non-Abrahamic settings exhibit markedly lower or negative abnormal performance.

Together, these studies highlight that the financial consequences of operating in a sin industry are not universal but depend on the cultural and moral environment in which a firm is embedded. This insight suggests that similar cross-country heterogeneity should arise in credit markets. If banks are themselves influenced by normative pressures in their home countries, then sin firms operating in societies with strong moral aversion toward sin activities should face higher loan spreads, whereas in more permissive societies, pricing differences should be weakened or absent. Conversely, if banks are not influenced by societal norms and can shield their lending decisions through the opacity of the syndicated loan market, then loan pricing

should not systematically vary with cultural environments. Building on these considerations, we formulate the following hypothesis:

Hypothesis 2: Sin firms face higher loan spreads when borrowing from banks headquartered in societies with strong moral aversion toward sin industries than from banks headquartered in more permissive normative environments.

3. Methodology

We examine whether firms operating in sin industries face differential financing conditions in the syndicated loan market and whether such differences depend on the normative environment in which the lending bank is embedded. Our empirical strategy consists of three complementary analyses. First, we analyse firms' financing decisions to assess whether sin firms rely more heavily on debt financing. Second, we examine whether sin firms face different loan pricing in the syndicated loan market. Third, we investigate whether any pricing differences depend on cross-country variation in societal norms.

3.1 Financing Decision

We begin our empirical analysis by examining firms' financing decisions, closely following the framework of Hong and Kacperczyk (2009). Their analysis suggests that sin firms rely more heavily on debt financing, consistent with shunning in equity markets. Establishing whether this pattern holds in our international sample provides a natural starting point for our analysis and motivates our subsequent examination of syndicated loan pricing. We estimate the following cross-sectional regression:

$$Leverage_{\mathrm{i,t}} = \alpha + \beta_1 Sin_{\mathrm{i}} + \beta_2 Comparable_{\mathrm{i}} + \gamma X_{i,t} + \delta_{\mathrm{bc}} + \delta_{\mathrm{s}} + \delta_{\mathrm{t}} + \varepsilon_{i,t} \quad (1)$$

where $Leverage_{\mathrm{i,t}}$ denotes firm $i's$ book leverage or market leverage in the year t. Sin_{i} is a binary variable equal to one if the firm operates in a sin industry, and zero otherwise. $Comparable_{\mathrm{i}}$ is an indicator equal to one for firms operating in either sin industries or in economically similar consumer industries. $X_{i,t}$ is a vector of firm-level control variables. All specifications include country (δ_{bc}), industry (δ_{s}), and year (δ_{t}) fixed effects. The coefficient of interest, β_1, captures whether sin firms differ systematically from otherwise comparable firms in their financing decisions.

Equation 1 is estimated using ordinary least squares with robust standard errors clustered at the borrower level to account for within-borrower correlation across loan tranches. To reduce the potential impact of outliers, all continuous borrower-level control variables are winsorised at the 99% level. We use the same estimation methodology for equations 2 and 3 presented in the next section.

3.2 Loan Pricing

We next examine whether sin firms face differential borrowing costs in the syndicated loan market. At the loan-tranche level, we estimate the following baseline specification:

$$Spread_{\mathrm{i,j,t}} = \alpha + \beta_1 Sin_{\mathrm{i}} + \beta_2 Comparable_{\mathrm{i}} + \gamma X_{i,t-1} + \theta Z_{j,t} + \lambda W_{c,t} + \delta_{bc} + \delta_t + \varepsilon_{i,j,t} \quad (2)$$

where $Spread_{i,j,t}$ denotes the all-in spread drawn of the loan tranche j to borrower i in year t. The vectors X, Z, and W capture control variables at the level of the borrower, loan, and borrower-country, respectively. All borrower-level control variables are lagged by one year to mitigate simultaneity concerns. The model includes borrower-country fixed effects (δ_{bc}) and year fixed effects (δ_t).

The coefficient $\beta_1$measures whether sin firms face a systematically different loan spread relative to comparable firms after controlling for observable borrower characteristics, loan structure, and macro-institutional conditions.

3.3 Social Norms and Lender-Country Heterogeneity

To examine whether loan pricing depends on the normative environment of the lending bank, we augment the baseline model of equation 2 with interactions between a firm's sin status and measures of social norms in the lender parent's country. We focus on the lender's parent-country normative environment rather than on the subsidiary bank's or the borrower's. Prior research shows that cultural norms prevailing in a bank's headquarters country shape organisational culture, internal governance, and risk preferences at the parent level, and are subsequently transmitted to foreign subsidiaries through centralised decision-making, incentive structures, and internal controls (Ashraf & Arshad, 2017; Bloom et al., 2012; Giannetti & Yafeh, 2012). As a result, lending decisions, even when executed by foreign affiliates or within syndicated structures, reflect preferences and norms formed at the headquarters level rather than solely local subsidiary or borrower-country characteristics.

$$Spread_{i,j,t} = \alpha + \beta_1 Sin_i + \beta_2 Sin_i \times SocialNorm_{l,t} + \beta_3 Comparable_i \times SocialNorm_{l,t} + \beta_4 SocialNorm_{l,t} + \gamma X_{i,t-1} + \theta Z_{j,t} + \lambda W_{c,t} + \delta_{bc} + \delta_t + \delta_{lc} + \varepsilon_{i,j,t} \quad (3)$$

where $SocialNorm_{l,t}$captures the strength of societal aversion toward sin industries in the home country of the lead arranger's parent bank in the year t. We include lender-country fixed effects (δ_{lc}) to control for all time-invariant characteristics of the lending environment. Because lender-country fixed effects absorb the level effect of societal norms, the coefficient on the interaction term is identified from within-lender-country variation over time. We restrict the sample to loans in which all lead arrangers' parent banks are headquartered in the same country to avoid averaging across heterogeneous normative environments. The coefficient β_2 captures whether sin firms face higher borrowing costs than comparable firms when contracting with banks headquartered in norm-conservative societies.

4. Data

At its core, our sample consists of syndicated loan data for an international set of corporate borrowers, obtained from the DealScan database. This section presents our sample construction, defines all variables used in the regression models and describes their data sources. Because the analyses focus on different economic outcomes, some borrower characteristics are used exclusively in the financing-decision regressions of equation 1, while others are used in the loan-pricing regressions of equations 2 and 3.

4.1 Sample Construction

We construct a comprehensive dataset combining loan-, firm-, and country-level information for a large international sample of listed and unlisted corporate borrowers. Loan-level data are obtained from the Loan Pricing Corporation's (LPC) DealScan database, which provides extensive historical coverage of the global syndicated loan market, including detailed information on contract terms, loan spreads, maturities, tranche sizes, purposes, borrower credit ratings, covenant packages, and collateralisation. DealScan consolidates information from SEC filings, public disclosures, loan syndicators, and other industry sources. Following standard practice, we exclude borrowers with one-digit SIC codes beginning with 6, corresponding to financial institutions.

Firm-level accounting and market data are obtained from Orbis, a global commercial database that provides harmonised financial statements for both publicly listed and private

firms. This broad coverage allows us to capture the whole universe of borrowers active in the syndicated loan market, rather than restricting the analysis to publicly listed firms.

Country-level macroeconomic and institutional data are sourced from the Economist Intelligence Unit, the IMF Financial Development Index, and the World Bank. Data on social norms are sourced from the Integrated Values Survey (IVS). Additional consumption-based information for normative attitudes is obtained from the United Nations, the World Health Organisation, and the World Bank. Information on countries' religious composition is drawn from the Pew Research Centre (Hackett et al., 2025).

4.2 Identification of Sin Firms and Comparables

We examine the role of social norms in syndicated lending by focusing on the traditional "Triumvirate of Sin": alcohol, tobacco, and gambling (Hong & Kacperczyk, 2009). Consistent with prior work, we exclude the sex industry because of its negligible firm representation and the lack of systematic industry classifications. Some studies additionally classify the defence industry as sin-related (Fabozzi et al., 2008; Sovbetov, 2025; Waxler, 2004). Following Salaber (2007), we do not adopt this extension for three reasons. First, alcohol, tobacco, and gambling are broadly perceived as inherently harmful or morally objectionable across cultures, whereas a basic level of defence production is typically viewed to serve a necessary public function. Second, unlike defence, the three core sin industries are closely tied to addictive consumption and substantial public health externalities. Third, their products are commonly subject to targeted excise taxation designed explicitly to deter consumption and internalise social costs. These structural and normative distinctions justify restricting our definition to the traditional sin industries.

Borrowers are classified using borrowers' SIC codes in DealScan, mapped to the Fama–French (1997) industry groups. For example, SIC codes 2080–2085 map to industry group 4 (Beer & Liquor), while SIC codes 2100–2199 correspond to industry group 5 (Tobacco Products). Because the Fama-French classification does not isolate gambling from hotels and general entertainment, we identify gambling firms using NAICS codes available in DealScan (7132, 71321, 713210, 71329, 713290, 72112, and 721120).

A recognised concern in industry-based sin classification is potential misclassification of diversified firms (Hong & Kacperczyk, 2009). We therefore implement a multi-stage identification procedure. First, following Hong and Kacperczyk's (2009) augmented list of sin firms based on Compustat historical segment data (1985–2006), we extend their segment-level

screening through the end of our sample period in 2025. A firm is classified as sinful if any business segment falls within the sin-related SIC or NAICS ranges.

Because Compustat segment data cover only North American firms, we supplement global coverage using KLD's "controversial business issues" ratings and LSEG's sin-industry identifiers. We classify a firm as sinful if KLD flags involvement in alcohol, tobacco, or gambling, defined as producing the product or core inputs, licensing relevant brands, retailing the products, being owned by or owning a substantially engaged firm, or deriving material revenues from such activities. Firms flagged by LSEG as producers or meaningful retailers of sin products are likewise classified as sinful. As in Hong and Kacperczyk (2009), classification is persistent: once identified as sinful, a firm remains in the category throughout its observed history.

Although global screening using KLD and LSEG is necessary, both indicators can be overly inclusive. For example, convenience stores (e.g., 7-Eleven) or airlines (e.g., Lufthansa) are flagged because they sell alcohol or cigarettes as additional items. However, such firms are not realistically viewed as sin companies by society, investors or lenders. To address this issue, we manually verify all candidate firms and retain only those whose core operations are substantively tied to alcohol, tobacco, or gambling. This verification draws on corporate filings, business descriptions, and online resources. For robustness, we later re-estimate all baseline regressions using (i) a broad definition that includes all flagged firms and (ii) a narrow definition based solely on industry codes and segment disclosures.

Following Hong and Kacperczyk (2009), we construct a comparable-industry group to create a parsimonious benchmark. Fama–French industries 2 (Food), 3 (Soda), 7 (Fun), and 43 (Meals and Hotels) serve as comparables. These consumer-oriented sectors share similar demand characteristics but lack the moral stigma associated with sin products. Our comparable-industry indicator equals one for loans issued either to a sin firm or to a non-sin firm in these industry groups. This specification allows for a direct and intuitive test of the sin-loan premium.

Under this setup, within our loan-level regressions, comparable firms have an expected spread of β_2 relative to the omitted baseline. Sin firms, belonging to the same extended consumer group, have an expected spread of $\beta_1 + \beta_2$. The difference between sin and comparable firms is therefore β_1. The estimated coefficient β_1 thus provides a clean identification of whether sin firms face a distinct borrowing premium relative to their most closely related industry peers, after controlling for borrower, loan, and country characteristics.

4.3 Borrower Characteristics for Financing Decisions

The financing-decision regressions of equation 1examine firms' capital structure choices using book- and market-based leverage measures estimated in separate regressions. Firm-level accounting and market data for these dependent variables are obtained from Orbis, and the selection and construction of the variables follow the approach of Hong and Kacperczyk (2009). Book leverage (*BLEV*) is defined as total debt divided by the sum of total debt and book equity, measured at the fiscal year-end. Market leverage (*MLEV*) is computed analogously but replaces book equity with market equity, defined as the firm's average market capitalisation over the calendar year.

In addition, the financing-decision regressions include several firm-level control variables. Tobin's Q (*TobQ*) is measured as the market value of equity (share price multiplied by shares outstanding), plus total assets minus the book value of equity, all divided by total assets at fiscal year-end. Sales (*Sales*) is the natural logarithm of net sales. Profitability (*Profit*) is defined as earnings before interest, taxes, and depreciation divided by total assets and expressed as a percentage. Tangibility (*Tang*) is measured as net property, plant, and equipment divided by total assets. All variables in the financing-decision regressions are measured contemporaneously at the fiscal year-end.

4.4 Borrower, Loan, and Country Characteristics for Loan Pricing

To implement the loan pricing regressions of equations 2 and 3 we use loan pricing data obtained from DealScan. Following Ivashina (2009), we define the dependent variable, $Spread_{i,j,t}$, as the all-in drawn spread of the loan tranche j to borrower i in year t, measured in basis points at origination. To account for heterogeneity in borrower, loan, and country characteristics, the loan-pricing regressions include a comprehensive set of control variables consistent with standard practice in the syndicated lending literature (Bharath et al., 2009; Chava & Roberts, 2008; Demerjian, 2011; Goss & Roberts, 2011; Graham et al., 2008).

Loan characteristics which serve as independent control variables are also obtained from DealScan and defined at the tranche level. *Loan Size* denotes the facility amount in millions of US dollars; *Maturity* is the contractual maturity in months; *Secured* equals one for collateralised facilities; *Seniority* equals one for senior tranches; *Multiple Tranches* equals one if the tranche is part of a multi-tranche loan package; *Currency* equals one for tranches denominated in US dollars; *Relationship Loan* equals one if the borrower obtained a loan from at least one of the current lead arrangers within the previous five years, with lead arrangers identified following Chakraborty et al. (2018); *Term Loan* equals one for term loan facilities; *Refinancing* equals

one if the tranche refinances outstanding debt; *Financial Covenants* equals one if the loan contract includes financial covenants; and *Performance Pricing* equals one when the loan contains performance-pricing provisions. In addition, Loan Purpose categorises the stated use of proceeds into six mutually exclusive categories.

Borrower-level control variables include *Size*, measured as the natural logarithm of total assets; *Tangibility*, the ratio of net property, plant, and equipment to total assets; *Leverage*, defined as total debt scaled by total assets; *Z-Score*, computed as the modified Altman Z-score following Chava and Roberts (2008); *Profitability*, measured as EBITDA over total assets; *Sales*, defined as the natural logarithm of net sales; and *Public*, an indicator that equals one if the borrower is publicly listed. Borrower credit quality is additionally captured using issuer credit ratings from DealScan, which are used to define *Prime Grade* and *Junk Grade* indicator variables. To mitigate simultaneity concerns, all continuous borrower-level variables used in the loan-pricing regressions are lagged by one year. All of these firm-level variables are obtained from Orbis.

Finally, we include three country-level variables that capture macroeconomic conditions and institutional quality in the borrower's country. *Financial Development* is measured using the IMF Financial Institutions Efficiency Index. *Economic Growth* is measured as the annual percentage change in real GDP, as reported by the Economist Intelligence Unit. *Country Governance* is proxied by the corruption-control component of the World Bank's Worldwide Governance Indicators.

4.5 Social Norms Measures

To capture cross-country variation in societal attitudes toward sin industries, we construct two complementary proxies that reflect three distinct cultural dimensions: moral values, consumption behaviour, and religious adherence.

Our primary measure, *Sin Values*, is a survey-based moral-values indicator and closely follows the approach of Fauver and McDonald (2014). Given the broader geographic scope of this study, we draw on the IVS rather than the standalone WVS. The IVS harmonises more than 460 survey waves from the WVS and the European Values Study (EVS), covering 118 countries from 1981 onward, thereby offering substantially wider cross-country and time-series coverage. Following Fauver and McDonald (2014) and Knack and Keefer (1997), we select IVS survey items that reflect the strength, enforcement, and moral orientation of social norms. Specifically, we include questions capturing religious attitudes (A006, A040, F028, F034), environmental responsibility (A103, A197), charity and humanitarianism (A105), materialism (Y002), and

social cohesion (A064-A073). The exact survey questions and constructions are reported in Table A1 in the Appendix. Because the IVS does not include the WVS personal-freedom item (question 164), this component is excluded from the index. In addition, the IVS does not consistently aggregate social-cohesion questions across all survey waves and countries. As a result, for certain components, we use the corresponding items from either the WVS or the EVS, mutually exclusively by country, in constructing the index.

