Mind the Gap: Gender Discrimination in Loan Pricing Around the World

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Abstract

We examine how international cross-cultural variations in attitudes towards female executives affect the pricing of large, mostly syndicated business loans. In countries where skepticism and negative stereotypes about women's managerial abilities prevail, firms led by female CFOs face significantly higher loan spreads than firms led by male CFOs. In these countries, female-led firms also receive loans of significantly smaller size than male-led firms. Our results provide first evidence of discrimination against women in the international, mostly syndicated business loan market. These results are robust to using different measures of cultural attitudes towards women in the labor market.

Keywords: CFO, Gender, Debt, Banks, Culture, Loan Pricing

JEL classification: G21, G32, J16, Z13

1. Introduction

Despite a global trend toward greater gender equality, significant gender discrimination still exists (Global Gender Gap Report, 2023). Empirical evidence demonstrates that women face gender-based discrimination across various domains, including healthcare (Azad et al., 2020; Safran et al., 1997), education (Alan et al., 2018; Jayachandran, 2015), work-life balance (Pace & Sciotto, 2021), political representation (Hooghe et al., 2015; Teele et al., 2018), and most notably, in the labor market (Bell et al., 2002; Grün, 2004; Moss-Racusin et al., 2012). Although several countries introduced gender quotas for female directors in publicly listed companies – starting with Norway in 2008 and later adopted by other European countries like Belgium, France, Germany, Italy, and Spain – and the number of women in executive positions has increased, women are still significantly underrepresented in corporate boards, particularly in top executive roles such as CEO and CFO (MSCI, 2023).

In financial markets, particularly the debt markets, the evidence on gender discrimination is mixed. Discrimination has been widely documented in the mortgage credit market (Fang & Munneke, 2017; Ladd, 1982; Robinson, 2002). In peer-to-peer lending, even if female borrowers exhibit higher creditworthiness than their male counterparts, their likelihood of securing funding remains the same (Chen et al., 2020). For small business lending, some studies highlight discrimination against female executives (Alesina et al., 2013; Fay & Williams, 1993; Mijid & Bernasek, 2013), while others find no significant gender differences (Blanchflower et al., 2003; Storey, 2004). In contrast, research on large corporations suggests that firms led by female executives receive more favorable loan conditions (Francis et al., 2013; Luo et al., 2018). Notably, most existing studies focus on single-country samples, such as Italy (Alesina et al., 2013), China (Chen, 2020; Luo et al., 2018), Trinidad and Tobago (Storey, 2004), New Zealand (Fay & Williams, 1993), and the United States (Blanchflower et al., 2003; Francis et al., 2013; Robinson, 2002).

This study contributes to this evidence by investigating internationally whether firms led by female top executives face discriminatory treatment in the (syndicated) loan market. We use an international dataset comprising 14,039 loans from 3,916 individual firms across 57 countries from 2003 to 2024. After controlling for firm, loan, country, and executive characteristics, we observe no significant difference in bank loan spreads between firms led by female and male top executives. The picture changes once we include cross-country differences in the perception of female executives. We introduce a proxy for a country's attitudes and beliefs regarding women's ability in executive positions relative to men. Specifically, the proxy is derived from the Integrated Value Survey (IVS) statement: "Men make better business

executives than women". We aggregate individual responses at the country level by calculating the ratio of respondents who "disagree" or "strongly disagree" with the statement to the total number of respondents and refer to this variable as our "equality score". The results indicate that in a hypothetical country where the equality score equals zero, meaning not a single respondent disagrees with the statement that men make better business executives than women, firms with at least one female top executive would face a loan spread that is 221 basis points higher than for male-led firms, all else equal. Although such a country is not represented in the sample, the lowest observed equality score is in Egypt (2006), at 13, corresponding to a surcharge of 180.47 basis points for female-led firms relative to the sample average. Each percentage point increase in the share of respondents disagreeing with the statement is associated with a 2.57 basis point reduction in the spread difference. In the average country of the sample, firms with female executives face a surcharge of 6.44 basis points. When we disaggregate the executive roles, we find that the observed pricing differences are driven by the gender of the CFO, rather than the CEO.

When considering loan sizes, we see that a negative perception about female business leaders in a country's population leads to substantial costs for firms with female leaders. Using cultural values from 2020 and considering the sample's average loan size of $674.5 million, we estimate that firms with female CFOs in Indonesia, which have a relatively low cultural score of 38, pay an additional spread of 85 basis points and thus incur an additional cost of approximately $5.76 million compared to firms with male CFOs, all else being equal. This higher loan cost for female-led firms poses a substantial competitive disadvantage for firms with female CFOs and might be a good reason for firms to prefer hiring male executives. For comparison, in the United States, the focus of much prior research on gender effects in loan pricing (Blanchflower et al., 2013; Francis et al., 2013; Robinson, 2002), where the equality score of 2019 is 88, the loan pricing difference between firms with female and male CFOs is virtually zero. After controlling for firm-, loan-, country, and executive-level characteristics, firms with female CFOs pay only 1.7 basis points or $114,665 less for a loan of an average size than those with male CFOs.

The results are robust to alternative sample specifications and different measures of cultural attitudes. Notably, the results are similar when culture is measured by the share of a country's respondents who "disagree" or "strongly disagree" with the IVS statements "Men make better political leaders than women." or "Problem if women have more income than their husband" or, alternatively, the statement "Job scarce: Men should have more right to a job than women". These consistent findings provide preliminary evidence that the observed patterns are

not limited to perceptions of women in executive roles. Instead, they appear to be driven by broader patriarchal norms and traditional gender-role beliefs regarding women's participation in society, for example, as political leaders, and in the labor market.

We also examine whether gender-related differences extend beyond pricing terms to the non-pricing dimensions of loan contracts. Specifically, we investigate whether firms with female CFOs receive different loan amounts compared to those led by male CFOs. The results indicate that female-led firms receive significantly smaller loans in countries where negative stereotypes about women in business are more widely shared. Using the earlier example of Egypt in 2006, where societal attitudes strongly disfavor female executives, female CFOs receive loans that are approximately 73.6% smaller than those of otherwise similar firms with male CFOs. Based on the sample's average loan size, this corresponds to a reduction of approximately $496.5 million. In contrast, in a country with an equality score similar to the average score of our sample (83.4), the estimated loan size reduction for firms with female CFOs is smaller, at approximately 6.4%, but still translates to a loan difference of $43.2 million. Finally, in the United States, where the 2019 equality score is 88, the estimated difference in loan size between firms with female and male CFOs is minor. Firms with female CFOs receive just 1.7% larger loans, corresponding to a loan gap of approximately $11.5 million.

This study contributes to the existing literature on gender discrimination in financial markets in several ways. While previous research has explored gender biases in lending practices, particularly in small business markets (Alesina et al., 2013; Blanchflower et al., 2003; Fay & Williams, 1993; Mijid & Bernasek, 2013; Storey, 2004), limited attention has been paid to the role of executive gender in large and syndicated loans. We address this gap by offering the first analysis of the relationship between top executive gender and loan pricing in the international, mostly syndicated loan market. We complement the findings of Francis et al. (2013) and Luo et al. (2018), who focus on one country, by examining cross-country variations. As our results confirm, investigating cross-country variation is crucial in this context because discrimination against women in business varies substantially worldwide and has economically and statistically significant effects on loan pricing and loan amounts.

Finally, and perhaps most notably, we complement previous literature on cultural influences on financial decision-making (Alesina and Giuliano, 2015; Dyck et al., 2019; Falk et al., 2018; Guiso et al.,2006) by showing that a country's societal attitudes towards gender are a critical determinant of both pricing and non-pricing terms in the international and mostly syndicated loan market. This highlights the importance of considering the cultural context when analyzing soft factors, such as gender, which are often shaped by subjective evaluations.

The remainder of this article is structured as follows: Section 2 provides background literature and develops hypotheses. Section 3 describes the data and sample and provides descriptive statistics. Section 4 explains the methodology and empirical results. Section 5 concludes.