Each response is scaled to a 0-100 metric, with higher scores indicating stricter normative attitudes or stronger moral convictions. We then construct an equally weighted country-level index of values from these nine components, which also ranges from 0 to 100. Higher index values reflect stricter social norms and greater societal disapproval of behaviours commonly associated with sin industries. Because EVS and WVS survey waves are fielded approximately every 4 years, we construct an annual country-level index by linearly interpolating each component's values between survey rounds and carrying forward the most recent observation when data are unavailable for a given year. Following Fauver and McDonald (2014), we then rank all countries, both within and outside our sample, by their index value in each year and construct a binary indicator, *Sin Values*, equal to one for countries above the annual median ("high moral-values countries") and zero otherwise.

Whereas *Sin Values* captures stated moral attitudes, our second measure follows the conceptual framework of Stulz and Williamson (2003), which emphasises that societal norms operate through multiple, mutually reinforcing channels. Building on this idea, we combine the IVS-based moral-values measure with indicators reflecting actual behaviour, health outcomes, and religious composition, recognising that social norms are expressed not only in stated beliefs but also in observable societal patterns. Building on Fauver and McDonald (2014) and insights from the literature on religion and cultural finance (Salaber, 2007; Sovbetov, 2025; Stulz & Williamson, 2003), we construct annual measures based on alcohol and tobacco consumption and alcohol- and tobacco-related mortality. For each indicator, we rank countries, both within and outside our sample, annually and assign a value of one to those below the annual median, capturing societies with lower consumption or lower substance-related mortality, both of which proxy stronger normative aversion. Due to data limitations, we cannot produce a similar component for the gambling industry. In addition, following Sovbetov (2025), we create a religion-based dummy equal to one when more than 50% of a country's population adheres to an Abrahamic religion (Christianity, Islam, or Judaism), reflecting religious traditions that historically impose strong behavioural restrictions on alcohol, gambling, and, to varying degrees, tobacco.

To construct our second measure, we combine the IVS-based moral-values index (*Sin Values*) with additional country-level indicators of actual behaviour, health outcomes, and religious composition, using principal component analysis (PCA). Specifically, PCA is applied to a set of variables comprising *Sin Values*, per-capita alcohol and tobacco consumption, substance-related mortality, and measures of religious adherence. The first principal component, which we denote *Sin Composition*, serves as a comprehensive, data-driven index of societal aversion toward sin industries. By jointly incorporating stated moral attitudes and observable behavioural, health, and religious outcomes, this composite measure captures the covariance structure across multiple channels through which societal norms manifest, thereby reflecting deeper, structural aspects of cultural attitudes.

To account for heterogeneity across sin categories, we additionally construct industry-specific PCA indices, *Alcohol Composition* and *Tobacco Composition*, using the corresponding consumption and mortality variables for each product type, together with the *Sin Values* and religion measures.

5. Descriptive Statistics

Our sample for testing hypotheses 1 and 2 comprises 133,267 loan tranches issued to 37,363 unique borrowers from 48 borrower countries, arranged by 1,868 unique lead-arranger parent banks headquartered in 74 distinct countries, over the period 1988–2025. Of these, 2,913 loan tranches are extended to sin firms, representing 700 unique sin borrowers, including 295 alcohol firms, 61 tobacco firms, and 344 gambling firms. Tables A2 and A3 in the Appendix report the cross-country and time-series distribution of loans.

Alcohol and gambling borrowers appear in most jurisdictions, whereas tobacco-related loans are concentrated in a small number of countries. This pattern likely reflects structural differences across sin industries: alcohol production and gambling activities often involve local operators alongside multinational firms, while global tobacco production is highly concentrated among a small number of multinational corporations (e.g., British American Tobacco, Philip Morris, and Altria).

After imposing the full set of control variables, the final regression sample remains representative and includes 416 loan tranches issued to sin firms with lead arranger parent banks headquartered in 40 distinct countries.

5.1 Summary Statistics

Table 1 reports summary statistics for all key variables used in the analysis. Approximately 2% of loans in the sample are extended to sin firms, while about 10% are issued to firms in the comparable industry group. The distribution of borrower and loan characteristics aligns closely with prior studies of the syndicated loan market (Demerjian, 2011; Francis et al., 2013; Lim et al., 2014; Maskara, 2010). Regarding key characteristics, we find that the average loan amounts to $287.6 million, is priced at a spread of 262.5 bps, has a maturity of 56.5 months and 51% of loans are secured. To address skewness, *Size*, *Loan Size*, and *Maturity* are entered into all regressions in natural logarithms.

[Insert Table 1 about here]

More central to our analysis, Table 2 reports descriptive statistics separately for loans to sin firms, comparable firms (excluding sin firms), and all remaining borrowers. The final two columns present t-tests for mean differences between (i) sin and comparable firms and (ii) sin and all non-sin firms. These comparisons offer preliminary insights into how banks treat sin firms at the unconditional level.

[Insert Table 2 about here]

The results reveal several notable patterns. First, sin firms appear to pay significantly lower unconditional loan spreads: spreads are 24.79 bps lower relative to comparable firms and 20.06 bps lower relative to the full set of non-sin borrowers. Sin firms also borrow markedly larger amounts; the mean loan size is nearly double that of comparable or non-sin firms, and they rely less frequently on collateral. At face value, these statistics suggest that banks may treat sin firms more favourably rather than less. At the same time, sin firms differ systematically from other borrowers along several key dimensions. On average, they are substantially larger than both comparable and non-sin firms and exhibit higher leverage ratios than non-sin firms, whereas leverage is similar to that of comparable firms; these patterns are largely consistent with Hong and Kacperczyk (2009). Sin firms also have lower Altman Z-scores, indicating weaker financial health and higher baseline credit risk, despite being more likely to receive prime-grade credit ratings. These descriptive differences underscore the importance of

controlling for borrower, loan, and country characteristics in the multivariate regressions to isolate the incremental effect of sin status on loan pricing.

5.2 Social Norms

Table 1further provides summary statistics for the social-norms measures of lender parent countries used in the analysis. The continuous IVS-based social norms score (*Weighted Score (IVS)*) is reported primarily to provide an intuitive benchmark for the level and dispersion of societal norms across countries in our sample. The index has a mean of 31.34 and a standard deviation of 8.50, with observed values ranging from 7.77 to 52.99, on a conceptual scale of 0 to 100, where higher values indicate more sin aversion. This wide range indicates substantial heterogeneity in stated moral attitudes toward behaviours commonly associated with sin industries across countries and over time.

As discussed in Section 4, the continuous IVS-based index is not used directly in the regression analysis. Instead, it serves as the basis for constructing our main norms variable. Specifically, we use the IVS-based index to construct the binary indicator *Sin Values*, which equals one for countries with above-median moral-values scores in a given year and zero otherwise. The median is computed annually across both in-sample and out-of-sample countries. As shown in Table 1, *Sin Values* has a mean of 0.735, indicating that a substantial share of lender parent country–year observations is classified as relatively sin-averse. This construction ensures meaningful variation across normative environments while avoiding reliance on a small number of extreme observations.

The consumption-based measure, *Sin Consumption,* further exhibits considerable dispersion, with values ranging from 0 to 4.82, a mean of 1.274, and a standard deviation of 0.61.

Figure 1 illustrates the underlying IVS-based social norms scores for each lead arranger parent country in the sample, depicting the earliest and most recent observed values. Countries included in the sample are shown explicitly, while countries outside the sample or with missing data are shaded in grey. The colour scale is normalised to the sample's minimum and maximum values. The figure highlights persistent cross-sectional differences in normative environments across regions as well as notable within-country changes over time. In particular, countries in the Americas, parts of Southeast Asia, and South Africa tend to exhibit relatively higher social-norms scores, e.g. more sin aversion, whereas many European and Eurasian countries display lower scores. Overall, the figure provides an intuitive visual representation of the cross-

sectional and time-series variation in social norms that underpins the construction of the Sin Values indicator.

[Insert Figure 1 about here]

6. Results

This section presents the empirical results of the regression analyses. We begin by examining firms' financing decision to assess whether sin firms differ from comparable firms in their capital structure choices. We then analyse syndicated loan pricing to test whether sin firms face differential borrowing costs and whether these differences depend on the lending bank's normative environment. Throughout, we interpret the results in light of the hypotheses developed in Section 2.

6.1 Financing Decision

We first examine whether firms operating in sin industries differ from comparable firms in their capital structure choices. This analysis provides a benchmark for understanding sin firms' reliance on debt financing and mirrors prior evidence from equity markets. We analyse both book- and market-based leverage measures to assess whether sin firms' financing decisions differ systematically after controlling for standard firm characteristics.

Table 3 reports the estimation results based on our firm-by-year dataset. Columns (1) and (2) present regressions using book leverage. Column (3) reports results for market leverage. The key difference is that, while debt is measured at book value across all specifications, the leverage measure in Column (3) captures variation in firms' market valuation of equity.

[Insert Table 3 about here]

The results broadly mirror the findings of Hong and Kacperczyk (2009). In the book-leverage regressions, the coefficient of *Sin* is positive but statistically insignificant, indicating that sin firms do not differ meaningfully from other firms in their accounting-based leverage ratios. However, sin firms exhibit significantly higher market leverage. The estimated coefficient of 0.062 implies a 6.2 percentage-point increase in market leverage. Relative to the sample mean market leverage of 0.29, this corresponds to an increase of approximately 21%. Conditional on the regression covariates, this implies that non-sin firms have a market leverage

ratio of approximately 29%, whereas otherwise comparable sin firms exhibit a market leverage ratio of approximately 35%. This pattern indicates that sin firms' higher market leverage is driven not by greater book indebtedness but by lower equity market valuations, which mechanically raise their market-value leverage ratios.

These findings are consistent with the existing empirical evidence that sin firms face a higher cost of equity, making equity issuance comparatively more expensive. Consequently, they may rely more heavily on alternative external financing channels, particularly those less sensitive to public equity market sentiment. Syndicated loans, which are negotiated in relatively opaque markets and involve sophisticated intermediaries, therefore constitute a natural setting in which to evaluate whether lenders treat sin firms differently from otherwise similar borrowers.

6.2 Loan pricing

We next turn to the syndicated loan market to examine whether sin firms face differential borrowing costs. Using loan-tranche-level data, we estimate baseline loan-pricing regressions that relate loan spreads to borrowers' sin status while controlling for borrower, loan, and country characteristics. This analysis provides a direct test of whether banks systematically price sin firms differently from economically comparable borrowers, thereby testing our first hypothesis.

Table 4 summarises the multivariate results. Columns (1)–(4) progressively enrich the specification. Column (1) presents a baseline regression without controls. Column (2) adds borrower characteristics, which reduces the sample size but preserves internal validity, primarily because many loans to private firms drop out due to missing borrower-level accounting information. Column (3) incorporates loan-level variables, some of which may be endogenous to loan spreads. Column (4) presents the fully saturated model including all borrower-, loan-, and country-level controls; the inclusion of country-level characteristics leads to a further slight reduction in observations, as these variables are unavailable for a limited number of countries in our sample.

[Insert Table 4 about here]

The estimated *Sin* coefficients range from -24.793 bps in Column (1) to 8.715 bps in Column (4). Although sin firms appear to obtain significantly lower spreads in the univariate specification, this effect disappears once borrower fundamentals are included. In all subsequent

specifications, the coefficient on *Sin* is statistically indistinguishable from zero. Thus, after controlling for borrower characteristics, loan structure, and cross-country institutional conditions, sin firms neither pay more nor less than comparable borrowers in the syndicated loan market. Control variables load with expected signs and magnitudes, consistent with prior research in corporate lending (Francis et al., 2013; Graham et al., 2008).

Taken together, these findings provide no evidence that banks penalise or favour sin firms in loan pricing. This stands in contrast to the equity-market literature documenting stigma-driven mispricing (Chang & Krueger, 2013; Fabozzi et al., 2008; Hamdan et al., 2023; Hong & Kacperczyk, 2009; Perez et al., 2010) and differs from corporate bond evidence showing that sin firms might enjoy lower financing costs (Fabozzi et al., 2019). In the syndicated loan market, characterised by private contracting and limited public visibility, banks apply neither a premium nor a discount to sin borrowers. This suggests that lenders either operate under different normative constraints than public equity and bond investors or that reputational concerns are materially weakened in opaque lending environments.

We conduct several additional tests to ensure that the absence of pricing differences is not sample-specific or an artefact of model specification. First, because US borrowers are overrepresented in DealScan, the average regression coefficient may reflect US-market loan pricing that dominates the other countries. Thus, we re-estimate the full specification separately for US and non-US firms. As shown in Table A4 in the Appendix, the *Sin* coefficient remains statistically insignificant in both subsamples, suggesting that our null finding is not driven by US sample dominance. Importantly, this result persists despite the strong equity-market stigma documented for US sin firms by Hong and Kacperczyk (2009).

Second, the combined sin indicator may mask heterogeneity across alcohol, tobacco, and gambling. This concern is particularly relevant given that the social stigma associated with these industries varies markedly across countries. For example, alcohol consumption is socially accepted or only weakly stigmatised in many European countries, whereas gambling and tobacco are more consistently viewed as socially contentious. To assess this potential heterogeneity, we re-estimate Eq. (2) for each industry separately. Table A5 in the Appendix shows that the estimated coefficients for alcohol and tobacco are statistically insignificant, whereas only gambling exhibits a marginally positive coefficient at the 10% level. Given its limited statistical significance and lack of robustness across specifications, this isolated result does not meaningfully challenge the combined null finding.

Third, because societal attitudes, particularly toward tobacco, have shifted substantially over time, we split the sample into two distinct periods. The first period covers 1988 to 2002,

while the second period spans 2003 to 2025. This split captures major regulatory and cultural milestones such as the 1998 Master Settlement Agreement and the expansion of divestment movements. Table A6 in the Appendix shows that the results are qualitatively unchanged across periods.

Fourth, as discussed in Section 4.1, our identification of sin firms relies on a manual reclassification scheme applied to a broad pool of potential sin firms. While this approach allows for careful, transparent classification, it may raise concerns about selection bias. To address this issue, we confirm that our results are robust to alternative sin-classification schemes. Specifically, using either the stricter Hong-Kacperczyk definition or the broader KLD/LSEG-based definition (see Section 4.1), and replacing the *Comparable* indicator with industry fixed effects, we obtain consistent results. Table A7 in the Appendix presents the robustness tests.

Fifth, we examine whether heterogeneity across lenders influences pricing outcomes. This analysis is motivated by the notion that banks differ in their exposure to reputational concerns and public scrutiny. In particular, more reputable banks and those with explicit sustainability commitments may face greater reputational risk when lending to socially controversial borrowers, even in relatively opaque, relationship-based loan markets. As a result, such banks may be more inclined to adjust loan pricing when dealing with sin firms. Specifically, we test whether (i) bank reputation, measured as the value-weighted market share of each lead arranger in the year preceding loan signing, and (ii) banks' sustainability commitments, proxied by signatory status to the Equator Principles or the UN Principles for Responsible Banking (UNPRB), moderate the treatment of sin borrowers. Across all specifications reported in Table A8 in the Appendix, we find no evidence that either highly visible banks or banks with explicit social or environmental commitments price sin firms differently. The only result consistent with prior literature is that larger arrangers charge slightly lower spreads, reflecting superior monitoring capacity rather than differential moral preferences.

Finally, we test whether some lenders specialise in financing sin firms and extract compensation for doing so. The motivation for this analysis is twofold. On the one hand, repeated lending to socially controversial borrowers may expose banks to reputational risk, prompting compensation demands. On the other hand, if sin firms face limited access to external financing, particularly in public equity markets, specialised lenders may gain bargaining power. In this setting, a hold-up problem arises when sin firms become dependent on a small set of willing lenders, allowing these lenders to charge higher spreads at origination or refinancing

because switching to alternative financing sources is costly or infeasible. For each lead arranger, we construct specialisation measures based on (i) the share of past sin deals in the arranger's historical number of arranged loan deals and (ii) the analogous share based on total dollar volume. In both cases, the measures are computed using all loan deals arranged by the bank from the start of the sample period up to the year preceding the current loan signing. We then construct a deal-level *Sin Share* measure as the value-weighted average of these bank-level specialisation shares across all lead arrangers in the syndicate.