2. Background and Hypotheses

Female executives are frequently associated with greater risk aversion and more ethical behavior compared to their male counterparts (Faccio et al., 2016; Huang & Kisgen, 2013; Luo et al., 2020). Moreover, a growing body of research shows that these behavioral differences persist across a wide range of cultural contexts and countries (Atari et al., 2020; Bönte, 2015; Cárdenas et al., 2012; Markowsky & Beblo, 2022; Qian et al., 2024) and are linked to lower information and agency risk, and ultimately a reduced probability of default (Faccio et al., 2016). However, unlike hard financial data, the evaluation of soft information, such as gender, is an inherently subjective process and, therefore, heavily influenced by a person's own beliefs. These beliefs are shaped by culture, which can be described as a set of norms, attitudes, and beliefs shared by a specific group (Hofstede, 1980). Culture significantly influences an individual's beliefs about gender-specific roles and stereotypes (Carrasco et al., 2015; Nelson & Levesque, 2007), potentially leading to unconscious discrimination (Fay & Williams, 1993). Stereotypes act as expectations about the attributes and behaviors of group members (Ellemers, 2018), often ingrained from an early age and reproduced in personal behavioral traits and beliefs (Ellemers, 2018). These stereotypes vary significantly across countries, influenced by the underlying cultural context (Hofstede, 1980; Inglehart, 2015; House, 2004). As a result, it is plausible that differing stereotypes about female executives lead banks to interpret such soft information differently, resulting in variations in loan spreads.

Empirical evidence demonstrated that gender stereotypes differ significantly across nations. For instance, a survey study conducted by Breda et al. (2020), which included 300,000 individuals across 64 nations, shows that the underlying culture influences individuals' perceptions of girls in math. Using survey data from 500,000 participants in 72 countries, Napp and Breda (2022) demonstrate that, despite the stereotype that men are more talented than women, the strength of this effect varies across cultures. Essentially, the study by Cuddy et al. (2015) shows that cultural differences can even lead to opposing stereotypes across countries. The authors show that while Americans view men as more individualistic than women, men in Korea are seen as more collectivist than women, hence leading to opposing stereotypes.

In the context of female executives, Hofstede (1980) highlights that men are expected to be assertive in masculine societies, and women are expected to be modest, thereby shaping gender roles and leadership expectations. For example, Omar and Davidson (2001) argue that societal beliefs rooted in Confucianism, Islamic teachings, or traditional family values often foster negative stereotypes about women in business. In cultures where family and motherhood are highly valued, women are often expected to prioritize their family over their career. In some Islamic and Confucian societies, women face social or legal restrictions on their ability to hold influential positions, with extreme cases viewing women in leadership roles as unacceptable or forbidden (De Leon & Ho, 1994; Nagata, 1984; Tayeb, 1997). These findings are also supported by the GLOBE leadership study (House, 2004), which shows that women in more gender-egalitarian countries, such as those in Scandinavia, are perceived as more competent leaders than those in countries with substantial power distance or traditional gender roles, such as those in the Middle East or East Asia.

When information about individuals is scarce or ambiguous, such as in loan negotiations, decision-makers rely on stereotypes to fill in the gaps (Ellemers, 2018). Even though women may generally be more risk-averse and ethical, which should theoretically reduce banks' perceived risks, cultural differences in the perception of female leadership may lead banks in certain countries to assess female executives differently. Consequently, banks' evaluation of gender as soft information could vary significantly across cultures. When controlling for observable measures of risk-taking and ethical behavior (for example, leverage ratios, Z-score, or credit ratings), one would expect female executives to receive less favorable loan conditions in cultures where negative stereotypes of women in business persist, compared to cultures with more positive views.

H1: Female executives operating in a country with a high negative cultural perception of women as business leaders pay higher loan spreads than male executives.

Preparing financial statement data, making leverage decisions, and conducting bank negotiations traditionally fall within the responsibilities of the CFO. Although CEOs may be involved in substantial decisions, particularly when they represent the controlling shareholder (Luo et al., 2018), empirical evidence suggests that the leverage decisions of firms can be more explained by the CFO (Frank & Goyal, 2007). Geiger and North (2006) further show a strong connection between the CFO and the quality of accounting information. Hrazdil et al. (2024) and Li et al. (2023) also show a strong connection between a CFO's personal characteristics and

bank loan contracts. Hence, the effect of the gender of top executives on loan spreads should be stronger for female CFOs than for CEOs.

H2: The gender of the CFO has a more substantial impact on loan spreads than the gender of the CEO.

3. Data

3.1 Sample

The empirical analysis focuses on bank loans raised by an international sample of corporate borrowers, using loan data obtained from the Loan Pricing Corporation's (LPC) Dealscan database. Dealscan provides comprehensive historical information on the global commercial loan market, including detailed information on loan terms and conditions, including the spread, maturity, size, purpose, debt rating, and collateral. Dealscan's underlying data is compiled from filings with the US Securities and Exchange Commission (SEC), public documents, loan syndicators, and other sources.

Executive information, including gender, is taken from the ExecuComp and Orbis databases. While ExecuComp covers most S&P 1500 companies and approximately 90% of the US equity market, it does not contain data on private companies and corporations outside the US. Thus, executive information from Orbis, which covers over 527 million public and private companies worldwide, is utilized to expand the scope of this study. Furthermore, accounting information is taken from Orbis.

Data from the Integrated Value Survey (IVS), which combines data from the European Value Study (EVS) and the World Value Survey (WVS), is used to proxy a country's cultural perception regarding female and male executives. The EVS and WVS are cross-national, large-scale, repeated, cross-sectional longitudinal survey programs that aim to capture the social and political lives of countries. The IVS combines data from 466 surveys in 118 countries starting from 1981.

After aggregating data from these different sources, several steps have been taken to refine the dataset. First, loans for which ExecuComp and Orbis provide different executive information have been excluded. Second, loans for which gender information was missing for either the CEO or the CFO have been excluded. Finally, loan-year observations for which no cultural values were available have been excluded. The final sample consists of 14,039 loan tranches obtained by 3,916 individual firms within 57 countries from 2003 until 2024.

3.2 Descriptive Statistics

Table 1 presents the descriptive statistics for the key variables used in this study. The dummy variable female executives, which equals one if the firm had at least one female executive (CEO/CFO) at the time of the loan signing, and zero otherwise, indicates that 12.7% of the sample's loans are granted to firms with at least one female top executive. Approximately 10% of loans are originated by firms with female CFOs, and firms with female CEOs originate 3.3%. Although these numbers are higher than the ones reported by Francis et al. (2013) and Luo et al. (2018), their samples cover earlier periods (1994-2006 and 2006-2012, respectively). Given the continuing rise in female executives (MSCI, 2023), it is unsurprising that the sample at hand provides higher numbers. Despite the progress made over the last two decades, the overall number of female CEOs and CFOs remains relatively low compared to their male counterparts, and women in CEO positions, in particular, continue to be significantly underrepresented.

[Insert Table 1 about here]

The variable equality score serves as a proxy for the borrower country's attitudes and beliefs regarding women's ability in executive positions relative to men. It is derived from the IVS statement: "Men make better business executives than women." Respondents of the survey can select one of four answers: "agree strongly", "agree", "disagree", and "strongly disagree". We aggregate individual responses at the country level by dividing the number of participants who choose "strongly disagree" and "disagree" by the total number of respondents in the country. Consequently, the score ranges from 0, indicating that the whole country views men as superior business executives, to 100, indicating equality in the perception of men and women in business leadership. It is worth noting that not all countries were questioned simultaneously regarding this statement, and there were years when certain countries were not surveyed. Therefore, we choose to interpolate the cultural values to estimate values between the known data points. Additionally, we extrapolate the cultural value for each country for two years before and after the earliest or latest reported value. We do not extrapolate the values for the entire time range of our loan data, as these estimates could lead to unreliable results far beyond the observed data range. Thus, although countries might have different starting and end dates for the proxy, there are no data gaps between them. Table 1 shows that within the sample, the score ranges from a minimum of 13.13, recorded in Egypt in 2006, to a maximum of 97.16, recorded in Sweden in 2019, indicating a wide variety of cultural attitudes. The mean value of 83.40

indicates that, on average, 83.4% of respondents in the sampled countries believe that men are not superior to women as business executives. While this suggests relatively close gender equality, there remains some degree of bias in favor of men.