Table A9 in the Appendix shows that the interaction terms between *Sin* and *Sin Share* are positive and marginally statistically significant, indicating that lenders with greater historical exposure to sin borrowers tend to charge somewhat higher spreads to sin firms. Quantitatively, a one-percentage-point increase in a lender's historical sin-deal share is associated with an increase in loan spreads of approximately 3.41 bps. The distribution of *Sin Share* is highly right-skewed. The median lender has a sin-deal share of approximately 1.16%; the 75th percentile is 1.73%, and the 95th percentile is 2.70%. Only a small number of highly specialised lenders exhibit sin-deal shares above 4%. As a result, economically meaningful pricing effects arise only for a narrow subset of lenders. At the same time, because the interaction effect is statistically significant only at the 10% level, these findings should be interpreted with caution and viewed as suggestive rather than conclusive. While the pattern is consistent with modest price premia charged by specialised lenders, potentially reflecting compensation for reputational exposure or bargaining power effects consistent with a hold-up mechanism, we refrain from drawing strong causal conclusions. All results remain robust when lender fixed effects are included.

6.3 Loan pricing and social norms

The baseline results do not reveal systematic pricing differences between sin and non-sin firms. A potential explanation for the insignificant results is that social norms moderate the relationship between sin status and loan pricing. Prior research shows that societal norms vary widely across countries and meaningfully shape the financial treatment of sin industries in equity markets (Fauver & McDonald, 2014; Salaber, 2007; Sovbetov, 2025; Stulz & Williamson, 2003). If similar cultural mechanisms operate in bank lending, despite its greater opacity, loan pricing should depend on the normative environment in which the lending bank is embedded. We therefore interact borrowers' sin status with measures of lender-parent-country social norms to test whether banks headquartered in norm-conservative societies charge higher loan spreads to sin firms.

All variables are defined analogously to the main loan-pricing model, with two important modifications. First, both the *Sin* and *Comparable* indicators are interacted with measures of social norms prevailing in the home country of the lead arranger parent bank. We focus on the parent level because reputational concerns, cultural expectations, and internal norm structures arise there and are subsequently transmitted to foreign subsidiaries through centralised decision-making, incentive structures, and internal controls (Ashraf & Arshad, 2017; Bloom et al., 2012; Giannetti & Yafeh, 2012). To avoid averaging across heterogeneous cultural contexts, which could bias our estimates, we restrict the sample to loans in which all lead arranger parent banks are headquartered in the same country. This restriction ensures that the relevant normative environment is well defined. Implementing this filter excludes 3,488 loans from the sample, including 116 loans extended to sin firms. Second, because the analysis centres on lender-side cultural environments, we include lender-parent-country fixed effects, which absorb all time-invariant institutional and normative characteristics specific to each lending country.

Table 5 presents the core results. Column (1) uses the IVS-based *Sin Values* indicator, equal to one when the lender-parent country exhibits above-median societal aversion to sin industries. Column (2) replaces this with the PCA-based *Sin Composition* measure, which combines survey-based moral values with annual alcohol and tobacco consumption, related mortality, and the dominant religious affiliation. Because consumption and mortality indicators are not available for all countries with moral-values data, the PCA-based specification reduces the sample size by approximately 6,000 observations.

[Insert Table 5 about here]

Across both specifications, the interaction term *Sin* × *Social Norm* is positive, sizable, and statistically significant. These results show that sin firms do not face uniformly higher borrowing costs: norm penalties emerge specifically when banks originate from countries with strong societal aversion to sin industries. Conversely, in more permissive cultural environments, loan spreads for sin and comparable firms are statistically indistinguishable. Using the IVS-based dummy measure, sin firms borrowing from banks headquartered in above-median norm-conservative countries face loan spreads that are 40.68 bps higher, relative to comparable firms.

For the PCA-based continuous measure, the estimated coefficient of 28.18 bps reflects the effect of a one-unit change in the standardised index. Interpreted in economically

meaningful terms, a one-standard-deviation increase in the PCA-based social norms measure (0.613) is associated with an increase in loan spreads of approximately 17.3 bps, corresponding to an 8.4% increase relative to the average loan spread in this subsample. Because the PCA-based index excludes gambling-related consumption and mortality, it is best interpreted as a robustness proxy, whereas the IVS-based measure remains our preferred indicator.

Overall, these results confirm Hypothesis 2 and demonstrate that banks headquartered in norm-conservative societies impose higher financing costs on sin firms. This pattern closely mirrors findings in the equity-market literature (Fauver & McDonald, 2014; Sovbetov, 2025), indicating that cultural norms shape financial decisions even in opaque private-debt markets traditionally viewed as insulated from public scrutiny.

The economic magnitude is substantial. Given the average loan spread of 205.98 for this subsample, a 40.68-bps increase implies approximately a 20% increase in financing costs. This corresponds to an additional USD 2.04 million per year for the average sin firm loan of USD 501.81 million.

To assess the robustness of these findings, we conduct several additional tests. First, because the identified effect is explicitly lender-driven, we re-estimate the interaction model, replacing lender-parent country fixed effects with lender-parent fixed effects. Table A10 in the Appendix shows that the coefficients remain virtually unchanged, ruling out unobserved time-invariant lender characteristics, such as bank reputation, business model, or monitoring expertise, as explanations for the documented pattern. We thus decide to control for lender-parent fixed effects within all remaining regressions.

Second, the interaction results are robust to alternative sin classifications. We re-estimate the model using: (i) Fama–French 48 industry fixed effects instead of the Comparable indicator; (ii) the original Hong and Kacperczyk (2009) SIC/NAICS-based classification; and (iii) the broadest sin definition incorporating all firms flagged as sin by KLD or LSEG. Table A11 in the Appendix confirms the robustness of our findings. Notably, the interaction becomes even stronger under the Hong and Kacperczyk (HK) definition when using the IVS-based measure. The broadest definition yields insignificant results, consistent with our initial assumption that firms such as airlines and convenience stores are wrongly classified as sin firms.

Third, because the PCA-based *Sin Composition* index does not incorporate gambling-related consumption or health burdens, we estimate separate models for alcohol and tobacco firms using industry-specific PCA indices. Table A12 in the Appendix shows that the interaction effect remains strong for both industries, indicating that gambling firms are not driving the

overall pattern. The relatively large negative baseline coefficient for the sin dummy in Column (2) should be interpreted in light of the empirical distribution of the *Alcohol Composition* index: the 25th percentile of the measure is 1.7, meaning that only in exceptionally norm-permissive environments would the baseline discount for sin firms appear.

Taken together, these robustness tests confirm that the interaction between sin status and lender-country social norms is not an artefact of sample composition, classification choices, or model specification. Instead, the evidence consistently supports the conclusion that banks located in norm-conservative countries systematically charge higher spreads to sin firms, revealing a clear cultural dimension in international lending markets.

6.4 Social norms premium versus risk premium

While the previous section establishes that banks in norm-constrained countries charge higher spreads to sin firms, it remains unclear whether this premium represents a norm-driven surcharge, that is, compensation for violating the lender's moral expectations, or whether norm-constrained banks instead perceive sin firms as riskier borrowers. Although we already extensively control for observable borrower risk, including credit ratings, Altman Z-scores, leverage, profitability, and collateral status, it remains possible that banks embedded in stricter normative environments interpret sin-related activities as inherently riskier, even when objective risk characteristics are comparable. If so, social norms would indirectly influence loan pricing via lenders' subjective risk assessments rather than directly through moral disutility.

To investigate this possibility, we examine whether the sin-spread premium is accompanied by adjustments in other contractual margins that typically respond to borrower risk or information asymmetry. Syndicated loans are customised financial contracts in which banks jointly adjust multiple terms rather than modifying prices in isolation (Francis et al., 2013). Prior research shows that features such as collateral requirements and loan maturity react systematically to information asymmetry and credit quality: higher-risk borrowers tend to receive shorter maturities and face a greater likelihood of collateral being required (Barclay & Smith, 1995; Berger & Udell, 1990; Jiménez et al., 2006; Rajan & Winton, 1995). Likewise, Sufi (2007) shows that syndicate structure, particularly the concentration of loan shares, responds to monitoring incentives, as riskier or more opaque borrowers lead arrangers to retain larger portions of the loan, resulting in more concentrated syndicates.

To test whether similar patterns emerge for sin firms, we re-estimate the interaction model in Equation (3) using three alternative dependent variables that proxy core non-pricing margins: (i) an indicator for whether the loan is secured, (ii) the natural logarithm of maturity,

and (iii) syndicate concentration, measured as a Herfindahl–Hirschman Index (HHI) of lender participation shares. Following Sufi (2007), the index is constructed as the sum of squared lender shares of the total loan amount within each syndicated loan, where shares are expressed as fractions of the total commitment. Higher values of the index indicate more concentrated syndicates. If the sin premium reflected heightened perceived risk, we would expect norm-conservative banks to demand more collateral, shorten maturities, or rely on more concentrated syndicates. Conversely, if the spread premium reflects a normative penalty unconnected to risk, these margins should remain unaffected.

[Insert Table 6 about here]

Table 6 reports the results. Columns (1) and (2) analyse maturity, Columns (3) and (4) collateral requirement, and Columns (5) and (6) the syndicate concentration. Across all specifications, the interaction terms between *Sin* and *Social Norm* are statistically insignificant for maturity, collateralisation, and the syndicate concentration index. Banks in norm-averse countries do not shorten maturities, require additional collateral, or alter syndicate structures when lending to sin firms. The absence of effects on the Sufi (2007) concentration measure is particularly informative. If sin firms trigger higher monitoring needs or reputational exposure, lead arrangers would be expected to retain larger shares, resulting in more concentrated syndicates. Instead, concentration patterns remain unchanged.

Together, these findings indicate that the sin-spread premium observed in Section 6.3 does not arise from differences in borrower risk, information asymmetry, or monitoring intensity. This interpretation is consistent with the extensive risk controls included in our baseline regressions and with the lack of corresponding contractual adjustments that typically respond to borrower quality. Instead, the evidence points to a norm-driven penalty: banks headquartered in countries with a strong aversion to sin industries impose higher spreads, but do not alter contractual protections or the allocation of monitoring responsibilities within the syndicate. The penalty operates solely through price, reflecting moral disutility rather than risk-based pricing.

7. Conclusion

This article examines whether firms operating in the alcohol, tobacco, and gambling industries face differential treatment in the international syndicated loan market and how country-level social norms shape lenders' pricing decisions. While prior research documents pronounced

shunning effects in equity markets, auditing practices, and labour outcomes, little is known about whether similar patterns arise in global credit markets. We address this gap by analysing whether banks, operating in a relatively opaque, privately negotiated environment, price sin firms differently across the normative contexts of their home countries.

Using a large international sample of mostly syndicated loans and controlling for an extensive set of borrower-, loan-, and country-level characteristics, we find clear evidence that social norms influence loan pricing. Sin firms do not face higher borrowing costs when loans are arranged by banks from neutral or permissive normative environments. In contrast, when lead arrangers originate from countries with strict societal disapproval of sin industries, sin borrowers pay significantly higher loan spreads. This result is robust across specifications, consistent across alternative measures of normative environments, and economically meaningful, demonstrating that cultural context shapes lenders' perceptions and pricing of norm-sensitive firms.

Importantly, our further analyses indicate that this pricing difference is not accompanied by adjustments to other contractual margins, such as collateral requirements, maturities, or syndicate structure, nor do differences in borrower risk explain it. These patterns suggest that the spread premium does not reflect heightened informational asymmetry or credit risk, but rather a normative surcharge: banks embedded in more conservative cultural environments require additional compensation for lending to firms whose activities conflict with prevailing societal values.

Our study has several limitations. The PCA-based cultural proxy, while comprehensive, incorporates only alcohol- and tobacco-related consumption and health indicators due to the absence of comparable data for gambling, and may therefore capture normative environments imperfectly across all sin categories. Moreover, our data do not allow us to observe loan-application outcomes, preventing us from examining whether normative shunning also manifests through denial rates, a channel through which normative exclusion may even be stronger.

Despite these limitations, our findings provide novel evidence that the shunning of sin firms extends beyond public equity markets into the international syndicated loan market and operates through cultural norms rather than borrower risk. These results highlight an important channel through which societal values influence global credit allocation and underscore the need for future research to explore how ethical, cultural, and political forces interact with financial intermediation across countries.

8. References

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.

Akerlof, G. A., & Kranton, R. E. (2000). Economics and identity. *The Quarterly Journal of Economics, 115*(3), 715-753.

Alexander, C., Piazza, M., Mekos, D., & Valente, T. (2001). Peers, schools, and adolescent cigarette smoking. *Journal of Adolescent Health, 29*(1), 22-30.

Andreoni, J., & Bernheim, B. D. (2009). Social image and the 50–50 norm: A theoretical and experimental analysis of audience effects. *Econometrica, 77*(5), 1607-1636.

Ashraf, B. N., & Arshad, S. (2017). Foreign bank subsidiaries' risk-taking behaviour: Impact of home and host country national culture. *Research in International Business and Finance, 41*, 318-335.

Bharath, S. T., Dahiya, S., Saunders, A., Srinivasan, A., (2009). Lending relationships and loan contract terms. *Review of Financial Studies*.

Balliet, D., & Van Lange, P. A. (2013). Trust, punishment, and cooperation across 18 societies: A meta-analysis. *Perspectives on Psychological Science, 8*(4), 363-379.

Barclay, M. J., & Smith Jr, C. W. (1995). The maturity structure of corporate debt. *The Journal of Finance, 50*(2), 609-631.

Becchetti, L., & Manfredonia, S. (2022). Media, reputational risk, and bank loan contracting. *Journal of Financial Stability, 60*, 100990.

Becker, S. (1957). The economics of discrimination. *University of Chicago Press*.

Berger, A. N., & Udell, G. F. (1990). Collateral, loan quality and bank risk. *Journal of Monetary Economics, 25*(1), 21-42.

Blitz, D., & Fabozzi, F. J. (2017). Sin stocks revisited: Resolving the sin stock anomaly.

Bloom, N., Sadun, R., & Van Reenen, J. (2012). The organisation of firms across countries. *The Quarterly Journal of Economics, 127*(4), 1663-1705.

Chakraborty, I., Goldstein, I., & MacKinlay, A. (2018). Housing price booms and crowding-out effects in bank lending. *The Review of Financial Studies, 31*(7), 2806-2853.

Chang, C. E., & Krueger, T. M. (2013). The VICEX fund: recent shortcomings of a long-run success story. *Journal of Management &Sustainability,* 3, 131.

Chava, S., & Roberts, M. R. (2008). How does financing impact investment? The role of debt covenants. *The Journal of Finance*, *63*(5), 2085-2121.

Chava, S. (2014). Environmental externalities and cost of capital. *Management Science*, *60*(9), 2223-2247.

Chong, J., Her, M., & Phillips, G. M. (2006). To sin or not to sin? Now that's the question. *Journal of Asset Management, 6*(6), 406-417.

Cialdini, R. B., & Trost, M. R. (1998). Social influence: Social norms, conformity, and compliance.

Cialdini, R. B., Wosinska, W., Barrett, D. W., Butner, J., & Gornik-Durose, M. (1999). Compliance with a request in two cultures: The differential influence of social proof and commitment/consistency on collectivists and individualists. *Personality and Social Psychology Bulletin, 25*(10), 1242-1253.

Cornée, S., & Szafarz, A. (2014). Vive la différence: Social banks and reciprocity in the credit market. *Journal of Business Ethics, 125*(3), 361-380.

Dalton, M. A., Beach, M. L., Adachi-Mejia, A. M., Longacre, M. R., Matzkin, A. L., Sargent, J. D., ... & Titus-Ernstoff, L. (2009). Early exposure to movie smoking predicts established smoking by older teens and young adults. *Pediatrics, 123*(4), e551-e558.

Demerjian, P. R. (2011). Accounting standards and debt covenants: Has the balance sheet approach led to a decline in the use of balance sheet covenants? *Journal of Accounting and Economics 52* (2), 178–202.

Derwall, J., Koedijk, K., & Ter Horst, J. (2011). A tale of values-driven and profit-seeking social investors. *Journal of Banking & Finance, 35*(8), 2137-2147.

Durand, R. B., Koh, S., & Tan, P. L. (2013). The price of sin in the Pacific-Basin. *Pacific-Basin Finance Journal, 21*(1), 899-913.

Dyck, A., Lins, K. V., Roth, L., & Wagner, H. F. (2019). Do institutional investors drive corporate social responsibility? International evidence. *Journal of Financial Economics, 131*(3), 693-714.