The loan spread in the sample, measured as the all-in spread drawn (Ivashina, 2009), ranges from 1.75 to 1,800 basis points, with a mean of 211.6 basis points, consistent with prior literature (Lim et al., 2014). The average loan size is $674.5 million, which is slightly below the figure reported by Francis et al. (2013) but still comparable. The average loan maturity is 54 months, aligning with the findings of Lim et al. (2014). Approximately 40% of loans are secured, and 99% are senior, consistent with Maskara (2010). The majority (71%) are denominated in US dollars, and 37% qualify as relationship loans—loans where the borrower has previously borrowed from one of the current deal's lead arrangers within five years. Term loans constitute 42% of the sample, and 58% of deals involve multiple tranches. Additionally, 33% of loans include financial covenants, 18% are refinancing loans, and 32% contain performance-based pricing provisions.

Regarding firm characteristics, the total assets amount to $14.6 billion on average. Tangibility, defined as the ratio of property, plant, and equipment to total assets, averages 0.3. Leverage—measured as total debt over total assets (Demerjian, 2011)—ranges from 0 to 95%, with a mean of 27%. The average Altman Z-score, computed using the modified formula from Chava and Roberts (2008), is 1.70:

$$Modified\ Z-Score = \frac{1.2*Working\ Capital+1.48*Retained\ Earnings+3.3*EBIT+0.999*Sales}{Total\ Assets} \quad (1)$$

Profitability, measured as EBITDA over total assets, averages 0.13. Public firms constitute 81% of the sample, as indicated by the variable transparency. To assess borrower credit quality, we utilize Moody's issuer ratings, as available in Dealscan, supplemented by S&P ratings where Moody's data is unavailable. Given that specific rating values are often unavailable and are instead reported as categorical labels (e.g., "Investment Grade"), we construct three indicator variables for credit quality: prime-grade, junk-grade, and missing ratings. As shown in the table, approximately 30% of loans are classified as prime-grade. Overall, these firm and loan characteristics are mainly consistent with those in Francis et al. (2013), although our sample comprises slightly larger firms and utilizes broader credit classifications due to data limitations.

Finally, several country-level characteristics are included. The average democracy score is 8.04 (min = 2.26; max = 9.93). Financial development, capturing institutional efficiency,

ranges from 21.18 to 82.99, with a mean of 58.48. Real GDP growth averages 2.25% across the sample. Country governance, proxied by the World Bank's control of corruption indicator, ranges from 1.28 to 2.45, with a mean of 1.28.

Additional descriptive statistics regarding the distribution of loans across years, countries, and industries, as well as executive characteristics like age, experience, and educational background, and a Spearman pair-wise correlation between the main variables are presented in Tables B1 to B5 in Appendix B.

3.3 Univariate Comparisons

Table 2 presents univariate comparisons of several key variables between firms with at least one female top executive and those led exclusively by male top executives. The results reveal that firms with female executives receive slightly more favorable loan pricing. Specifically, the average loan spread for these firms is 205.98 basis points, compared to 212.42 basis points for firms with only male executives, indicating a discount of 6.44 basis points. Although this difference is statistically significant only at the 10% level, it aligns with the findings of Francis et al. (2013).

Additionally, loans to firms with at least one female executive are less likely to be secured and tend to have a slightly simpler loan structure, as reflected in a lower average number of tranches. The country's characteristics and culture show that firms with female top executives are more prevalent in countries with higher gender equality scores and greater financial development. These patterns are consistent with expectations, though the magnitude of the differences is modest given the range of these variables, as shown in Table 1.

Regarding firm-specific characteristics, the differences between the two subsamples are more pronounced and largely statistically significant. Firms with female executives tend to be larger, more profitable, and more often privately held. They also exhibit lower leverage, higher z-scores, and a higher likelihood of receiving a prime-grade credit rating, although this last finding is not statistically significant. These patterns are consistent with prior research suggesting that female executives are more risk-averse and adhere to higher ethical standards (Bernardi & Arnold, 1997; Lund, 2008; Niessen & Ruenzi, 2006), associated with lower long-term debt issuance (Huang & Kisgen, 2013), reduced earnings volatility, and higher firm survival rates (Faccio et al., 2016).

The univariate comparison suggests that firms with at least one female executive tend to receive slightly more favorable loan terms. They also show that several essential borrower and loan characteristics, factors known to influence bank lending decisions, differ across the subsamples, which may reflect broader organizational traits associated with the presence of

female executives, such as lower risk-taking and stronger financial health. Consequently, we need to control for these firm- and loan-level characteristics in the subsequent multivariate analysis to isolate the effect of executive gender on loan pricing.

[Insert Table 2 about here]

4. Empirical Analysis

4.1 Empirical Model

Our research question centers on the difference in bank loan costs for companies with female versus male executives. We test this effect using the following empirical model:

$$Loan\ Spread_{i,t} = \alpha + \beta_1 Female\ Executives_{i,t} + \beta_2 Controls_{i,t} + FE + \epsilon_{i,t} \quad (2)$$

The dependent variable in our analysis is the loan spread, measured at the loan tranche level, which serves as the unit of observation. The primary explanatory variable, female executives, is a binary indicator equal to one if the borrowing firm had at least one female CEO or CFO at the time of loan signing, and zero otherwise.

Following prior literature, we include a comprehensive set of borrower-level controls. First, we include credit ratings, as they serve not only as a widely accepted forward-looking measure of firm default risk but also embed valuable assessments of managerial quality. Prior research has shown that credit ratings capture dimensions such as executives' risk-taking behavior (Bonsall IV et al., 2017; Kuang & Qin, 2013) and can predict the likelihood of accounting irregularities and fraud (Huang et al., 2023). Thus, credit ratings reflect financial and qualitative insights into firm-level risk relevant for loan pricing. We also control for firm size, as larger firms are generally considered less risky due to their greater capacity to absorb cash flow shocks and meet debt obligations (Goss & Roberts, 2011). Profitability is included on similar grounds—more profitable firms tend to have stronger internal cash flows and are thus less likely to default. Leverage, which increases financial risk, has been shown to be positively associated with higher loan spreads (Goss & Roberts, 2011). To complement credit ratings, we include the modified Altman Z-score (Chava & Roberts, 2008) as an additional measure of financial distress risk. A higher z-score implies a lower likelihood of financial distress and is expected to correlate with reduced borrowing costs. Tangibility is also controlled, as tangible assets enhance recovery values in the event of default and thus affect pricing

(Graham et al., 2008). Moreover, we include a dummy variable for public firms, as public companies face stricter disclosure requirements, which may reduce information asymmetry and result in more favorable loan terms.

We also control a range of loan characteristics known to influence pricing, including loan size, maturity, loan type, seniority, complexity (i.e., the number of tranches), refinancing status, financial covenants, performance pricing provisions, and currency denomination. Furthermore, we control for relationship lending, as repeated borrowing from the same lender can reduce the loan spread (Bharath et al., 2009). The loan purpose is captured through six categories to reflect potential differences in risk across the use of proceeds.

To further isolate the effect of gender, we control for other executive characteristics, including age, education, and professional background. Older or more experienced executives may be perceived as more reliable, while those with advanced or business-related degrees may signal stronger managerial competence.

Finally, we include country and industry fixed effects to control for unobservable characteristics within each country and industry that stay constant over time. Firms are classified into industries based on their 2-digit SIC codes. Likewise, year-fixed effects are included to eliminate any confounding caused by unobservable characteristics that stay constant within each year. Our estimates are OLS with robust standard errors clustered by the borrower.