Engs, R. C., & Mullen, K. (1999). The effect of religion and religiosity on drug use among a selected sample of post secondary students in Scotland. *Addiction Research, 7*(2), 149-170.

Ennett, S. T., Foshee, V. A., Bauman, K. E., Hussong, A., Faris, R., Hipp, J. R., & Cai, L. (2010). A social contextual analysis of youth cigarette smoking development. *Nicotine & Tobacco Research, 12*(9), 950-962.

EVS (2022): EVS Trend File 1981-2017. GESIS Data Archive, Cologne. ZA7503 Data file Version 3.0.0, doi:10.4232/1.14021.

Eriksson, K., Strimling, P., & Coultas, J. C. (2015). Bidirectional associations between descriptive and injunctive norms. *Organisational Behavior and Human Decision Processes, 129*, 59-69.

Fama, E. F., & French, K. R. (1997). Industry costs of equity. *Journal of Financial Economics*, *43*(2), 153-193.

Fabozzi, F. J., Lamba, A. S., Nishikawa, T., Rao, R. P., & Ma, K. C. (2019). Does the corporate bond market overvalue bonds of sin companies?. *Finance Research Letters, 28,* 165-170.

Fabozzi, F. J., Ma, K. C., & Oliphant, B. J. (2008). Sin stock returns. *The Journal of Portfolio Management, 35*(1), 82-94.

Fairbanks, D. (1977). Religious forces and" morality" policies in the American states. *Western Political Quarterly, 30*(3), 411-417.

Fauver, L., & McDonald IV, M. B. (2014). International variation in sin stocks and its effects on equity valuation. *Journal of Corporate Finance, 25*, 173-187

Fehr, E., & Gächter, S. (2000). Cooperation and punishment in public goods experiments. *American Economic Review, 90*(4), 980-994.

Festre, A. (2010). Incentives and social norms: A motivation-based economic analysis of social norms. *Journal of Economic Surveys, 24*(3), 511-538.

Francis, B., Hasan, I., & Wu, Q. (2013). The impact of CFO gender on bank loan contracting. *Journal of Accounting, Auditing & Finance,* 28(1), 53-78.

Gächter, S., & Fehr, E. (1999). Collective action as a social exchange. *Journal of Economic Behavior & Organization, 39*(4), 341-369.

Gelfand, M. J., Raver, J. L., Nishii, L., Leslie, L. M., Lun, J., Lim, B. C., & Yamaguchi, S. (2011). Differences between tight and loose cultures: A 33-nation study. *Science, 332*(6033), 1100-1104.

Gerbner, G., Gross, L., Morgan, M., Signorielli, N., & Shanahan, J. (2002). Growing up with television: Cultivation processes. In media Effects (pp. 53-78). *Routledge*.

Giannetti, M., & Yafeh, Y. (2012). Do cultural differences between contracting parties matter? Evidence from syndicated bank loans. *Management Science, 58*(2), 365-383.

Goss, A., & Roberts, G. S. (2011). The impact of corporate social responsibility on the cost of bank loans. *Journal of Banking & Finance*, *35*(7), 1794-1810.

Graham, J. R., Li, S., & Qiu, J. (2008). Corporate misreporting and bank loan contracting. *Journal of Financial Economics, 89*(1), 44-61.

Guiso, L., Sapienza, P., & Zingales, L. (2006). Does culture affect economic outcomes?. *Journal of Economic Perspectives, 20*(2), 23-48.

Hackett, C., Stonawski, M., Tong, Y., Kramer, S., Shi, A. F., & Zanetti, N. (2025). Religious composition by country, 2010–2020. *Pew Research Center.*

Haerpfer, C., Inglehart, R., Moreno, A., Welzel, C., Kizilova, K., Diez-Medrano J., M. Lagos, P. Norris, E. Ponarin & B. Puranen et al. (eds.). 2022. World Values Survey Trend File (1981-2022) Cross-National Dataset. Madrid, Spain & Vienna, Austria: JD Systems Institute & WVSA Secretariat. Version 4.0.0, doi:10.14281/18241.27.

Hall, J. A., & Valente, T. W. (2007). Adolescent smoking networks: The effects of influence and selection on future smoking. *Addictive Behaviors, 32*(12), 3054-3059.

Hamdan, M., Fernandez Calavia, P., & Aminu, N. (2023). Sin stocks in European countries: The influence of wealth and familiarity bias on investment choices. *Investment Management and Financial Innovations,* 20(2), 256-26.

Heinrichs, N., Rapee, R. M., Alden, L. A., Bögels, S., Hofmann, S. G., Oh, K. J., & Sakano, Y. (2006). Cultural differences in perceived social norms and social anxiety. *Behaviour Research and Therapy, 44*(8), 1187-1197.

Henriksen, L., Schleicher, N. C., Feighery, E. C., & Fortmann, S. P. (2010). A longitudinal study of exposure to retail cigarette advertising and smoking initiation. *Pediatrics, 126*(2), 232-238.

Hong, H., & Kacperczyk, M. (2009). The price of sin: The effects of social norms on markets. *Journal of Financial Economics, 93*(1), 15-36.

Ivashina, V. (2009). Asymmetric information effects on loan spreads. *Journal of Financial Economics*, *92*(2), 300-319.

Jimenez, G., Salas, V., & Saurina, J. (2006). Determinants of collateral. J*ournal of Financial Economics, 81*(2), 255-281.

Kim, I., & Venkatachalam, M. (2011). Are sin stocks paying the price for accounting sins? *Journal of Accounting, Auditing & Finance, 26*(2), 415-442.

Kim, M., Surroca, J., & Tribó, J. A. (2014). Impact of ethical behavior on syndicated loan rates. *Journal of Banking & Finance*, *38*, 122-144.

Kitson, A. (1996). Taking the pulse: Ethics and the British cooperative bank. *Journal of Business Ethics, 15*(9), 1021-1031.

Kleimeier, S. & M. Viehs. (2021). Pricing Carbon Risk: Investor Preferences or Risk Mitigation? *Economics Letters 205*, 109936.

Knack, S., & Keefer, P. (1997). Does social capital have an economic payoff? A cross-country investigation. *The Quarterly Journal of Economics,* 112(4), 1251-1288.

Krupka, E. L., & Weber, R. A. (2013). Identifying social norms using coordination games: Why does dictator game sharing vary? *Journal of the European Economic Association, 11*(3), 495-524.

Kumar, A., Page, J. K., & Spalt, O. G. (2011). Religious beliefs, gambling attitudes, and financial market outcomes. *Journal of Financial Economics, 102*(3), 671-708.

Kuzey, C., Hamrouni, A., Uyar, A., & Karaman, A. S. (2024). Social reputation, loan contracting and governance mechanisms. *International Journal of Accounting & Information Management, 32*(3), 502-531.

Leventis, S., Hasan, I., & Dedoulis, E. (2013). The cost of sin: The effect of social norms on audit pricing. *International Review of Financial Analysis, 29*, 152-165.

Lim, J., Minton, B., & Weisbach, M. (2014). Syndicated loan spreads and the composition of the syndicate. *Journal of Financial Economics, 111*(1), 45-69.

Liu, R. W., Lapinski, M. K., Kerr, J. M., Zhao, J., Bum, T., & Lu, Z. (2021). Culture and Social Norms: Development and Application of a Model for Culturally Contextualised Communication Measurement (MC3M).

Lovato, C., Watts, A., & Stead, L. F. (2011). Impact of tobacco advertising and promotion on increasing adolescent smoking behaviours. *Cochrane Database of Systematic Reviews*, (10).

Maskara, P. (2010). Economic value in tranching of syndicated loans. *Journal of Banking & Finance, 34*(5), 946-955

McCombs, M. E., & Shaw, D. L. (1993). The evolution of agenda-setting research: Twenty-five years in the marketplace of ideas. *Journal of Communication, 43*(2), 58-67.

McGuire, S. T., Omer, T. C., & Sharp, N. Y. (2012). The impact of religion on financial reporting irregularities. *The Accounting Review, 87*(2), 645-673.

Mead, E. L., Rimal, R. N., Ferrence, R., & Cohen, J. E. (2014). Understanding the sources of normative influence on behavior: The example of tobacco. *Social Science & Medicine, 115*, 139-143.

Merton, R. C. (1987). A simple model of capital market equilibrium with incomplete information.

Mullen, K., Williams, R., & Hunt, K. (1996). Irish descent, religion, and alcohol and tobacco use. *Addiction, 91*(2), 243-254.

Nosenzo, D., & Görges, L. (2020). Measuring social norms in economics: why it is important and how it is done. *Analyse & Kritik, 42*(2), 285-312.

Novak, S. P., Reardon, S. F., Raudenbush, S. W., & Buka, S. L. (2006). Retail tobacco outlet density and youth cigarette smoking: a propensity-modeling approach. *American Journal of Public Health, 96*(4), 670-676.

Pappas, K., & Xu, A. L. (2023). Do foreign lenders' national cultures affect loan pricing?. *International Journal of Finance & Economics, 28*(2), 2006-2036.

Perez Liston, D., & Soydemir, G. (2010). Faith-based and sin portfolios: An empirical inquiry into norm-neglect vs norm-conforming investor behavior. *Managerial Finance, 36*(10), 876-885.

Perkins, H. W. (2002). Social norms and the prevention of alcohol misuse in collegiate contexts. *Journal of Studies on Alcohol, Supplement, 14,* 164-172.

Renneboog, L., Ter Horst, J., & Zhang, C. (2008). Socially responsible investments: Institutional aspects, performance, and investor behavior. *Journal of Banking & Finance, 32*(9), 1723-1742.

Rajan, R., & Winton, A. (1995). Covenants and collateral as incentives to monitor. *The Journal of Finance, 50*(4), 1113-1146.

Roos, P., Gelfand, M., Nau, D., & Lun, J. (2015). Societal threat and cultural variation in the strength of social norms: An evolutionary basis. *Organisational Behavior and Human Decision Processes, 129*, 14-23.

Sagbakken, S. T., & Zhang, D. (2022). European sin stocks. *Journal of Asset Management*, *23*(1), 1-18.

Salaber, J. M. (2007). The determinants of sin stock returns: Evidence on the European market. In Paris December 2007 *Finance International Meeting AFFI-EUROFIDAI Paper*.

Schaffer, B. S., & Riordan, C. M. (2003). A review of cross-cultural methodologies for organisational research: A best-practices approach. *Organisational Research Methods, 6*(2), 169-215.

Shulman, H. C., Rhodes, N., Davidson, E., Ralston, R., Borghetti, L., & Morr, L. (2017). The state of the field of social norms research. *International Journal of Communication, 11*, 22.

US SIF. (2025). US sustainable investing trends 2024/2025. US SIF: The Forum for Sustainable and Responsible Investment. https://www.ussif.org/trends

Smith, A. (1759; 6th ed., 1790). The Theory of Moral Sentiments, the Glasgow Edition (D. D. Raphael & A. L. Macfie, Eds.). Oxford: *Oxford University Press*, 1976.

Sovbetov, I. (2025). Financial price of sin stocks across religions. *Journal of Business Ethics,* 1-22.

Stulz, R. M., & Williamson, R. (2003). Culture, openness, and finance. *Journal of Financial Economics, 70*(3), 313-349.

Sufi, A. (2007). Information asymmetry and financing arrangements: Evidence from syndicated loans. *The Journal of Finance 62* (2), 629–668.

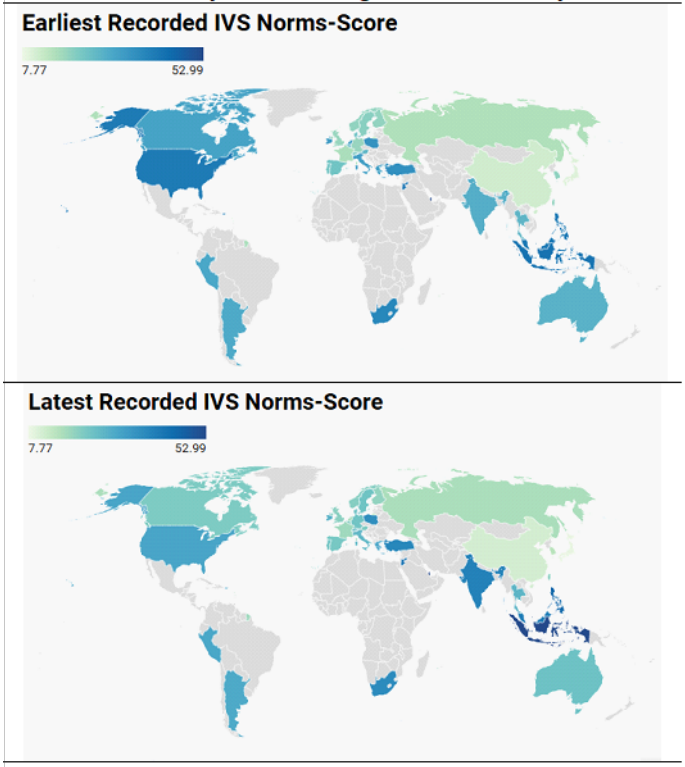
Sunder, S. (2005). Minding our manners: Accounting as social norms. *The British Accounting Review, 37*(4), 367-387.

Wakefield, M., Flay, B., Nichter, M., & Giovino, G. (2003). Role of the media in influencing trajectories of youth smoking. *Addiction, 98*, 79-103.

Waxler, C. (2004). Stocking up on sin: How to crush the market with vice-based investing. *John Wiley & Sons*.

West, J. H., Blumberg, E. J., Kelley, N. J., Hill, L., Sipan, C. L., Schmitz, K. E., ... & Hovell, M. F. (2010). Does proximity to retailers influence alcohol and tobacco use among Latino adolescents? *Journal of Immigrant and Minority Health, 12*(5), 626-633.

Figure 1:Earliest and Latest Observed Social Norms Scores by Lead-Arranger Parent Country



Note: This figure illustrates the IVS-based social norms score for each lead-arranger parent country in the sample. The upper panel reports the earliest year in which the score is observed for each country, while the lower panel reports the most recent observation.

Table 1: Descriptive Statistics

Variable	N	Mean	Std. Dev.	Min.	p10	p25	p50	p75	p90	Max.
Sin										
Sin	133,267	0.0218	0.146	0	0	0	0	0	0	1
Comparable	133,267	0.102	0.302	0	0	0	0	0	1	1
Loan Characteristics										
Spread (bps)	133,267	262.50	177.00	0.03	63	135	238	350	475	1,800
Loan Size $M	133,267	287.60	823.30	0.01	10	27	85	250	646	49,000
Maturity in Months	133,267	56.54	34.05	1	12	36	60	72	84	725
Secured	133,267	0.51	0.50	0	0	0	1	1	1	1
Senior	133,267	0.994	0.08	0	1	1	1	1	1	1
Currency	133,267	0.82	0.39	0	0	1	1	1	1	1
Relationship Loan	133,267	0.30	0.45	0	0	0	0	1	1	1
Term Loan	133,267	0.46	0.50	0	0	0	0	1	1	1
Multiple Tranches	133,267	0.635	0.48	0	0	0	1	1	1	1
Financial Covenants	133,267	0.22	0.41	0	0	0	0	0	1	1
Refinancing	133,267	0.06	0.24	0	0	0	0	0	0	1
Performance Pricing	133,267	0.18	0.38	0	0	0	0	0	1	1
Borrower Characteristics										
Size $M	37,982	8,249	30,877	0	77.40	296.6	1,231	5,263	18,298	3,470,000
Tangibility	37,588	0.32	0.25	0	0.04	0.11	0.25	0.49	0.72	0.92
Leverage	37,435	0.28	0.23	0	0.00	0.11	0.25	0.40	0.575	1.13
Z-Score	26,474	1.57	1.33	-3.81	0.31	0.84	1.54	2.33	3.13	5.09
Profitability	36,663	0.11	0.11	-0.42	0.02	0.07	0.11	0.16	0.23	0.43
Public	133,267	0.342	0.475	0	0	0	0	1	1	1
Sales	36,939	5,297	12,916	0.171	56.26	226.4	943.7	3,846	12,955	87,071
Country Characteristics										
Financial Development	132,509	57.67	10.50	9.445	49.55	50.52	54.12	64.16	71.38	110.1
Economic Growth	132,501	2.819	2.110	-54.30	1	2	2.800	3.800	4.800	26.60
Country Governance	133,082	1.390	0.535	-1.301	1.020	1.301	1.537	1.647	1.874	2.610
Social Norms										
Weighted Score (IVS)	114,889	31.34	8.501	7.765	18.03	25.89	32.26	38.73	40.96	52.99
Sin Values	114,889	0.735	0.441	0	0	0	1	1	1	1
Sin Consumption	72,924	1.274	0.613	0	0.234	1.346	1.384	1.411	2.135	4.816

Note: This table provides summary statistics for the key variables. The underlying unit of observation is the loan tranche.