4.2 The Effect of Executive Gender on Loan Spreads

Table 3 provides the results of the multivariate regression analysis. In columns 1 to 5, we investigate how the presence of at least one female top executive (CEO or CFO) impacts bank loan pricing using various model specifications. Column 1 includes no control variables, providing a baseline model. In column 2, we introduce borrower controls, followed by the inclusion of loan characteristics in column 3. While adding borrower characteristics significantly reduced our sample, it still contains loan data from 44 countries. Given the international scope of our analysis, we further account for four borrower country characteristics in the fourth specification. Precisely, we control for the level of democracy, the efficiency of financial institutions, economic growth, and the level of corruption in each country. Finally, column 5 presents the full model, which incorporates all control variables, including executive characteristics. The estimated coefficients of female executives vary from -6.434 basis points (column 1) to 1.665 basis points (column 5). However, all coefficients are statistically insignificant.

Most control variables display the expected results consistent with prior studies (Francis et al., 2013; Graham et al., 2008). In detail, larger firms, less leveraged firms, more profitable firms, those further away from financial distress, and firms with higher credit ratings are associated with lower loan spreads. Tangibility is also negatively associated with loan spreads, though the coefficient is statistically insignificant. Additionally, banks do not appear to perceive a significant information asymmetry between public and private firms.

Concerning loan characteristics, we find that loans requiring collateral, term loans, and loans with more than one tranche are considered riskier. Conversely, loans with performance pricing, senior status, longer maturities, and refinancing loans are viewed as less risky. Relationship lending shows a negative coefficient, and loans denominated in US currency are negatively related to loan spreads, though they are not statistically significant. Furthermore, while the coefficients for loan size and financial covenants are positive, they are statistically insignificant. Overall, the results are consistent with the assumption that firms with higher default risk and information asymmetry are charged higher loan prices (Francis et al., 2013).

[Insert Table 3 about here]

As indicated by the studies of Francis et al. (2013) and Luo et al. (2018), the insignificant coefficient for female executives could be explained by the fact that the proxy may not be sufficiently accurate, as the specific role of the CEO or CFO can be more critical than female leadership in general. Thus, we rerun the full regression model from column (5) separately for the genders of the CFO and CEO. The results are shown in columns 6 and 7, respectively. The findings indicate a positive coefficient of 3.408 basis points (column 6) for female CFOs and a negative coefficient of -4.082 basis points (column 7) for female CEOs. However, both coefficients remain statistically insignificant, suggesting that neither firms with female CEOs nor those with female CFOs receive different loan spreads than firms with male executives.

Taken together, the results of Table 3 suggest that, on average in our sample, there is no effect of the gender of a firm's top executives on bank loan spread. Thus, the results contradict the findings of Francis et al. (2013) and Luo et al. (2018) and align with earlier studies by Blanchflower et al. (2003) and Storey (2004).

4.3 Cultural Influence on Loan Spreads

So far, the results indicate no connection between the gender of a firm's top executive managers and the pricing of loans. A fundamental difference between this study and the previous studies

in this field is the scope of the sample. While the studies by Francis et al. (2013) and Luo et al. (2018) focus on US samples and Chinese firms, respectively, this study comprises an international sample spanning 57 nations. The absence of a significant effect of executive gender on loan spreads might be due to the heterogeneity in cultural values across countries. As argued in Hypothesis 1, cultural attitudes, beliefs, and stereotypes regarding gender roles and leadership may vary significantly. As proposed, in countries whose values support gender equality, female executives may lead to lower perceived risk and, thus, lower loan spreads.

In contrast, in countries with more negative views regarding women in leadership, female executives may be perceived more negatively, resulting in a higher perceived risk and, thus, higher loan spreads. Thus, a country's cultural values could moderate the effect of female executives on loan spread. The opposing effects could cancel each other out when aggregated in the full sample, making it appear that there is no effect. To capture these dynamics and to test Hypothesis 1, we include the variable equality score as a proxy for culture as an external factor.

Figure 1 visually represents cultural differences across countries and over time. While the top section displays the earliest available score for each country, the bottom section shows the most recent score. Countries without available information are shaded in grey. Cultural scores are visualized across countries, varying from dark blue (indicating the least gender-equal perception) to light green (indicating the most gender-equal perception).

[Insert Figure 1 about here]

As illustrated, there is a significant variation between countries. Western countries, including the US, Canada, Western European nations, New Zealand, and Scandinavian countries such as Sweden, Norway, and Finland, exhibit relatively high scores, reflecting a strong attitude towards gender equality in business leadership. In contrast, African nations, Eastern European countries, parts of Asia, and Russia tend to attribute higher business competence to men. When comparing the earliest and most recent cultural values, it becomes clear that cultural attitudes are relatively sticky. While some Latin American and East-Asian countries show a shift in their views on women as business executives, these trends are prolonged.

To capture the effect of culture on bank loan spreads, we reestimate the full regressions of column 5 of Table 3, incorporating an interaction term between female executives and the equality score. This interaction captures whether firms face differential treatment based not only

on executive gender but also on the cultural environment in which the firm operates. The results are presented in column 1 of Table 4.

In contrast to our previous findings, the results in column 1 reveal a positive and statistically significant coefficient for the female executive variable of 220.65 basis points. While the equality score itself has no significant direct effect on spreads, the interaction term between female executives and the equality score is negative and statistically significant, with a coefficient of –2.569 basis points. These findings suggest that in a hypothetical country with an equality score of zero, where none of the respondents disagreed with the statement "Men make better business executives than women", firms with female executives would face a surcharge of 220.65 basis points relative to male-led firms.

However, for each percentage point increase in respondents who disagree with the statement, this surcharge decreases by approximately 2.57 basis points. At the sample's average equality score of 83.40, this implies that firms with female executives are charged 6.38 basis points more than firms led exclusively by male executives, all else being equal. These results suggest that bank loan spreads are influenced by cultural expectations regarding gender and executive competence, offering strong support for Hypothesis 1.

To test Hypothesis 2, we distinguish between the effect of the gender of the CFO and CEO in columns 2 and 3, respectively. Only the coefficient and interaction term for female CFOs are statistically significant. Although the coefficient for female CEOs is relatively large at 379.855 basis points, it is statistically insignificant, suggesting that the difference in loan spreads for female executives (column 1) is driven by the gender of the CFO rather than the CEO. This finding is consistent with the results reported by Francis et al. (2013) and in alignment with Hypothesis 2.

[Insert Table 4 about here]

Figure 2 illustrates the impact of these findings across our sample. Specifically, it shows the predicted difference in loan spreads for female CFOs compared to their male counterparts based on the latest cultural score for each country, using the regression from column 2 of Table 4. For example, firms with female CFOs in Indonesia in 2020, with a relatively low cultural score of 38 (38% of participants believe that male executives are superior), would face a bank loan spread of 85.50 basis points higher than those of their male-led counterparts. Interestingly, the figure also shows countries where firms with female CFOs receive lower loan spreads than those with male CFOs. For example, in 2019 in Sweden, where the latest cultural score is

approximately 97 (97% of the participants disagree that males are better business executives than women), firms with female CFOs pay 17.42 basis points less. Given the average loan size in our sample of $674.5 million, this translates into an annual interest cost reduction of $1.17 million for firms with female CFOs in Sweden. In contrast, in Indonesia, where gender attitudes are less favorable, female CFOs are associated with an additional annual interest cost of $5.76 million, highlighting the economic significance of these differences.

The finding of a negative coefficient for female CFOs in some countries is unusual at first sight, as we would expect to find no loan pricing difference in countries with full gender equality. In line with Francis et al. (2013), one plausible explanation for the finding is that our analysis does not fully capture all underlying differences in ethical behavior and risk preferences between male and female executives. Although we include several firm characteristics in our regression that partially reflect these traits, such as credit ratings, z-scores, or leverage, these are unlikely to capture the full extent of the differences. Consequently, unobserved differences might explain the negative spread in some countries. An alternative, though in our view less likely, explanation is that in some cultural contexts, women are viewed not just as equally competent but as superior business leaders. However, empirical support for this perspective is limited, and our data does not allow us to test this option directly. The design of the IVS question from which our cultural proxy is derived only captures whether a country's population believes male executives are better than or equal to female executives. It does not account for the possibility that people view female executives as superior.

Nevertheless, the more plausible interpretation of these negative coefficients is that they reflect unobserved differences driven by risk-taking and ethical differences of male and female CFOs. While these findings are noteworthy, they are not the central focus of our analysis. Instead, the main contribution of this study lies in demonstrating that cultural attitudes systematically shape how executive gender influences loan pricing across countries.

[Insert Figure 2 about here]

In sum, the results presented in Table 4 strongly support both Hypothesis 1 and Hypothesis 2. Loan contracting decisions are influenced by underlying cultural values, with firms led by female CFOs receiving less favorable loan terms than their male counterparts in countries with negative views about the competence of female executives. Furthermore, the

findings suggest that banks primarily respond to the gender of the CFO, while the gender of the CEO appears to have little impact on lending outcomes.

To ensure the robustness of our results, we perform several complementary analyses. First, we rerun the regressions using an alternative cultural proxy, equality in politics, which captures respondents' disagreement with the statement "Men make better political leaders than women." Although this measure does not directly relate to the business context, it still reflects broader leadership perceptions relevant in political and corporate settings. The measure is constructed analogously to our primary cultural proxy, and the results, reported in Table B6 of Appendix B, are consistent with our primary findings.

Second, given that US borrowers are overrepresented in our sample, mainly due to the composition of the Dealscan database, it is possible that cultural attitudes of the United States disproportionately influence our results. To test this, we rerun our regressions excluding all US borrowers. Table B7 of Appendix B shows that the results remain robust and qualitatively unchanged.

Third, we address the concern that countries with very few observations for female-led firms might disproportionately influence the results. Specifically, we exclude all countries with fewer than six loan observations associated with female executives. The findings, presented in Table B8 of Appendix B, remain consistent.

Fourth, we test whether the relevant cultural influence stems from the borrower's country or instead from the country where the loan is syndicated, i.e., where the legal and financial structuring of the loan takes place. To address this, we reestimate the regressions using the cultural values of the syndicate country instead of the borrower country. Table B9 of Appendix B shows that the results are robust to this alternative specification.

Finally, as discussed above, while our controls account for important differences in risk preferences and ethical behavior between male and female executives, we acknowledge that these traits may not be fully captured. Thus, we include an additional control variable related to ethical behavior to address this issue. Due to data limitations, we cannot rely on standard accounting-based fraud measures (e.g., accruals), as doing so would drastically reduce our sample size. Instead, we follow Brazel et al. (2009) and construct a non-financial fraud proxy that measures the difference between a firm's revenue and employee growth. The results in Table B10 of Appendix B remain largely stable. While the interaction effect narrowly misses conventional significance thresholds ($p \approx 0.06$), the direction and magnitude of the coefficient are consistent with our main findings.

4.4 Further Tests

4.4.1 Broader Stereotypes

A natural question from the previous results is to what degree such discrimination extends: Is it confined to women in leadership roles, or does it reflect broader societal biases against women? On the one hand, the observed effects may be context-specific, driven by public mistrust in women holding leadership positions due to isolated events, such as a high-profile female business leader or politician being accused or convicted of corruption. In such cases, societies might still view women as equal in general workplace roles, yet remain skeptical about their competence in positions of power. On the other hand, the results could stem from broader, deeply rooted societal attitudes and gender-role stereotypes. In this view, discrimination is not limited to leadership roles but is a manifestation of pervasive patriarchal norms that shape perceptions of women's competence and appropriate societal roles across various domains. While it is inherently difficult to distinguish between these drivers empirically, we provide an initial exploratory test by rerunning the regressions using two different statements from the IVS: "Job scarce: Men should have more right to a job than women" and "Problem if women have more income than husband".

The first statement captures a society's traditional view of gender roles, where men are perceived as the primary breadwinners. A low cultural score on this metric suggests that society values men more in the labor market, potentially implying that women are seen as less capable or expected to fulfill more traditional roles, such as staying at home and caring for children, rather than participating in professional management. The second statement addresses societal discomfort with women in positions of financial or professional superiority. A low score here reflects traditional power dynamics and negative perceptions of women in high-status jobs, such as executives.

Both of these statements reflect broader societal attitudes and stereotypes towards gender roles rather than some distrust of women in leadership positions, which may rationally influence lending decisions. If the previously observed results are purely driven by perceptions of females in the position of power, one would expect no significant effect. However, if gender discrimination is based on a broader set of stereotypes and traditional views, we would expect to still see a significant effect.

The results in Table 5 are consistent with our previous findings. For both cultural proxies, we can still find statistically significant positive coefficients for female CFOs and negative effects for the interaction of culture and female CFOs, on loan spreads (columns 4-5), supporting the idea that broader societal gender discrimination at least partly drives the cultural

variation in loan spreads between female and male CFOs. Societies that hold more traditional or patriarchal views, such as prioritizing men during job scarcity or finding it problematic when women earn more, impose stricter loan terms on female CFOs. This suggests that cultural stereotypes about gender roles, rather than objective measures of business competencies, influence bank lending decisions.

The analysis highlights that cultural biases significantly shape banks' assessment of female CFOs, independent of actual business risk. In countries with more progressive views on gender roles, women are less likely to encounter discrimination in loan negotiations, and banks recognize their positive traits. In contrast, in countries with deeply entrenched patriarchal values, female CFOs face higher loan spreads due to prevailing negative stereotypes.

[Insert Table 5 about here]

4.4.2 Non-Pricing Terms

We investigate whether discriminatory behavior against women also extends to non-pricing loan terms, particularly the loan amount. If banks in some countries perceive female CFOs as less competent and therefore impose higher spreads, it is plausible that they would also be inclined to grant women only smaller loans.

To examine the effect of anti-female cultural attitudes on differences in loan size, we reestimate our model using the natural logarithm of loan size as the dependent variable. Table 6 presents the results for female CFOs across all four cultural proxies. In three of the four specifications, including our primary measure, the equality score, the dummy for female CFO is negative and statistically significant, while the interaction term between female CFO and the cultural proxy is positive and statistically significant. The exception is the equality income proxy specification, where both coefficients are insignificant.

Specifically, the coefficient of -1.567 in column (1) implies that, in a hypothetical country with an equality score of 0, where all respondents believe that men are better business executives than women, firms with female CFOs would receive approximately 79% smaller loans than comparable firms with male CFOs. However, this negative effect diminishes by 0.018 log points for each one-point increase in the equality score. Using the 2020 cultural score for Indonesia of 85 and the sample's average loan size of $674.5 million, firms with female CFOs in Indonesia receive approximately $396.1 million less than their male-led counterparts. In contrast, in a country with a sample mean equality score of 83.4, firms with female CFOs

receive loans that are approximately 6.4% smaller, corresponding to a reduction of $43.17 million in loan size, which is economically meaningful. While effect sizes vary across cultural dimensions (see columns 2-4), the results remain statistically and economically significant. These findings suggest that in countries where societal norms favor male leadership, female-led firms face higher loan spreads and receive smaller loan amounts.

Results for female CEOs remain statistically insignificant and are therefore not reported. However, the corresponding coefficients for the equality score specification across CEOs, CFOs, and the combined female executives variable are reported in Table B11 in Appendix B.

[Insert Table 6 about here]

5. Conclusion

This article investigates the relationship between the gender of top executives and loan spreads for international firms in the mostly syndicated loan market. Specifically, we focus on how cross-country cultural differences influence this relationship. By controlling for a range of executive characteristics—including age, experience, educational level, and degree subject—we offer a more nuanced analysis of gender effects than prior studies. Our large international sample enables us to assess how different cultural settings influence the relationship between executive gender and loan pricing.

Our results indicate that firms with female CFOs face significantly higher loan spreads than those with male CFOs in countries where societal beliefs about women's managerial capabilities are predominantly negative. Moreover, this pattern extends beyond pricing to non-pricing loan terms: firms with female CFOs also receive smaller loan amounts in countries with negative stereotypes about female executives. Thereby, our results highlight substantial disadvantages in obtaining debt financing for female-led firms in countries with low equality scores. These financing disadvantages could be another reason for firms to avoid having female CFOs. In this way, the discrimination against female-led firms in debt markets could potentially even lead to further discrimination against women in executive labor markets.