Table 2: Descriptive Statistics for Subsamples

	Loans to sin firms		Loans to comparable firms		Loans to non-sin firms		t-test for differences in mean for loans to sin firms versus comparable firms		t-test for differences in mean for loans to sin firms versus non-sin firms	
	N	Mean	N	Mean	N	Mean	difference	significance	difference	significance
Dependent variable										
Spread (bps)	2,903	242.92	10,646	267.71	130,364	262.98	-24.79	***	-20.06	***
Loan characteristics										
Loan Size $M	2,903	501.81	10,646	236.40	130,364	282.87	265.41	***	218.94	***
Maturity in Months	2,903	54.79	10,646	56.42	130,364	56.57	-1.63	***	-1.78	***
Secured	2,903	0.44	10,646	0.48	130,364	0.51	-0.04	***	-0.07	***
Senior	2,903	0.99	10,646	0.99	130,364	0.99	0.00		0.00	
Currency	2,903	0.77	10,646	0.80	130,364	0.82	-0.03	***	-0.05	***
Relationship Loan	2,903	0.31	10,646	0.31	130,364	0.30	0.00		0.01	
Term Loan	2,903	0.44	10,646	0.48	130,364	0.46	-0.04	***	-0.02	***
Multiple Tranches	2,903	0.66	10,646	0.69	130,364	0.63	-0.03	***	0.03	**
Financial Covenants	2,903	0.23	10,646	0.19	130,364	0.22	0.04	***	0.01	
Refinancing	2,903	0.09	10,646	0.06	130,364	0.06	0.03	***	0.03	***
Performance Pricing	2,903	0.21	10,646	0.15	130,364	0.18	0.06	***	0.03	***
Borrower characteristics										
Size $M	790	10,775.35	2,408	6,357.55	37,192	8,195.51	4,417.80	***	2,579.84	**
Tangibility	777	0.37	2,400	0.39	36,811	0.32	-0.02	***	0.05	***
Leverage	782	0.34	2,379	0.33	36,653	0.28	0.01		0.06	***
Z-Score	534	1.48	1,847	1.66	25,940	1.57	-0.18	***	-0.09	
Profitability	770	0.13	2,346	0.13	35,893	0.11	0.00		0.02	***
Public	2,903	0.36	10,646	0.28	130,364	0.34	0.08	***	0.02	**
Sales	768	5,626.02	2,396	5,118.72	36,171	5,290.42	507.30		335.60	
Prime Grade	2,903	0.20	10,646	0.12	130,364	0.14	0.08	***	0.06	***
Junk Grade	2,903	0.56	10,646	0.55	130,364	0.54	0.01		0.02	**

Note: This table reports descriptive statistics for three subsamples: (1) sin firms, (2) comparable firms (excluding sin firms), and (3) all non-sin firms. The right-hand side of the table presents t-tests of differences in means, comparing sin firms to comparable firms (left) and sin firms to non-sin firms (right). The underlying unit of observation is the loan tranche. Statistical significance at the 10%, 5%, and 1% levels is indicated by *, **, and ***, respectively.

Table 3: Corporate Financing Decisions

	Full	Public	Public
	BLEV	BLEV	MLEV
Sin	0.020	0.069	0.062 ***
	(0.043)	(0.077)	(0.022)
Comparable	0.060 ***	0.058	-0.008
	(0.019)	(0.036)	(0.012)
Sales	0.020 ***	0.021 ***	0.008 **
	(0.004)	(0.006)	(0.003)
Tang	0.142 ***	0.061	0.135 ***
	(0.041)	(0.037)	(0.028)
Profit	-0.076	0.193	-0.127 ***
	(0.059)	(0.124)	(0.047)
TobQ		-0.041 ***	-0.115 ***
		(0.008)	(0.013)
Fixed effects			
Country	Yes	Yes	Yes
Industry (SIC)	Yes	Yes	Yes
Year	Yes	Yes	Yes
Adjusted R-squared	0.065	0.098	0.408
Observations	20,509	5,849	5,899

Note: This table reports the results of the corporate financing decision regressions. The dependent variable is book leverage in Columns 1 and 2 and market leverage in Column 3. All variables are defined in Section 4.1. Standard errors are clustered at the Fama–French 48 industry level, with an additional industry category added for gambling firms. Standard errors are reported in parentheses. Statistical significance at the 10%, 5%, and 1% levels is indicated by *, **, and ***, respectively.

Table 4: Multivariate Regressions of the Price of Sin

	(1)	(2)	(3)	(4)
Sin	-24.793 ***	6.058	9.038	8.715
	(7.666)	(9.095)	(7.777)	(7.734)
Comparable	5.150	3.282	-0.941	-0.902
	(3.731)	(4.808)	(4.153)	(4.131)
Borrower characteristics				
Tangibility		-37.878 ***	-9.378 *	-8.945
		(6.416)	(5.629)	(5.629)
Leverage		99.336 ***	78.446 ***	78.670 ***
		(8.014)	(6.638)	(6.633)
Z-Score		-23.066 ***	-16.421 ***	-16.383 ***
		(1.834)	(1.598)	(1.601)
Profitability		-165.566 ***	-149.861 ***	-149.259 ***
		(18.150)	(15.282)	(15.356)
Sales		16.564 ***	14.028 ***	13.906 ***
		(2.889)	(2.674)	(2.686)
Public		-9.278 **	-6.490 *	-6.354
		(4.715)	(3.905)	(3.911)
Size		-24.456 ***	-26.196 ***	-26.224 ***
		(2.691)	(2.639)	(2.651)
Prime Grade		-109.662 ***	-53.130 ***	-54.361 ***
		(6.022)	(5.111)	(5.132)
Junk Grade		8.384	18.479 ***	15.980 ***
		(6.201)	(5.301)	(5.330)
Loan characteristics				
Secured			57.854 ***	57.664 ***
			(2.871)	(2.871)
Financial Covenants			-0.021	-0.472
			(2.888)	(2.886)
Term Loan			42.869 ***	43.419 ***
			(2.291)	(2.292)
Seniority			-223.321 ***	-224.828 ***
			(35.427)	(35.033)
Loan Size			-2.920 ***	-2.455 **
			(1.028)	(1.032)
Multiple Tranches			12.224 ***	12.195 ***
			(2.317)	(2.320)
Currency			-4.580	-4.756
			(5.684)	(5.693)
Maturity			-12.610 ***	-12.275 ***
			(1.615)	(1.617)
Relationship Loan			-5.196 **	-6.305 ***
			(2.201)	(2.226)
Refinancing			-12.169 ***	-17.585 ***
			(4.317)	(4.384)
Performance Pricing			-29.975 ***	-30.437 ***
			(2.546)	(2.558)
Country characteristics				
Financial Development				-1.201 ***
				(0.248)
Economic Growth				-4.175 ***
				(1.005)
Country Governance				21.660 ***
				(8.251)
Fixed effects				
Borrower Country	No	Yes	Yes	Yes
Loan Signing Year	No	No	Yes	Yes
Loan Purpose	No	No	Yes	Yes
Adjusted R-squared	0.000	0.314	0.483	0.486
Observations	133,267	26,379	26,379	26,222

Note: The dependent variable is the loan spread. Columns (1)–(4) assess whether sin firms pay higher loan spreads than comparable firms in the syndicated loan market under increasingly saturated sets of control variables. The number of observations refers to the number of loan tranches. Standard errors are clustered at the firm level and reported in parentheses. Statistical significance at the 10%, 5%, and 1% levels is indicated by *, **, and ***, respectively.

Table 5: Social Norms and the Price of Sin

	Social Norm = *Sin Values*	Social Norm = *Sin Composition*
	(1)	(2)
Sin	-21.403	-29.977
	(14.075)	(19.583)
Sin * Social Norm	40.680 **	28.179 **
	(17.431)	(12.777)
Comparable	3.472	12.928
	(8.759)	(12.819)
Comparble * Social Norm	-3.253	-10.834
	(10.306)	(8.740)
Social Norm	-2.248	3.154
	(11.274)	(9.270)
Borrower characteristics		
Tangibility	-6.636	-3.136
	(5.912)	(6.874)
Leverage	80.791 ***	89.066 ***
	(6.874)	(7.835)
Z-Score	-16.113 ***	-16.237 ***
	(1.641)	(2.010)
Profitability	-153.640 ***	-159.571 ***
	(16.035)	(19.113)
Sales	14.237 ***	14.858 ***
	(2.881)	(3.513)
Public	-6.566	-9.427 **
	(4.120)	(4.746)
Size	-25.771 ***	-24.739 ***
	(2.878)	(3.529)
Prime Grade	-52.016 ***	-49.829 ***
	(6.236)	(6.800)
Junk Grade	13.474 **	19.653 ***
	(5.991)	(6.632)
Loan characteristics		
Secured	57.216 ***	51.937 ***
	(3.122)	(3.762)
Financial Covenants	2.353	7.263 *
	(3.103)	(3.752)
Term Loan	43.808 ***	48.736 ***
	(2.508)	(2.915)
Seniority	-245.124 ***	-273.093 ***
	(36.007)	(39.630)
Loan Size	-3.764 ***	-3.720 ***
	(1.085)	(1.283)
Multiple Tranches	12.307 ***	12.296 ***
	(2.487)	(2.778)
Currency	-2.917	-9.690
	(6.156)	(6.958)
Maturity	-11.938 ***	-13.283 ***
	(1.715)	(2.093)
Relationship Loan	-7.507 ***	-8.046 ***
	(2.052)	(2.463)
Refinancing	-16.964 ***	-16.945 ***
	(5.245)	(5.687)
Performance Pricing	-33.445 ***	-38.472 ***
	(2.713)	(3.269)
Country characteristics		
Financial Development	-1.668 ***	-1.733 ***
	(0.351)	(0.483)
Economic Growth	-3.084 **	-3.984 **
	(1.421)	(1.766)
Country Governance	27.715 ***	34.569 ***
	(9.975)	(11.436)
Fixed effects		
Borrower Country	Yes	Yes
Loan Signing Year	Yes	Yes
Loan Purpose	Yes	Yes
Lender Parent Country	Yes	Yes
Adjusted R-squared	0.490	0.496
Observations	22,609	16,834

Note: The dependent variable is loan spread. This table examines whether banks' social norms moderate the effect of sin status on non-pricing loan terms in the syndicated loan market. In Column (1) Social_Norm is defined as the IVS-based Sin_Values indicator. In Column (2) Social_Norm is measured using the Sin_Composition index derived from the PCA that combines IVS moral-values data with alcohol and tobacco consumption, mortality rates, and the dominant religious tradition. Cultural variables are measured at the lender-parent-country level. The unit of observation is the loan tranche. Standard errors are clustered at the firm level and reported in parentheses. Statistical significance at the 10%, 5%, and 1% levels is denoted by *, **, and ***, respectively.

Table 6: Social Norms and Non-Pricing Terms

	Maturity		Secured		Syndicate Concentration	
	Social Norm = *Sin Values*	Social Norm = *Sin Composition*	Social Norm = *Sin Values*	Social Norm = *Sin Composition*	Social Norm = *Sin Values*	Social Norm = *Sin Composition*
	(1)	(2)	(3)	(4)	(5)	(6)
Sin	-0.040	-0.012	0.017	0.079	478.445	678.474
	(0.096)	(0.137)	(0.046)	(0.076)	(396.914)	(538.306)
Sin * Social Norm	0.060	-0.015	0.011	-0.024	-468.784	-337.988
	(0.109)	(0.095)	(0.064)	(0.060)	(446.184)	(359.251)
Comparable	0.011	0.077	0.017	-0.040	31.386	255.911
	(0.055)	(0.069)	(0.026)	(0.041)	(214.377)	(281.062)
Comparble * Social Norm	-0.020	-0.048	-0.043	0.009	30.631	-111.425
	(0.059)	(0.045)	(0.029)	(0.029)	(233.670)	(186.367)
Social Norm	0.018	-0.082 ***	-0.012	-0.004	-652.067 ***	306.589 **
	(0.055)	(0.031)	(0.012)	(0.009)	(227.653)	(128.089)
Borrower characteristics						
Tangibility	0.025	0.041	0.001	-0.008	-133.665	-125.772
	(0.032)	(0.028)	(0.020)	(0.023)	(111.424)	(120.528)
Leverage	0.042	0.066 **	0.212 ***	0.194 ***	-609.046 ***	-583.736 ***
	(0.035)	(0.030)	(0.020)	(0.024)	(132.476)	(149.648)
Z-Score	0.034 ***	0.021 ***	-0.028 ***	-0.037 ***	-67.112 **	-76.130 **
	(0.008)	(0.007)	(0.004)	(0.005)	(29.944)	(35.296)
Profitability	0.335 ***	0.390 ***	-0.486 ***	-0.492 ***	-341.045	-321.342
	(0.084)	(0.069)	(0.048)	(0.058)	(288.519)	(333.946)
Sales	-0.048 ***	-0.036 ***	0.044 ***	0.058 ***	3.682	51.599
	(0.014)	(0.012)	(0.008)	(0.010)	(46.176)	(54.172)
Public	-0.017	-0.026	-0.027 *	-0.035 **	315.195 ***	212.967 **
	(0.023)	(0.020)	(0.015)	(0.017)	(86.681)	(92.641)
Size	-0.013	-0.034 ***	-0.078 ***	-0.088 ***	-206.684 ***	-240.356 ***
	(0.014)	(0.012)	(0.008)	(0.010)	(50.349)	(57.857)
Prime Grade	-0.125 ***	-0.197 ***	-0.134 ***	-0.136 ***	822.151 ***	666.486 ***
	(0.036)	(0.030)	(0.021)	(0.025)	(117.203)	(149.285)
Junk Grade	0.085 **	0.037	0.237 ***	0.243 ***	816.439 ***	707.736 ***
	(0.035)	(0.028)	(0.021)	(0.026)	(113.939)	(145.330)
Loan characteristics						
Secured	0.136 ***	0.134 ***			406.944 ***	382.456 ***
	(0.016)	(0.014)			(59.638)	(66.637)
Financial Covenants	0.016	-0.022	0.126 ***	0.134 ***	19.223	117.705
	(0.018)	(0.016)	(0.010)	(0.012)	(63.084)	(74.295)
Term Loan	0.291 ***	0.294 ***	0.082 ***	0.083 ***	441.436 ***	543.217 ***
	(0.014)	(0.012)	(0.006)	(0.007)	(60.047)	(68.905)
Seniority	-0.335	-0.316	0.135 *	0.048	-1643.437 **	-1586.525 **
	(0.248)	(0.209)	(0.071)	(0.073)	(652.676)	(658.479)
Loan Size	0.090 ***	0.106 ***	-0.005	0.000	-873.834 ***	-830.500 ***
	(0.008)	(0.007)	(0.004)	(0.004)	(33.017)	(38.656)
Multiple Tranches	0.159 ***	0.172 ***	0.075 ***	0.082 ***	-1058.911 ***	-1033.016 ***
	(0.014)	(0.012)	(0.008)	(0.009)	(50.517)	(56.310)
Currency	-0.084 ***	-0.071 **	0.026	0.025	-309.716 **	-185.562
	(0.032)	(0.030)	(0.017)	(0.020)	(129.870)	(138.982)
Maturity			0.045 ***	0.048 ***	-602.751 ***	-629.249 ***
			(0.005)	(0.006)	(37.096)	(44.017)
Relationship Loan	-0.046 ***	-0.055 ***	-0.029 ***	-0.038 ***	-555.716 ***	-589.864 ***
	(0.012)	(0.011)	(0.007)	(0.009)	(42.892)	(49.152)
Refinancing	0.040 **	0.045 **	0.062 ***	0.053 ***	42.073	4.462
	(0.020)	(0.020)	(0.017)	(0.018)	(88.326)	(90.646)
Performance Pricing	0.147 ***	0.200 ***	0.001	0.010	-672.419 ***	-570.420 ***
	(0.016)	(0.014)	(0.009)	(0.010)	(62.666)	(74.736)
Country characteristics						
Financial Development	0.003	0.001	-0.002 **	-0.001	-39.471 ***	-12.532
	(0.002)	(0.002)	(0.001)	(0.001)	(7.570)	(9.150)
Economic Growth	0.004	-0.001	0.006	0.001	-68.705 **	-144.112 ***
	(0.008)	(0.006)	(0.004)	(0.005)	(27.798)	(35.846)
Country Governance	-0.338 ***	-0.185 **	0.033	0.024	949.982 ***	421.456
	(0.084)	(0.074)	(0.037)	(0.046)	(264.867)	(282.041)
Fixed effects						
Borrower Country	Yes	Yes	Yes	Yes	Yes	Yes
Loan Signing Year	Yes	Yes	Yes	Yes	Yes	Yes
Loan Purpose	Yes	Yes	Yes	Yes	Yes	Yes
Lender Parent Country	Yes	Yes	Yes	Yes	Yes	Yes
Adjusted R-squared	0.296	0.305				
Pseudo R-squared			0.433	0.433	0.534	0.501
Observations	22,560	16,801	22,609	16,834	16,011	11,894

Note: The dependent variable is Maturity in Columns (1)–(2), and indicator for Secured in Columns (3)–(4), and the Herfindahl index in Columns (5)–(6). This table examines whether banks' social norms moderate the effect of sin status on non-pricing loan terms in the syndicated loan market. In Columns (1), (3), and (5), Social Norm is defined as the IVS-based Sin_Values indicator. In Columns (2), (4), and (6), Social Norm is measured using the Sin Composition index derived from the PCA that combines IVS moral-values data with alcohol and tobacco consumption, mortality rates, and the dominant religious tradition. Cultural variables are measured at the lender-parent-country level. Results for the dependent variable Secured remain robust using a logit regression instead of OLS. The unit of observation is the loan tranche. Standard errors are clustered at the firm level and reported in parentheses. Statistical significance at the 10%, 5%, and 1% levels is denoted by *, **, and ***, respectively.