Notably, the interaction between cultural attitudes and executive gender remains both economically and statistically significant across all specifications. Our analysis provides novel evidence of gender-based discrimination in the international, mostly syndicated loan market. Additional analysis further suggests that stereotypes about women's competence in leadership alone are insufficient to explain these disparities. Instead, the observed patterns appear to reflect

broader patriarchal norms and traditional views about gender roles in the labor market. We also find that, in contrast to CFOs, the gender of the CEO does not appear to influence loan pricing or loan amounts.

A limitation of our study lies in the design of the cultural proxy used to capture societal views on female executives' capabilities. While we measure whether a country perceives women as equally capable or less capable than men, our proxy does not account for the possibility that women could be viewed as superior to men in business leadership, which could provide a more refined measure. Thus, it does not fully account for more favorable perceptions of female leadership that may exist in some countries. Consequently, we cannot entirely rule out that unobserved gender differences, such as risk and ethical behavior truly drive the observed negative coefficient for female CFOs in some countries. Instead, although unlikely, these results could reflect countries that view female executives as superior to male executives.

Additionally, while we document that female executives face higher spreads and lower loan amounts in cultures with negative gender perceptions, we cannot assess whether this discrimination also translates into higher loan denial rates due to data limitations. Finally, while we provide preliminary evidence suggesting that our results are not purely influenced by business-related gender perceptions but also broader stereotypical and traditional gender role views, further research is needed to determine whether rational or irrational motives drive these findings. Future studies could explore the specific reasons behind these observed cultural effects.

6. References

Alan, S., Ertac, S., & Mumcu, I. (2018). Gender stereotypes in the classroom and effects on achievement. *Review of Economics and Statistics, 100*(5), 876-890.

Alesina, A., & Giuliano, P. (2015). Culture and institutions. J*ournal of Economic Literature, 53*(4), 898-944.

Alesina, A., Lotti, F., & Mistrulli, P. (2013). Do women pay more for credit? Evidence from Italy. *Journal* of *the European Economic Association*, *11*, 45-66.

Atari, M., Lai, M., & Dehghani, M. (2020). Sex differences in moral judgments across 67 countries. *Proceedings of the Royal Socie*ty B, 287(1937), 20201201.

Azad, A., Charles, A., Ding, Q., Trickey, A., & Wren, S. (2020). The gender gap and healthcare: associations between gender roles and factors affecting healthcare access in Central Malawi, June–August 2017. *Archives of Public Health, 78*, 1-11.

Bell, M., McLaughlin, M., & Sequeira, J. (2002). Discrimination, harassment, and the glass ceiling: Women executives as change agents. *Journal of Business Ethics, 37*, 65-76.

Bernardi, R., & Arnold Sr, D. (1997). An examination of moral development within public accounting by gender, staff level, and firm. *Contemporary Accounting Research, 14*(4), 653-668.

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

Blanchflower, D., Levine, P., & Zimmerman, D. (2003). Discrimination in the small-business credit market. *Review of Economics and Statistics, 85*(4), 930-943.

Bönte, W. (2015). Gender differences in competitive preferences: New cross-country empirical evidence. *Applied Economics Letters, 22*(1), 71-75.

Bonsall IV, S., Holzman, E., & Miller, B. (2017). Managerial ability and credit risk assessment. *Management Science, 63*(5), 1425-1449.

Breda, T., Jouini, E., Napp, C., & Thebault, G. (2020). Gender stereotypes can explain the gender equality paradox. *Proceedings of the National Academy of Sciences*, *117*(49), 31063-31069.

Brazel, J., Jones, K., & Zimbelman, M. (2009). Using nonfinancial measures to assess fraud risk. *Journal of Accounting Research, 47*(5), 1135-1166.

Cárdenas, J., Dreber, A., Von Essen, E., & Ranehill, E. (2012). Gender differences in competitiveness and risk-taking: Comparing children in Colombia and Sweden. *Journal of Economic Behavior & Organization, 83*(1), 11-23.

Carrasco, A., Francoeur, C., Labelle, R., Laffarga, J., & Ruiz-Barbadillo, E. (2015). Appointing women to boards: Is there a cultural bias? *Journal of Business Ethics*, *129*, 429-444.

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

Chen, X., Huang, B., & Ye, D. (2020). Gender gap in peer-to-peer lending: Evidence from China. *Journal of Banking & Finance, 112*, 105633.

Cuddy, A., Wolf, E., Glick, P., Crotty, S., Chong, J., & Norton, M. (2015). Men as cultural ideals: Cultural values moderate gender stereotype content. *Journal of Personality and Social Psychology*, *109*(4), 622.

De Leon, C., & Ho, S. (1994). The third identity of modern Chinese women: Women managers in Hong Kong. *Competitive frontiers: Women Managers in a Global Economy*, 43-56.

Demerjian, P. (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*(2-3), 178-202.

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

Ellemers, N. (2018). Gender stereotypes. *Annual Review of Psychology*, *69*(1), 275-298.

Faccio, M., Marchica, M., & Mura, R. (2016). CEO gender, corporate risk-taking, and the efficiency of capital allocation. *Journal of Corporate Finance*, *39*, 193-209.

Falk, A., Becker, A., Dohmen, T., Enke, B., Huffman, D., & Sunde, U. (2018). Global evidence on economic preferences. *The Quarterly Journal of Economics, 133*(4), 1645-1692.

Fang, L., & Munneke, H. (2017). Gender Equality in Mortgage Lending. *Real Estate Economics, DOI10, 1111*, 1540-6229.

Fay, M., & Williams, L. (1993). Gender bias and the availability of business loans. *Journal of Business Venturing*, *8*(4), 363-376.

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.

Frank, M., & Goyal, V. (2007). Corporate leverage: How much do managers really matter? *Available at SSRN 971082*.

Geiger, M., & North, D. (2006). Does hiring a new CFO change things? An investigation of changes in discretionary accruals. *The Accounting Review*, *81*(4), 781-809.

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

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

Grün, C. (2004). Direct and indirect gender discrimination in the South African labour market. *International Journal of Manpower, 25*(3/4), 321-342.

Grunspan, D., Eddy, S., Brownell, S., Wiggins, B., Crowe, A., & Goodreau, S. (2016). Males underestimate academic performance of their female peers in undergraduate biology classrooms. *PloS one, 11*(2), e0148405.

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

Hofstede, G. (1980). Culture and organizations. *International Studies of Management & Organization, 10*(4), 15-41.

Hooghe, M., Jacobs, L., & Claes, E. (2015). Enduring gender bias in reporting on political elite positions: Media coverage of female MPs in Belgian news broadcasts (2003–2011). *The International Journal of Press/Politics, 20*(4), 395-414.

House, R. (2004). Culture, leadership, and organizations: The GLOBE study of 62 societies. *Thousand Oaks, CA*.

Hrazdil, K., Li, J., Lobo, G., & Zhang, R. (2024). CFO facial beauty and bank loan contracting. *Accounting & Finance*, *64*(1), 975-1009.

Huang, A., Kraft, P., & Wang, S. (2023). The usefulness of credit ratings for accounting fraud prediction. *The Accounting Review, 98*(7), 347-376.

Huang, J., & Kisgen, D. (2013). Gender and corporate finance: Are male executives overconfident relative to female executives? *Journal of Financial Economics*, *108*(3), 822-839.

Inglehart, R. (2015). The silent revolution: Changing values and political styles among Western publics. *Princeton University Press.*

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

Jayachandran, S. (2015). The roots of gender inequality in developing countries. *Annual Review of Economics, 7*(1), 63-88.

Kuang, Y., & Qin, B. (2013). Credit ratings and CEO risk-taking incentives. *Contemporary Accounting Research, 30*(4), 1524-1559.

Ladd, H. (1982). Equal credit opportunity: women and mortgage credit. *The American Economic Review, 72*(2), 166-170.

Li, J., Li, Z., & Zhang, M. (2023). CFOs' facial trustworthiness and bank loan contracts. *International Review of Economics & Finance*, *84*, 332-357.

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

Luo, J., Huang, Z., Li, X., & Lin, X. (2018). Are women CEOs valuable in terms of bank loan costs? Evidence from China. *Journal of Business Ethics*, *153*, 337-355.