9. Appendix: Further Tables

Table A1: Integrated Values Survey Components

IVS Element	Correpsonding Question	Measure
Religious Attitudes		
A006	How important is religion in your life?	Percentage of a country's respondents who said "Very Important"
A040	List of qualities it is important for children to learn at home?	Percentage of a country's respondents who said "Religion/Faith"
F028	How often do you attend religious services?	Percentage of a country's respondents who said "Multiple Times a Week" or "Once a Week"
F034	Would you say you are a religious person (regardless of whether you attend services)?	Percentage of a country's respondents who said "Yes"
Environmental Responsibility		
A103	Are you an active member of an environmental group?	Percentage of a country's respondents who said "Yes"
A197	Is it important to this person look after the Environment?	Percentage of a country's respondents who said "Very much like me" or "Like me" (Top 2 categories)
Charity and Humanitarianism		
A105	Are you an active member of a charitable organization?	Percentage of a country's respondents who said "Yes"
Materialism		
Y002	Are you PostMaterialist?	Percentage of a country's respondents who said "Yes"
Social Cohesion		
	Do you belong to any of the following types of organizations:	A density measure of associational activity, measured by the average number of groups cited per participant in each country
A064 or A105	a) social welfare services for elderly, handicapped, or deprived people;	
A065 or A098	b) religious or church organizations;	
A066 or A100	c) education, arts, music, or cultural activities;	
A067 or A101	d) trade unions;	
A068 or A102	e) political parties or groups;	
A069	f) local community action on issues like poverty, employment,housing, racial equality;	
A070	g) third world development or human rights;	
A071 or A103	h) conservation, the environment, ecology;	
A072 or A104	i) professional associations;	
A073	j) youth work (e.g., scouts, guides, youth clubs, etc.).24	

Note: This table provides a detailed overview of the variables used to construct the *Social Values* measure.

Table A2: Distribution of Loans by Country

		Fraction of loans raised by			
Country	Number of loans	Sin Firms	Alcohol Firms	Tobacco Firms	Gambling Firms
Argentina	261	2.3%	2.3%	0.0%	0.0%
Australia	2,012	1.8%	0.7%	0.0%	1.1%
Bahamas	42	21.4%	0.0%	0.0%	21.4%
Belgium	447	8.1%	7.8%	0.0%	0.2%
Bermuda	332	5.4%	5.4%	0.0%	0.0%
Brazil	420	1.4%	0.2%	1.2%	0.0%
Cambodia	7	14.3%	14.3%	0.0%	0.0%
Canada	2,434	2.3%	1.2%	0.0%	1.1%
Cayman Islands	249	2.0%	0.0%	0.0%	2.0%
Chile	251	1.2%	1.2%	0.0%	0.0%
China	2,178	0.3%	0.1%	0.0%	0.1%
Colombia	87	9.2%	9.2%	0.0%	0.0%
Czech Republic	113	7.1%	6.2%	0.0%	0.9%
Denmark	199	5.0%	5.0%	0.0%	0.0%
Dominican Republic	9	33.3%	33.3%	0.0%	0.0%
France	3,492	2.1%	1.5%	0.0%	0.6%
Germany	2,589	0.4%	0.0%	0.0%	0.4%
Greece	269	3.3%	0.0%	0.7%	2.6%
Hong Kong	1,680	1.0%	0.5%	0.0%	0.5%
India	1,091	0.6%	0.3%	0.4%	0.0%
Indonesia	817	0.5%	0.0%	0.5%	0.0%
Ireland	439	5.2%	3.2%	0.0%	2.1%
Israel	82	1.2%	0.0%	0.0%	1.2%
Italy	1,242	2.1%	1.1%	0.0%	1.0%
Japan	991	1.4%	0.4%	0.6%	0.4%
Macao	48	64.6%	0.0%	0.0%	64.6%
Malaysia	279	1.8%	0.0%	0.0%	1.8%
Malta	29	13.8%	0.0%	0.0%	13.8%
Mexico	681	2.2%	1.5%	0.7%	0.0%
Netherlands	1,596	1.7%	1.2%	0.0%	0.5%
New Zealand	164	3.7%	0.0%	3.7%	0.0%
Norway	377	0.8%	0.8%	0.0%	0.0%
Peru	76	5.3%	5.3%	0.0%	0.0%
Philippines	246	10.2%	10.2%	0.0%	0.0%
Poland	225	0.4%	0.4%	0.0%	0.0%
Russian Federation	468	0.4%	0.4%	0.0%	0.0%
Singapore	761	2.5%	0.1%	0.1%	2.2%
South Korea	1,301	1.2%	1.2%	0.0%	0.0%
Spain	2,525	1.6%	0.9%	0.1%	0.6%
Sweden	646	1.7%	0.8%	0.9%	0.0%
Switzerland	656	0.9%	0.0%	0.8%	0.2%
Thailand	408	0.7%	0.7%	0.0%	0.0%
Turkey	226	0.9%	0.9%	0.0%	0.0%
United Kingdom	6,001	5.8%	2.6%	0.7%	2.5%
United States	94,426	2.0%	0.6%	0.3%	1.2%
Venezuela	48	6.3%	6.3%	0.0%	0.0%
Vietnam	170	0.6%	0.6%	0.0%	0.0%
Virgin Islands (British)	177	1.7%	0.0%	0.6%	1.1%
Total loans	133,267	2,914	1,067	360	1,487

Note: This table reports the total number of loans raised within each country and the fraction of these loans obtained by sin firms, separately for the alcohol, tobacco, and gambling industries. The underlying unit of observation is the loan tranche.

Table A3: Distribution of Loans by Year

Year	Number of loans	Fraction of loans raised by			
		Sin Firms	Alcohol Firms	Tobacco Firms	Gambling Firms
1988	1,831	3.1%	0.5%	2.2%	0.4%
1989	1,749	0.6%	0.1%	0.2%	0.3%
1990	1,598	0.9%	0.3%	0.2%	0.4%
1991	1,394	1.1%	0.5%	0.3%	0.3%
1992	1,662	1.4%	0.1%	0.5%	0.8%
1993	2,205	2.7%	0.9%	0.7%	1.1%
1994	2,826	1.8%	1.0%	0.3%	0.6%
1995	2,981	2.1%	1.0%	0.5%	0.6%
1996	4,082	1.7%	0.6%	0.5%	0.7%
1997	5,024	1.9%	0.7%	0.4%	0.8%
1998	4,414	2.1%	0.9%	0.1%	1.1%
1999	4,311	2.7%	1.5%	0.3%	0.9%
2000	4,836	2.2%	1.2%	0.3%	0.7%
2001	4,455	2.8%	1.4%	0.3%	1.1%
2002	4,614	2.7%	1.0%	0.4%	1.3%
2003	4,920	2.9%	1.3%	0.2%	1.3%
2004	5,995	2.2%	0.9%	0.2%	1.2%
2005	6,619	2.7%	0.9%	0.3%	1.5%
2006	7,153	2.2%	0.6%	0.1%	1.5%
2007	7,044	1.9%	0.5%	0.2%	1.2%
2008	4,066	2.5%	1.2%	0.2%	1.1%
2009	2,355	2.2%	1.2%	0.0%	1.0%
2010	3,673	2.1%	0.8%	0.3%	1.0%
2011	3,765	2.3%	0.9%	0.2%	1.2%
2012	3,805	2.5%	0.8%	0.2%	1.6%
2013	3,989	2.5%	0.6%	0.2%	1.7%
2014	4,104	2.3%	0.6%	0.4%	1.3%
2015	3,396	1.8%	0.8%	0.1%	1.0%
2016	2,985	2.7%	0.7%	0.0%	1.9%
2017	3,402	2.3%	0.2%	0.3%	1.7%
2018	3,392	1.5%	0.6%	0.2%	0.8%
2019	2,906	1.4%	0.4%	0.0%	1.0%
2020	2,502	1.8%	0.5%	0.4%	1.0%
2021	2,829	1.9%	0.4%	0.0%	1.5%
2022	1,961	1.9%	0.1%	0.4%	1.4%
2023	1,723	1.5%	0.9%	0.2%	0.4%
2024	1,664	1.9%	0.9%	0.1%	1.0%
2025	1,037	2.5%	0.8%	0.3%	1.4%
Total loans	133,267	2,914	1,067	360	1,487

Note: This table reports the total number of loans raised within each year and the fraction of these loans obtained by sin firms, separately for the alcohol, tobacco, and gambling industries. The underlying unit of observation is the loan tranche.

Table A4: US vs Rest of the World

	US	Rest of the World
	(1)	(2)
Sin	10.312	4.630
	(8.955)	(14.265)
Comparable	1.870	-14.406 *
	(4.688)	(8.103)
Borrower characteristics		
Tangibility	-2.833	-23.048 *
	(6.052)	(13.166)
Leverage	85.563 ***	23.920
	(7.278)	(15.467)
Z-Score	-15.500 ***	-21.933 ***
	(1.701)	(4.961)
Profitability	-162.139 ***	-75.518 **
	(16.798)	(35.338)
Sales	18.039 ***	4.497
	(3.111)	(5.492)
Public	-6.383	-5.331
	(4.508)	(7.983)
Size	-27.920 ***	-21.688 ***
	(3.159)	(5.474)
Prime Grade	-58.610 ***	-65.163 ***
	(10.839)	(6.395)
Junk Grade	0.568	41.763 ***
	(10.724)	(7.684)
Loan characteristics		
Secured	64.755 ***	34.175 ***
	(2.940)	(7.148)
Financial Covenants	0.156	-9.891
	(3.204)	(6.761)
Term Loan	49.277 ***	27.088 ***
	(2.514)	(4.208)
Seniority	-219.624 ***	-229.658 ***
	(51.278)	(44.921)
Loan Size	-3.930 ***	0.621
	(1.183)	(2.135)
Multiple Tranches	11.271 ***	7.797
	(2.408)	(5.240)
Currency	18.514 *	-12.203 *
	(9.637)	(6.506)
Maturity	-12.526 ***	-7.625 **
	(1.873)	(3.247)
Relationship Loan	-10.424 ***	6.759
	(2.039)	(7.946)
Refinancing	-10.104 *	-21.726 **
	(5.245)	(9.619)
Performance Pricing	-34.811 ***	-4.687
	(2.810)	(5.982)
Country characteristics		
Financial Development	2.220 *	-0.284
	(1.314)	(0.363)
Economic Growth	2.675	-3.748 ***
	(32.709)	(1.080)
Country Governance	-109.663	-23.633 *
	(75.881)	(12.991)
Fixed effects		
Borrower Country	Yes	Yes
Loan Signing Year	Yes	Yes
Loan Purpose	Yes	Yes
Adjusted R-squared	0.504	0.467
Observations	19,027	7,195

Note: The dependent variable is the loan spread. The table reports whether sin firms pay higher loan spreads than comparable firms in the syndicated loan market, separately for US borrowers (Column 1) and borrowers from outside the United States (Column 2). The number of observations refers to the number of loan tranches. Standard errors are clustered at the firm level and reported in parentheses. Statistical significance at the 10%, 5%, and 1% levels is indicated by *, **, and ***, respectively.

Table A5: SeparateSeperate Sin Industries

	Alcohol	Tobacco	Gambling
	(1)	(2)	(3)
Sin	-3.424	8.578	22.710 *
	(11.391)	(15.504)	(13.059)
Comparable	-13.119	-12.766 **	12.268 *
	(8.394)	(5.138)	(6.708)
Borrower characteristics			
Tangibility	-9.392 *	-8.678	-11.786 **
	(5.653)	(5.680)	(5.802)
Leverage	78.272 ***	78.015 ***	78.102 ***
	(6.694)	(6.677)	(6.674)
Z-Score	-16.233 ***	-16.275 ***	-16.187 ***
	(1.605)	(1.606)	(1.597)
Profitability	-150.325 ***	-151.123 ***	-151.668 ***
	(15.489)	(15.473)	(15.378)
Sales	13.806 ***	14.141 ***	13.755 ***
	(2.689)	(2.698)	(2.687)
Public	-6.117	-6.255	-6.284
	(3.940)	(3.940)	(3.925)
Size	-26.036 ***	-26.305 ***	-26.004 ***
	(2.653)	(2.663)	(2.654)
Prime Grade	-54.376 ***	-54.773 ***	-54.259 ***
	(5.169)	(5.202)	(5.179)
Junk Grade	15.389 ***	14.939 ***	15.547 ***
	(5.364)	(5.399)	(5.373)
Loan characteristics			
Secured	57.704 ***	57.871 ***	57.762 ***
	(2.897)	(2.907)	(2.880)
Financial Covenants	-0.552	0.283	-0.259
	(2.905)	(2.900)	(2.912)
Term Loan	43.558 ***	43.812 ***	43.693 ***
	(2.314)	(2.316)	(2.309)
Seniority	-225.151 ***	-225.231 ***	-225.049 ***
	(35.053)	(35.060)	(34.959)
Loan Size	-2.404 **	-2.361 **	-2.406 **
	(1.040)	(1.042)	(1.038)
Multiple Tranches	12.297 ***	12.362 ***	12.062 ***
	(2.334)	(2.338)	(2.335)
Currency	-4.924	-5.039	-4.822
	(5.738)	(5.793)	(5.799)
Maturity	-12.257 ***	-12.240 ***	-12.353 ***
	(1.629)	(1.632)	(1.638)
Relationship Loan	-6.251 ***	-6.076 ***	-6.286 ***
	(2.247)	(2.248)	(2.244)
Refinancing	-16.744 ***	-16.801 ***	-17.212 ***
	(4.413)	(4.424)	(4.430)
Performance Pricing	-30.153 ***	-30.658 ***	-30.661 ***
	(2.584)	(2.592)	(2.587)
Country characteristics			
Financial Development	-1.174 ***	-1.178 ***	-1.218 ***
	(0.250)	(0.253)	(0.250)
Economic Growth	-4.136 ***	-4.151 ***	-4.268 ***
	(1.018)	(1.015)	(1.013)
Country Governance	22.918 ***	24.493 ***	23.020 ***
	(8.255)	(8.329)	(8.333)
Fixed effects			
Borrower Country	Yes	Yes	Yes
Loan Signing Year	Yes	Yes	Yes
Loan Purpose	Yes	Yes	Yes
Adjusted R-squared	0.486	0.486	0.486
Observations	25,888	25,786	25,920

Note: The dependent variable is the loan spread. The table reports whether sin firms pay higher loan spreads than comparable firms in the syndicated loan market, separately for the alcohol industry (Column 1), the tobacco industry (Column 2), and the Gambling industry (Column 3). The number of observations refers to the number of loan tranches. Standard errors are clustered at the firm level and reported in parentheses. Statistical significance at the 10%, 5%, and 1% levels is indicated by *, **, and ***, respectively.

Table A6: Time Differences

	Pre 2003	Post 2002
	(1)	(2)
Sin	-3.384	13.201
	(10.333)	(9.933)
Comparable	12.352 **	-6.413
	(6.291)	(5.111)
Borrower characteristics		
Tangibility	-26.295 ***	-1.848
	(7.332)	(7.188)
Leverage	70.164 ***	86.014 ***
	(8.810)	(8.702)
Z-Score	-11.127 ***	-19.296 ***
	(2.151)	(2.135)
Profitability	-144.605 ***	-168.892 ***
	(18.554)	(22.327)
Sales	7.082 *	17.993 ***
	(3.773)	(3.417)
Public	-2.678	-6.715
	(5.392)	(5.249)
Size	-14.553 ***	-32.478 ***
	(3.830)	(3.338)
Prime Grade	-43.222 ***	-54.696 ***
	(7.752)	(5.902)
Junk Grade	22.432 ***	14.756 **
	(8.225)	(5.953)
Loan characteristics		
Secured	64.634 ***	53.128 ***
	(3.968)	(3.711)
Financial Covenants	-3.207	1.605
	(4.357)	(3.777)
Term Loan	31.631 ***	47.682 ***
	(2.921)	(2.922)
Seniority	-96.281 *	-266.067 ***
	(53.557)	(39.384)
Loan Size	-6.520 ***	-0.708
	(1.366)	(1.363)
Multiple Tranches	15.488 ***	10.213 ***
	(2.844)	(3.092)
Currency	6.235	-7.157
	(6.105)	(6.875)
Maturity	-6.704 ***	-15.091 ***
	(2.018)	(2.289)
Relationship Loan	-3.687	-7.080 **
	(2.839)	(3.040)
Refinancing		-16.750 ***
		(4.424)
Performance Pricing	-25.180 ***	-32.933 ***
	(3.471)	(3.556)
Country characteristics		
Financial Development	-3.061 ***	-1.220 ***
	(0.961)	(0.267)
Economic Growth	0.471	-5.741 ***
	(1.358)	(1.359)
Country Governance	71.037 ***	10.492
	(22.568)	(10.539)
Fixed effects		
Borrower Country	Yes	Yes
Loan Signing Year	Yes	Yes
Loan Purpose	Yes	Yes
Adjusted R-squared	0.561	0.467
Observations	8,705	17,517

Note: The dependent variable is the loan spread. The table reports whether sin firms pay higher loan spreads than comparable firms in the syndicated loan market, separately for loans rasied before 2003 (Column 1) and loans rased in 2003 or after(Column 2). The number of observations refers to the number of loan tranches. Standard errors are clustered at the firm level and reported in parentheses. Statistical significance at the 10%, 5%, and 1% levels is indicated by *, **, and ***, respectively.

Table A7: Different Sin Specifications

	Sin	Sin HK	Sin Wide
	(1)	(2)	(3)
Sin	-26.012	2.219	-3.273
	(22.669)	(6.974)	(6.154)
Comparable		1.066	4.017
		(4.265)	(5.141)
Borrower characteristics			
Tangibility	-20.064 ***	-9.278	-9.509 *
	(7.111)	(5.645)	(5.598)
Leverage	78.496 ***	78.749 ***	78.721 ***
	(6.592)	(6.637)	(6.632)
Z-Score	-16.391 ***	-16.354 ***	-16.346 ***
	(1.620)	(1.600)	(1.601)
Profitability	-149.952 ***	-149.281 ***	-149.146 ***
	(15.934)	(15.350)	(15.339)
Sales	11.759 ***	13.787 ***	13.677 ***
	(2.755)	(2.684)	(2.675)
Public	-7.205 *	-6.415	-6.451 *
	(3.946)	(3.919)	(3.916)
Size	-24.305 ***	-26.110 ***	-26.005 ***
	(2.737)	(2.651)	(2.639)
Prime Grade	-51.767 ***	-54.357 ***	-54.361 ***
	(5.040)	(5.133)	(5.166)
Junk Grade	14.200 ***	16.020 ***	15.993 ***
	(5.269)	(5.333)	(5.350)
Loan characteristics			
Secured	55.760 ***	57.684 ***	57.668 ***
	(2.863)	(2.872)	(2.872)
Financial Covenants	-0.018	-0.466	-0.492
	(2.860)	(2.886)	(2.885)
Term Loan	43.574 ***	43.407 ***	43.367 ***
	(2.280)	(2.292)	(2.293)
Seniority	-221.013 ***	-224.766 ***	-224.676 ***
	(34.916)	(35.020)	(35.021)
Loan Size	-3.314 ***	-2.438 **	-2.428 **
	(1.030)	(1.032)	(1.032)
Multiple Tranches	12.548 ***	12.211 ***	12.227 ***
	(2.313)	(2.320)	(2.313)
Currency	-5.635	-4.728	-4.731
	(5.514)	(5.693)	(5.691)
Maturity	-12.495 ***	-12.284 ***	-12.273 ***
	(1.627)	(1.617)	(1.618)
Relationship Loan	-6.391 ***	-6.346 ***	-6.387 ***
	(2.178)	(2.226)	(2.229)
Refinancing	-16.755 ***	-17.571 ***	-17.570 ***
	(4.320)	(4.386)	(4.382)
Performance Pricing	-30.284 ***	-30.399 ***	-30.433 ***
	(2.531)	(2.559)	(2.558)
Country characteristics			
Financial Development	-1.108 ***	-1.205 ***	-1.208 ***
	(0.244)	(0.248)	(0.248)
Economic Growth	-4.272 ***	-4.166 ***	-4.164 ***
	(0.996)	(1.006)	(1.007)
Country Governance	19.539 **	21.560 ***	21.433 ***
	(8.192)	(8.251)	(8.265)
Fixed effects			
Borrower Country	Yes	Yes	Yes
Loan Signing Year	Yes	Yes	Yes
Loan Purpose	Yes	Yes	Yes
Industry (FF)	Yes	No	No
Adjusted R-squared	0.493	0.486	0.486
Observations	26,222	26,222	26,222

Note: The dependent variable is the loan spread. The table reports whether sin firms pay higher loan spreads in the syndicated loan market under alternative sin definitions. Column (1) replaces the Comparable indicator with Fama–French industry fixed effects. Column (2) applies the sin definition of Hong and Kacperczyk (2009), based solely on SIC and NAICS codes and historical segment data from Compustat. Column (3) employs the broadest classification, combining the Hong and Kacperczyk definition with all firms identified as sin by either KLD or LSEG. The number of observations refers to the number of loan tranches. Standard errors are clustered at the firm level and reported in parentheses. Statistical significance at the 10%, 5%, and 1% levels is indicated by *, **, and ***, respectively.

Table A8: Bank Reputation

	Market Share	EQ	Fraction_EQ	UNPRB	Fraction UNPRB
	(1)	(2)	(3)	(4)	(5)
Sin	5.290	9.212	9.417	8.512	8.355
	(12.252)	(9.790)	(9.785)	(8.327)	(8.320)
Sin*Reputation	0.117	-1.185	-0.024	23.346	0.339
	(0.829)	(16.820)	(0.168)	(54.025)	(0.634)
Comparable	4.410	3.832	3.928	0.231	0.202
	(5.916)	(4.799)	(4.803)	(4.394)	(4.394)
Comparable*Reputation	-0.537	-14.218	-0.148	-3.315	-0.018
	(0.428)	(9.332)	(0.094)	(31.568)	(0.325)
Reputation	-0.811 ***	1.512	0.013	-9.874	-0.101
	(0.135)	(3.062)	(0.031)	(10.224)	(0.104)
Borrower characteristics					
Tangibility	-8.110	-9.438	-9.463	-8.629	-8.620
	(5.855)	(5.992)	(5.992)	(5.969)	(5.970)
Leverage	83.502 ***	82.972 ***	82.970 ***	82.938 ***	82.924 ***
	(6.831)	(6.899)	(6.897)	(6.894)	(6.894)
Z-Score	-16.166 ***	-15.948 ***	-15.944 ***	-15.969 ***	-15.970 ***
	(1.658)	(1.649)	(1.649)	(1.648)	(1.648)
Profitability	-141.964 ***	-154.783 ***	-154.818 ***	-154.344 ***	-154.337 ***
	(15.843)	(16.072)	(16.073)	(16.086)	(16.086)
Sales	14.703 ***	14.021 ***	14.011 ***	14.068 ***	14.071 ***
	(2.835)	(2.869)	(2.869)	(2.866)	(2.866)
Public	-6.940 *	-7.090 *	-7.097 *	-7.104 *	-7.111 *
	(4.131)	(4.138)	(4.138)	(4.140)	(4.140)
Size	-25.724 ***	-26.017 ***	-26.002 ***	-26.013 ***	-26.017 ***
	(2.834)	(2.858)	(2.858)	(2.850)	(2.850)
Prime Grade	-52.971 ***	-52.935 ***	-52.925 ***	-52.851 ***	-52.863 ***
	(6.078)	(6.165)	(6.164)	(6.135)	(6.139)
Junk Grade	14.918 ***	13.338 **	13.329 **	13.477 **	13.462 **
	(5.783)	(5.968)	(5.964)	(5.933)	(5.937)
Loan characteristics					
Secured	56.559 ***	58.499 ***	58.503 ***	58.599 ***	58.592 ***
	(3.068)	(3.099)	(3.100)	(3.102)	(3.101)
Financial Covenants	0.830	0.849	0.837	1.050	1.056
	(3.038)	(3.094)	(3.094)	(3.091)	(3.090)
Term Loan	42.563 ***	44.122 ***	44.120 ***	44.081 ***	44.091 ***
	(2.496)	(2.545)	(2.545)	(2.546)	(2.546)
Seniority	-246.882 ***	-244.905 ***	-244.883 ***	-245.469 ***	-245.503 ***
	(34.393)	(36.254)	(36.253)	(36.313)	(36.314)
Loan Size	-1.979 *	-2.805 **	-2.803 **	-2.821 **	-2.823 **
	(1.096)	(1.107)	(1.107)	(1.108)	(1.108)
Multiple Tranches	15.230 ***	12.642 ***	12.655 ***	12.659 ***	12.663 ***
	(2.494)	(2.557)	(2.556)	(2.548)	(2.547)
Currency	-4.986	-4.267	-4.296	-4.449	-4.428
	(6.576)	(6.619)	(6.619)	(6.617)	(6.617)
Maturity	-11.422 ***	-11.716 ***	-11.712 ***	-11.716 ***	-11.723 ***
	(1.709)	(1.725)	(1.725)	(1.726)	(1.726)
Relationship Loan	-4.858 **	-7.496 ***	-7.485 ***	-7.444 ***	-7.446 ***
	(2.090)	(2.087)	(2.088)	(2.092)	(2.092)
Refinancing	-16.481 ***	-15.684 ***	-15.665 ***	-15.699 ***	-15.741 ***
	(5.113)	(5.218)	(5.217)	(5.232)	(5.232)
Performance Pricing	-31.396 ***	-32.957 ***	-32.956 ***	-33.112 ***	-33.102 ***
	(2.655)	(2.711)	(2.711)	(2.707)	(2.706)
Country characteristics					
Financial Development	-1.576 ***	-1.617 ***	-1.616 ***	-1.655 ***	-1.649 ***
	(0.343)	(0.345)	(0.345)	(0.352)	(0.351)
Economic Growth	-3.131 **	-3.241 **	-3.241 **	-3.235 **	-3.228 **
	(1.409)	(1.443)	(1.442)	(1.442)	(1.440)
Country Governance	35.396 ***	30.169 ***	30.263 ***	30.612 ***	30.610 ***
	(9.803)	(9.805)	(9.799)	(9.799)	(9.798)
Fixed effects					
Borrower Country	Yes	Yes	Yes	Yes	Yes
Loan Signing Year	Yes	Yes	Yes	Yes	Yes
Loan Purpose	Yes	Yes	Yes	Yes	Yes
Adjusted R-squared	0.489	0.482	0.482	0.482	0.482
Observations	22,265	22,623	22,623	22,623	22,623

Note: The dependent variable is the loan spread. The table examines whether heterogeneity in bank reputation influences whether sin firms pay higher loan spreads in the syndicated loan market than comparable firms. Reputation represents a different measure in each column. Column (1) measures reputation as the average market share of the lead arranger banks in the year prior to loan signing. Column (2) uses a dummy equal to one if at least one lead arranger was a signatory to the Equator Principles at the time of loan signing and zero otherwise. Column (3) measures the fraction of lead arrangers that were Equator Principles signatories at the time of loan signing. Columns (4) and (5) use analogous measures for the UN Principles for Responsible Banking (UNPRB): a dummy for whether at least one lead arranger was a UN PRB signatory (Column 4) and the fraction of lead arrangers that were UN PRB signatories (Column 5). The number of observations refers to the number of loan tranches. Standard errors are clustered at the firm level and reported in parentheses. Statistical significance at the 10%, 5%, and 1% levels is indicated by *, **, and ***, respectively.

Table A9: Sin Lenders

	# Loans	$ Volume
	(1)	(2)
Sin	6.058	5.867
	(8.482)	(8.702)
Sin*Sin Share	3.412 *	2.933 *
	(1.984)	(1.763)
Comparable	-1.989	-1.193
	(5.100)	(5.095)
Comparable*Sin Share	0.916	-0.487
	(2.374)	(2.093)
Sin Share	-1.038	0.298
	(2.345)	(2.112)
Borrower characteristics		
Tangibility	-10.739 **	-10.771 **
	(5.375)	(5.379)
Leverage	90.527 ***	90.472 ***
	(6.716)	(6.709)
Z-Score	-16.135 ***	-16.141 ***
	(1.571)	(1.574)
Profitability	-154.920 ***	-155.245 ***
	(15.308)	(15.321)
Sales	15.997 ***	16.004 ***
	(2.703)	(2.702)
Public	-6.257	-6.302
	(3.905)	(3.906)
Size	-28.392 ***	-28.395 ***
	(2.783)	(2.781)
Prime Grade	-55.514 ***	-55.576 ***
	(5.727)	(5.730)
Junk Grade	9.398 *	9.328 *
	(5.633)	(5.630)
Loan characteristics		
Secured	59.026 ***	59.015 ***
	(2.858)	(2.860)
Financial Covenants	0.187	0.344
	(2.848)	(2.849)
Term Loan	47.609 ***	47.624 ***
	(3.006)	(3.009)
Seniority	-234.524 ***	-234.594 ***
	(44.845)	(44.853)
Loan Size	-1.494	-1.448
	(1.225)	(1.226)
Multiple Tranches	9.578 ***	9.639 ***
	(2.468)	(2.470)
Currency	-4.386	-4.442
	(7.221)	(7.224)
Maturity	-10.107 ***	-10.133 ***
	(1.681)	(1.681)
Relationship Loan	-7.015 ***	-6.973 ***
	(1.986)	(1.992)
Refinancing	-9.913 **	-9.989 **
	(4.708)	(4.706)
Performance Pricing	-28.916 ***	-28.997 ***
	(2.646)	(2.647)
Country characteristics		
Financial Development	-1.137 ***	-1.137 ***
	(0.305)	(0.307)
Economic Growth	-3.893 ***	-3.901 ***
	(1.328)	(1.328)
Country Governance	32.550 ***	32.877 ***
	(9.300)	(9.271)
Fixed effects		
Borrower Country	Yes	Yes
Loan Signing Year	Yes	Yes
Loan Purpose	Yes	Yes
Adjusted R-squared	0.497	0.497
Observations	16,039	16,036

Note: The dependent variable is the loan spread. The table examines whether some banks specialize in lending to sin firms and potentially extract compensation for doing so. Sin_Share in Column (1) represents the value-weighted share of past sin-firm loans (measured in loan counts) in each lead arranger's historical loan portfolio up to the year of loan signing. Column (2) uses an analogous measure based on dollar volume, capturing the value-weighted share of past sin-loan volume relative to the bank's total arranged loan volume. The number of observations refers to the number of loan tranches. Standard errors are clustered at the firm level and reported in parentheses. Statistical significance at the 10%, 5%, and 1% levels is indicated by *, **, and ***, respectively.