Luo, J., Peng, C., & Zhang, X. (2020). The impact of CFO gender on corporate fraud: Evidence from China. *Pacific-Basin Finance Journal, 63,* 101404.

Lund, D. (2008). Gender differences in ethics judgment of marketing professionals in the United States. *Journal of Business Ethics*, *77*, 501-515.

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

Markowsky, E., & Beblo, M. (2022). When do we observe a gender gap in competition entry? A meta-analysis of the experimental literature. *Journal of Economic Behavior & Organization, 198*, 139-163.

Mijid, N., & Bernasek, A. (2013). Gender and the credit rationing of small businesses. *The Social Science Journal*, *50*(1), 55-65.

Moss-Racusin, C., Dovidio, J., Brescoll, V., Graham, M., & Handelsman, J. (2012). Science faculty's subtle gender biases favor male students. *Proceedings of the National Academy of Sciences, 109*(41), 16474-16479.

MSCI. (2023). *Women on boards and beyond: 2023 progress report*. https://www.msci.com/documents/1296102/43943104/MSCI+Women+on+Boards+and+Beyond+2023+Progress+Report.pdf

Nagata, J. (1984). The reflowering of Malaysian Islam: Modern religious radicals and their roots. *University of British Columbia Press.*

Napp, C., & Breda, T. (2022). The stereotype that girls lack talent: A worldwide investigation. *Science Advances*, *8*(10), eabm3689.

Nelson, T., & Levesque, L. (2007). The status of women in corporate governance in high–growth, high–potential firms. *Entrepreneurship Theory and Practice*, *31*(2), 209-232.

Niessen, A., & Ruenzi, S. (2006). Sex matters: Gender and mutual funds. *Manuscript, University of Cologne*.

Omar, A., & Davidson, M. (2001). Women in management: a comparative cross-cultural overview. *Cross Cultural Management: An International Journal, 8(*3/4), 35-67.

Pace, F., & Sciotto, G. (2021). Gender differences in the relationship between work-life balance, career opportunities, and general health perception. *Sustainability, 14*(1), 357.

Qian, Y., Takimoto, Y., Wang, L., & Yasumura, A. (2024). Exploring cultural and gender differences in moral judgment: A cross-cultural study based on the CNI model. *Current Psychology, 43*(6), 5243-5253.

Robinson, J. (2002). Race, gender, and familial status: discrimination in one US mortgage lending market. *Feminist Economics, 8*(2), 63-85.

Safran, D., Rogers, W., Tarlov, A., McHorney, C., & Ware Jr, J. (1997). Gender differences in medical treatment: the case of physician-prescribed activity restrictions. *Social Science & Medicine, 45*(5), 711-722.

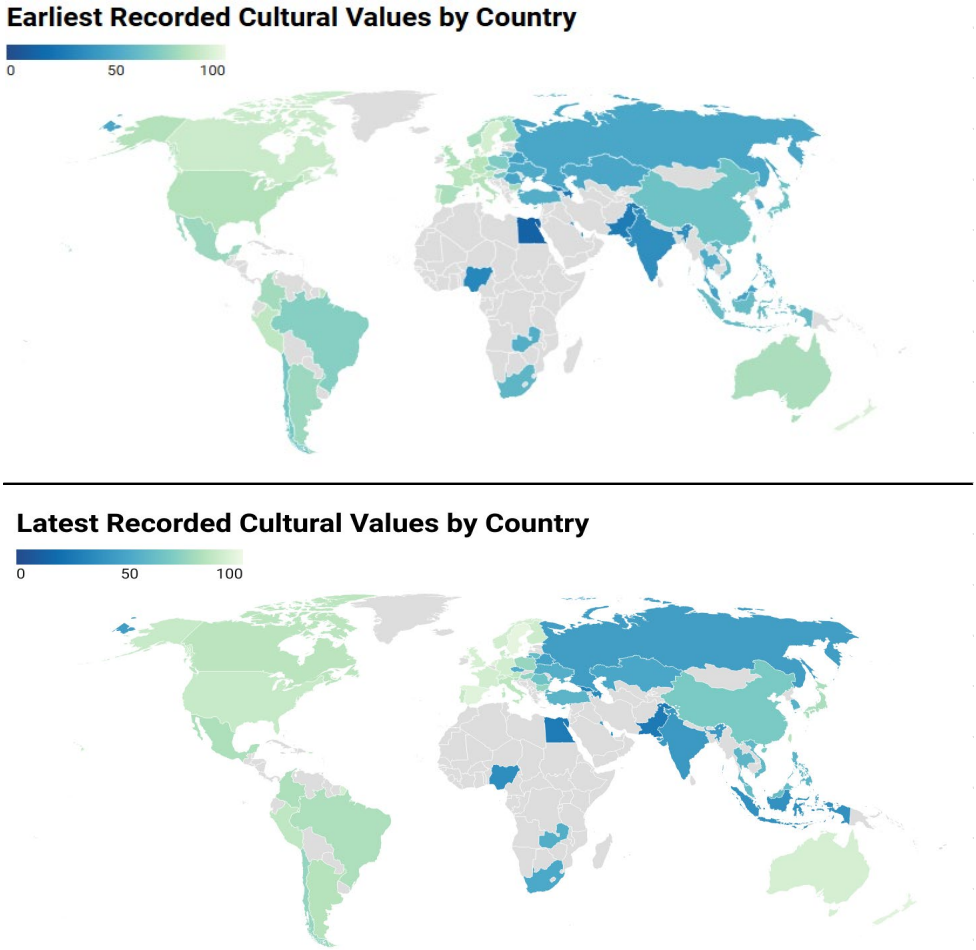
Storey, D. (2004). Racial and gender discrimination in the micro firms credit market?: Evidence from Trinidad and Tobago. *Small Business Economics, 23*, 401-422.

Tayeb, M. (1997). Islamic revival in Asia and human resource management. *Employee Relations, 19*(4), 352-364.

Teele, D., Kalla, J., & Rosenbluth, F. (2018). The ties that double bind: social roles and women's underrepresentation in politics. *American Political Science Review, 112*(3), 525-541.

World Economic Forum. (2023). *Global Gender Gap Report 2023*. https://www.weforum.org/reports/global-gender-gap-report-2023.

Figure 1: Earliest/Latest recorded cultural scores by country



Note: This figure illustrates the percentage of respondents in each country who "disagree" or "strongly disagree" with the statement "Men make better business executives than women". The upper section of the figure represents the earliest recorded cultural value for each country, while the lower section displays the most recent recorded cultural value.