Table A10: Social Norms and the Price of Sin (Including Lender Parent Fixed Effects)

	Social Norm = *Sin Values*	Social Norm = *Sin Composition*
	(1)	(2)
Sin	-21.861	-28.519
	(13.666)	(19.957)
Sin * Social Norm	42.297 **	27.718 **
	(16.770)	(13.235)
Comparable	0.364	10.234
	(8.516)	(12.261)
Comparble * Social Norm	-3.245	-11.106
	(10.004)	(8.465)
Social Norm	-6.041	9.181
	(11.460)	(9.611)
Borrower characteristics		
Tangibility	-1.828	-1.106
	(5.566)	(6.616)
Leverage	78.153 ***	85.690 ***
	(6.348)	(7.472)
Z-Score	-13.663 ***	-15.259 ***
	(1.535)	(1.966)
Profitability	-132.062 ***	-134.868 ***
	(13.828)	(17.006)
Sales	12.132 ***	14.217 ***
	(2.618)	(3.270)
Public	-6.895 *	-10.679 **
	(3.966)	(4.649)
Size	-22.318 ***	-23.860 ***
	(2.645)	(3.303)
Prime Grade	-52.521 ***	-55.617 ***
	(6.054)	(7.473)
Junk Grade	18.154 ***	17.945 **
	(5.469)	(7.060)
Loan characteristics		
Secured	50.005 ***	45.779 ***
	(3.035)	(3.732)
Financial Covenants	5.138 *	6.647 *
	(2.915)	(3.588)
Term Loan	39.912 ***	45.392 ***
	(2.304)	(2.673)
Seniority	-251.062 ***	-274.011 ***
	(36.558)	(40.503)
Loan Size	-3.446 ***	-3.308 ***
	(1.034)	(1.240)
Multiple Tranches	14.130 ***	13.364 ***
	(2.294)	(2.630)
Currency	-3.841	-7.548
	(5.831)	(6.684)
Maturity	-12.129 ***	-13.235 ***
	(1.692)	(2.067)
Relationship Loan	-1.044	-2.273
	(1.933)	(2.388)
Refinancing	-18.087 ***	-18.224 ***
	(5.027)	(5.520)
Performance Pricing	-29.424 ***	-31.559 ***
	(2.488)	(3.072)
Country characteristics		
Financial Development	-1.461 ***	-1.644 ***
	(0.324)	(0.486)
Economic Growth	-2.324 *	-3.531 **
	(1.313)	(1.731)
Country Governance	30.886 ***	37.378 ***
	(10.317)	(11.774)
Fixed effects		
Borrower Country	Yes	Yes
Loan Signing Year	Yes	Yes
Loan Purpose	Yes	Yes
Lender Parent Country	No	No
Lender Parent	Yes	Yes
Adjusted R-squared	0.569	0.554
Observations	22,560	16,801

Note: The dependent variable is the loan spread. This table examines whether the social norms of banks moderate the effect of sin status on loan pricing in the syndicated loan market, including Lender Parent FE. In Column (1), Social_Norm is defined as the IVS-based Sin_Values indicator. In Column (2), Social_Norm represents the Sin_Composition measure derived from the PCA that combines IVS moral-values data with alcohol and tobacco consumption, mortality data, and the dominant religious group. Cultural variables are measured at the lender-parent level. The number of observations refers to the number of loan tranches. Standard errors are clustered at the firm level and reported in parentheses. Statistical significance at the 10%, 5%, and 1% levels is indicated by *, **, and ***, respectively.

Table A11: Social Norms and the Price of Sin for Different Sin Definitions

	Sin	Sin	Sin HK	Sin HK	Sin Wide	Sin Wide
	(1)	(2)	(3)	(4)	(5)	(6)
Sin	-41.962 *	-45.845	-24.698 *	-26.202	-4.870	-18.066
	(22.616)	(28.049)	(12.637)	(17.774)	(10.930)	(20.060)
Sin * Social Norm	41.356 ***	20.185 *	36.665 **	20.362 *	7.076	11.930
	(14.131)	(11.843)	(15.296)	(11.669)	(13.651)	(14.572)
Comparable			2.559	12.880	-3.052	6.583
			(8.755)	(12.693)	(9.963)	-7.637
Comparble * Social Norm			-3.857	-11.971	3.859	(10.698)
			(10.352)	(8.693)	(12.275)	(8.465)
Social Norm	-7.080	9.174	-6.079	9.225	-6.495	8.885
	(11.368)	(9.495)	(11.468)	(9.631)	(11.479)	(9.220)
Borrower characteristics						
Tangibility	-11.991 *	-11.767	-1.948	-1.261	-2.437	-1.017
	(7.120)	(8.735)	(5.577)	(6.631)	(5.521)	(6.614)
Leverage	78.832 ***	87.362 ***	78.380 ***	85.936 ***	78.459 ***	86.342 ***
	(6.306)	(7.405)	(6.363)	(7.478)	(6.367)	(7.482)
Z-Score	-13.286 ***	-14.937 ***	-13.633 ***	-15.215 ***	-13.619 ***	-15.133 ***
	(1.524)	(1.958)	(1.534)	(1.964)	(1.536)	(1.966)
Profitability	-133.092 ***	-137.033 ***	-132.061 ***	-134.756 ***	-132.163 ***	-136.001 ***
	(14.368)	(17.982)	(13.826)	(17.006)	(13.826)	(17.001)
Sales	9.457 ***	10.808 ***	12.043 ***	14.076 ***	11.915 ***	14.235 ***
	(2.692)	(3.401)	(2.614)	(3.262)	(2.598)	(3.257)
Public	-7.958 **	-10.990 **	-7.034 *	-10.691 **	-6.961 *	-10.446 **
	(4.007)	(4.754)	(3.994)	(4.670)	(3.994)	(4.673)
Size	-20.188 ***	-21.094 ***	-22.195 ***	-23.669 ***	-21.994 ***	-23.627 ***
	(2.770)	(3.489)	(2.641)	(3.296)	(2.631)	(3.280)
Prime Grade	-49.265 ***	-51.103 ***	-52.711 ***	-55.928 ***	-52.715 ***	-55.767 ***
	(5.990)	(7.414)	(6.051)	(7.459)	(6.038)	(7.397)
Junk Grade	16.926 ***	18.114 ***	18.087 ***	17.722 **	18.208 ***	17.914 **
	(5.425)	(7.014)	(5.465)	(7.048)	(5.447)	(7.045)
Loan characteristics						
Secured	48.394 ***	43.828 ***	50.033 ***	45.823 ***	50.075 ***	45.817 ***
	(3.025)	(3.717)	(3.036)	(3.735)	(3.036)	(3.727)
Financial Covenants	5.317 *	7.116 **	5.133 *	6.650 *	5.089 *	6.667 *
	(2.914)	(3.586)	(2.916)	(3.588)	(2.915)	(3.587)
Term Loan	40.078 ***	45.780 ***	39.901 ***	45.357 ***	39.936 ***	45.460 ***
	(2.298)	(2.666)	(2.305)	(2.672)	(2.303)	(2.685)
Seniority	-243.871 ***	-266.784 ***	-250.969 ***	-273.917 ***	-251.262 ***	-273.810 ***
	(36.608)	(40.278)	(36.548)	(40.498)	(36.530)	(40.409)
Loan Size	-4.121 ***	-4.112 ***	-3.452 ***	-3.287 ***	-3.485 ***	-3.351 ***
	(1.035)	(1.242)	(1.033)	(1.240)	(1.034)	(1.235)
Multiple Tranches	14.471 ***	13.900 ***	14.104 ***	13.377 ***	14.084 ***	13.322 ***
	(2.292)	(2.628)	(2.294)	(2.632)	(2.284)	(2.633)
Currency	-5.090	-9.884	-3.887	-7.591	-3.855	-7.339
	(5.742)	(6.573)	(5.823)	(6.674)	(5.829)	(6.666)
Maturity	-12.422 ***	-13.391 ***	-12.101 ***	-13.234 ***	-12.066 ***	-13.181 ***
	(1.700)	(2.055)	(1.692)	(2.067)	(1.694)	(2.073)
Relationship Loan	-1.109	-2.597	-1.099	-2.337	-1.145	-2.444
	(1.918)	(2.371)	(1.934)	(2.390)	(1.936)	(2.401)
Refinancing	-17.655 ***	-17.911 ***	-18.104 ***	-18.280 ***	-18.192 ***	-18.274 ***
	(4.937)	(5.431)	(5.032)	(5.521)	(5.038)	(5.538)
Performance Pricing	-29.287 ***	-31.551 ***	-29.374 ***	-31.572 ***	-29.354 ***	-31.524 ***
	(2.463)	(3.015)	(2.489)	(3.073)	(2.493)	(3.078)
Country characteristics						
Financial Development	-1.352 ***	-1.456 ***	-1.469 ***	-1.656 ***	-1.466 ***	-1.645 ***
	(0.318)	(0.472)	(0.325)	(0.486)	(0.325)	(0.488)
Economic Growth	-2.514 *	-3.695 **	-2.330 *	-3.521 **	-2.337 *	-3.470 **
	(1.299)	(1.734)	(1.313)	(1.730)	(1.313)	(1.732)
Country Governance	29.969 ***	34.270 ***	30.840 ***	37.371 ***	30.579 ***	37.533 ***
	(10.182)	(11.493)	(10.309)	(11.765)	(10.264)	(11.616)
Fixed effects						
Borrower Country	Yes	Yes	Yes	Yes	Yes	Yes
Loan Signing Year	Yes	Yes	Yes	Yes	Yes	Yes
Loan Purpose	Yes	Yes	Yes	Yes	Yes	Yes
Lender Parent Country	No	No	No	No	No	No
Lender Parent	Yes	Yes	Yes	Yes	Yes	Yes
Industry (FF)	Yes	Yes	No	No	No	No
Adjusted R-squared	0.575	0.561	0.569	0.554	0.569	0.554
Observations	22,560	16,801	22,560	16,801	22,560	16,801

Note: The dependent variable is the loan spread. This table examines whether the social norms of banks moderate the effect of sin status on loan pricing in the syndicated loan market under three alternative sin definitions, with two social-norm measures reported for each definition. Columns (1) and (2) apply the sin definition using Fama–French industry fixed effects instead of the Comparable indicator. Columns (3) and (4) use the Hong and Kacperczyk (2009) definition based solely on SIC and NAICS codes and historical Compustat segment data. Columns (5) and (6) employ the broadest definition, combining the Hong and Kacperczyk classification with all firms identified as sin by KLD or LSEG. In Columns (1), (3), and (5), Social_Norm is defined as the IVS-based Sin_Values indicator. In Columns (2), (4), and (6), Social_Norm is the PCA-based Sin_Composition measure, constructed from IVS moral-values data together with alcohol and tobacco consumption, mortality data, and the dominant religious affiliation. Cultural variables are measured at the lender-parent level. The number of observations refers to loan tranches. Standard errors are clustered at the firm level and reported in parentheses. Statistical significance at the 10%, 5%, and 1% levels is indicated by *, **, and ***, respectively.

Table A12: Social Norms and the Price of Sin for Seperate Industries

	Alcohol		Tobacco	
	Social Norm = *Sin Values*	Social Norm = *Alcohol Composition*	Social Norm = *Sin Values*	Social Norm = *Tobacco Composition*
	(1)	(2)	(3)	(4)
Sin	-48.461	-80.800 **	-30.389	-50.348
	(29.988)	(32.468)	(22.694)	(44.705)
Sin * Social Norm	56.506 *	43.967 ***	63.388 **	43.006 *
	(31.036)	(15.151)	(26.802)	(25.981)
Comparable	5.676	16.170	-13.627	-8.504
	(26.825)	(28.047)	(12.385)	(24.856)
Comparble * Social Norm	-22.012	-16.866	-0.745	16.554
	(27.061)	(12.311)	(15.238)	(15.739)
Social Norm	-5.768	-16.866	-4.819	16.554
	(11.493)	(12.311)	(11.726)	(15.739)
Borrower characteristics				
Tangibility	-2.035	-4.495	-1.558	-1.388
	(5.578)	(5.814)	(5.596)	(6.707)
Leverage	77.746 ***	77.103 ***	77.586 ***	85.389 ***
	(6.413)	(6.596)	(6.380)	(7.493)
Z-Score	-13.600 ***	-13.736 ***	-13.619 ***	-15.292 ***
	(1.540)	(1.640)	(1.536)	(1.968)
Profitability	-133.195 ***	-127.287 ***	-133.303 ***	-135.840 ***
	(13.933)	(14.223)	(13.911)	(17.136)
Sales	12.326 ***	12.003 ***	12.538 ***	14.686 ***
	(2.623)	(2.786)	(2.628)	(3.288)
Public	-6.413	-7.392 *	-6.820 *	-10.141 **
	(3.983)	(4.076)	(3.979)	(4.638)
Size	-22.464 ***	-22.349 ***	-22.585 ***	-24.231 ***
	(2.650)	(2.820)	(2.658)	(3.322)
Prime Grade	-52.160 ***	-51.027 ***	-51.906 ***	-55.540 ***
	(6.101)	(6.849)	(6.142)	(7.661)
Junk Grade	18.307 ***	18.244 ***	18.350 ***	17.532 **
	(5.512)	(6.559)	(5.555)	(7.246)
Loan characteristics				
Secured	49.910 ***	48.766 ***	50.137 ***	45.620 ***
	(3.071)	(3.217)	(3.076)	(3.734)
Financial Covenants	5.609 *	6.018 *	6.123 **	7.763 **
	(2.949)	(3.152)	(2.938)	(3.624)
Term Loan	39.746 ***	41.776 ***	39.979 ***	45.445 ***
	(2.323)	(2.333)	(2.322)	(2.700)
Seniority	-250.996 ***	-258.511 ***	-251.192 ***	-274.445 ***
	(36.536)	(37.439)	(36.499)	(40.305)
Loan Size	-3.440 ***	-3.528 ***	-3.438 ***	-3.374 ***
	(1.040)	(1.079)	(1.044)	(1.259)
Multiple Tranches	14.452 ***	14.037 ***	14.609 ***	13.681 ***
	(2.307)	(2.296)	(2.311)	(2.675)
Currency	-5.124	-6.726	-4.730	-7.946
	(5.857)	(6.343)	(5.895)	(6.799)
Maturity	-12.171 ***	-12.430 ***	-12.224 ***	-13.218 ***
	(1.704)	(1.759)	(1.703)	(2.075)
Relationship Loan	-1.042	-1.615	-0.993	-2.234
	(1.949)	(2.050)	(1.955)	(2.404)
Refinancing	-18.735 ***	-17.886 ***	-18.784 ***	-18.485 ***
	(5.071)	(5.507)	(5.075)	(5.510)
Performance Pricing	-29.512 ***	-32.141 ***	-29.665 ***	-32.030 ***
	(2.520)	(2.643)	(2.517)	(3.114)
Country characteristics				
Financial Development	-1.377 ***	-1.699 ***	-1.358 ***	-1.628 ***
	(0.324)	(0.444)	(0.325)	(0.485)
Economic Growth	-2.465 *	-1.933	-2.562 *	-3.866 **
	(1.319)	(1.313)	(1.318)	(1.733)
Country Governance	32.626 ***	37.935 ***	33.326 ***	38.063 ***
	(10.359)	(11.659)	(10.442)	(11.888)
Fixed effects				
Borrower Country	Yes	Yes	Yes	Yes
Loan Signing Year	Yes	Yes	Yes	Yes
Loan Purpose	Yes	Yes	Yes	Yes
Lender Parent Country	No	No	No	No
Lender Parent	Yes	Yes	Yes	Yes
Adjusted R-squared	0.569	0.558	0.570	0.554
Observations	22,277	20,478	22,224	16,542

Note: The dependent variable is the loan spread. This table examines whether the social norms of banks moderate the effect of sin status on loan pricing in the syndicated loan market. Columns (1) and (2) restrict the sample to alcohol-industry borrowers; Columns (3) and (4) restrict the sample to tobacco-industry borrowers. In Columns (1) and (3), Social_Norm is defined as the IVS-based Sin_Values indicator. In Column (2), Social_Norm is the Alcohol_Composition measure derived from the PCA using IVS moral-values data together with alcohol consumption and alcohol-related mortality. In Column (4), Social_Norm is the Tobacco_Composition measure, constructed analogously using IVS moral-values data combined with cigarette consumption and tobacco-related mortality. Cultural variables are measured at the lender-parent level. The number of observations refers to the number of loan tranches. Standard errors are clustered at the firm level and reported in parentheses. Statistical significance at the 10%, 5%, and 1% levels is indicated by *, **, and ***, respectively.