Figure 2: Gender spread differences by Equality Score

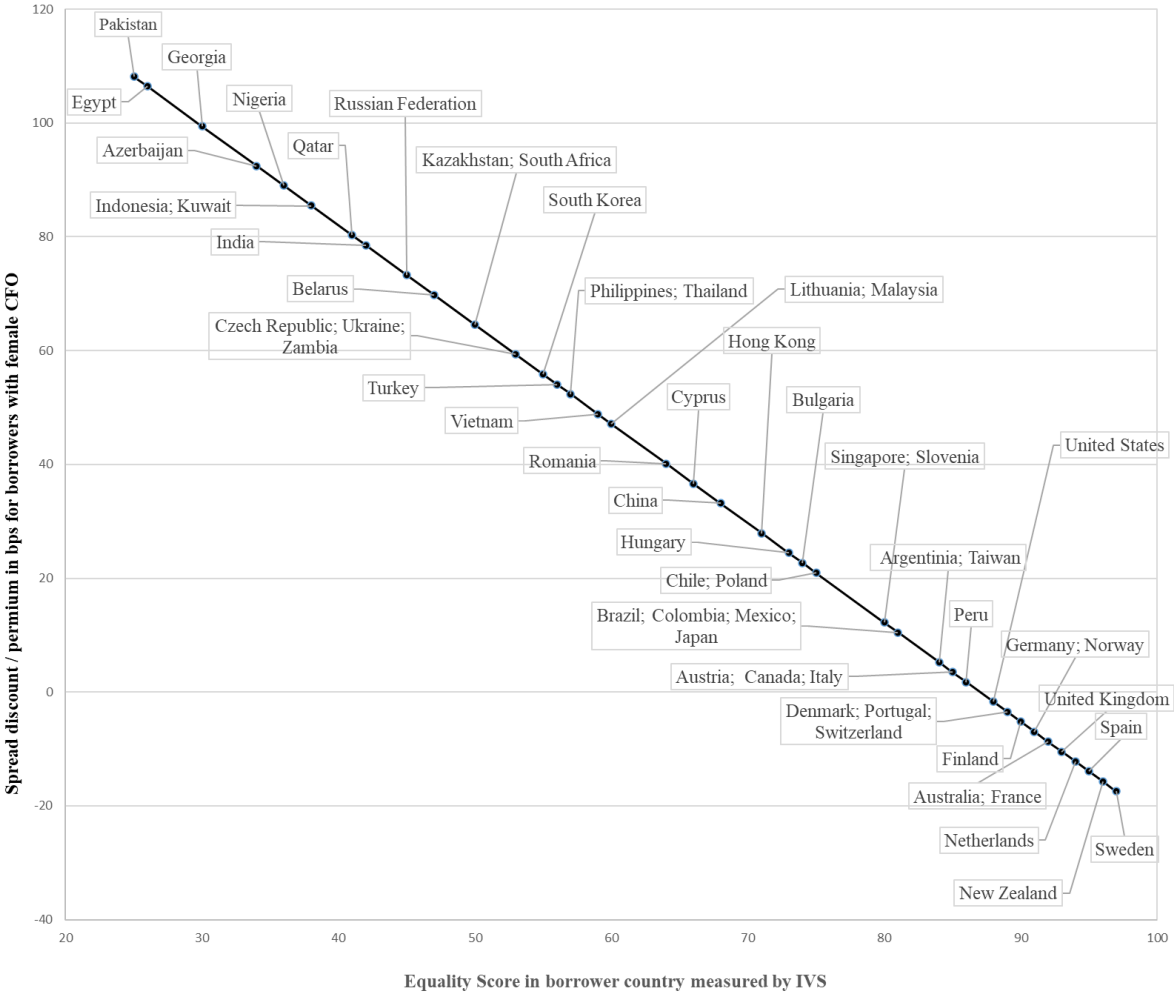


Table 1: Descriptive statistics

Variable		N	Mean	Median	Std. Dev.	Min.	Max.
Gender							
	Female Executives	14,039	0.127	0	0.333	0	1
	Female CFO	14,039	0.099	0	0.299	0	1
	Female CEO	14,039	0.033	0	0.178	0	1
Culture							
	Equality Score	14,039	83.40	87.26	10.89	13.13	97.16
Loan characteristics							
	Spread (bps)	14,039	211.60	175	159.30	1.75	1,800
	Loan size $M	14,039	674.50	282.90	1506.00	0.38	49,000
	Maturity in months	14,039	53.81	60.00	28.03	1.00	722
	Secured	14,039	0.40	0.00	0.49	0.00	1.00
	Senior	14,039	0.99	1.00	0.09	0.00	1.00
	Currency	14,039	0.71	1.00	0.45	0.00	1.00
	Relationship loan	14,039	0.37	0.00	0.48	0.00	1.00
	Term loan	14,039	0.42	0.00	0.49	0.00	1.00
	Multiple tranche	14,039	0.58	1.00	0.49	0.00	1.00
	Financial covenants	14,039	0.33	0.00	0.47	0.00	1.00
	Refinance	14,039	0.18	0.00	0.38	0.00	1.00
	Performance pricing	14,039	0.32	0.00	0.47	0.00	1.00
Borrower characteristics							
	Firm size $M	10,271	14,597	2,982	48,173	0.00	1,884,000
	Tangibility	10,213	0.30	0.21	0.26	0.00	0.93
	Leverage	9,715	0.27	0.25	0.20	0.00	0.95
	Z-score	6,900	1.70	1.58	1.11	-1.23	5.10
	Profitability	9,534	0.13	0.12	0.08	-0.05	0.41
	Transparency	13,901	0.81	1.00	0.40	0.00	1.00
	Prime grade	14,039	0.30	0.00	0.45	0.00	1.00
Country characteristics							
	Democracy	13,950	8.04	8.11	0.93	2.26	9.93
	Financial development	13,707	58.48	56.90	8.88	21.18	82.99
	Economic growth	14,039	2.25	2.40	2.12	-10.40	17.70
	Country governance	14,039	1.28	1.36	0.62	-1.28	2.45

Note: This table provides summary statistics for the key variables. The underlying unit of observation is the loan tranche. Definitions of the variables are provided in Table A1 of Appendix A.

Table 2: Univariate Comparisons

		Loans to firms with female executive			Loans to firms with male executives			t-test for differences in mean
		N	Mean	Median	N	Mean	Median	difference (unequal variance)
Dependent variable								
	spread (bps)	1,787	205.98	175.00	12,252	212.42	175.00	-6.44 *
Culture								
	Equality Score	1,787	84.02	87.26	12,252	83.31	87.26	0.71 ***
Loan characteristics								
	Loan size $M	1,787	705.90	300.00	12,252	669.94	275.00	35.96
	Maturity in months	1,787	52.84	60.00	12,252	53.95	60.00	-1.11
	Secured	1,787	0.37	0.00	12,252	0.41	0.00	-0.04 ***
	Senior	1,787	0.99	1.00	12,252	0.99	1.00	0.00
	Currency	1,787	0.71	1.00	12,252	0.71	1.00	0.00
	Relationship loan	1,787	0.50	0.00	12,252	0.49	0.00	0.01
	Term loan	1,787	0.42	0.00	12,252	0.42	0.00	0.00
	Multiple tranche	1,787	0.56	1.00	12,252	0.59	1.00	-0.03 *
	Financial covenants	1,787	0.32	0.00	12,252	0.33	0.00	-0.01
	Refinance	1,787	0.17	0.00	12,252	0.18	0.00	-0.01
	Performance Pricing	1,787	0.32	0.00	12,252	0.32	0.00	0.00
Borrower characteristics								
	Firm size $M	1,259	17,004.09	2,728.00	9,012	14,261.11	3,026.55	2,742.98 **
	Tangibility	1,250	0.27	0.18	8,963	0.30	0.22	-0.03 ***
	Leverage	1,201	0.25	0.23	8,514	0.27	0.25	-0.02 ***
	Z-score	900	1.84	1.67	6,000	1.68	1.57	0.16 ***
	Profitability	1,181	0.14	0.12	8,353	0.13	0.11	0.01 ***
	Transparency	1,769	0.79	1.00	12,132	0.81	1.00	-0.02 **
	Prime Grade	1,787	0.32	0.00	12,252	0.30	0.00	0.02
Country characteristics								
	Democracy	1,779	8.00	8.11	12,171	8.04	8.11	-0.04 *
	Financial development	1,720	58.97	59.15	11,987	58.40	56.89	0.57 **
	Economic growth	1,787	2.30	2.50	12,252	2.24	2.30	0.06
	Country governance	1,787	1.27	1.34	12,252	1.28	1.36	-0.01

Note: This table provides summary statistics for the key variables, split into loans with female executives and loans to firms with male executives, including a t-test for differences in mean. The underlying unit of observation is the loan tranche. Definitions of the variables are provided in Table A1 of Appendix A. Significance at the 10%, 5%, and 1% levels are indicated by *, **, ***, respectively.-

Table 3: Multivariate regression of executive gender on loan spreads

	Female Executives					Female CFO	Female CEO
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Female Executives	-6.434	2.888	1.661	2.326	1.665		
	(7.493)	(6.250)	(4.905)	(5.056)	(5.154)		
Female CFO						3.408	
						(5.504)	
Female CEO							-4.082
							(9.747)
Borrower characteristics							
Tangibility		-10.798	-2.553	1.836	0.844	0.569	2.104
		(14.272)	(12.794)	(13.099)	(13.228)	(13.175)	(13.134)
Leverage		83.597 ***	73.136 ***	76.336 ***	77.215 ***	77.734 ***	75.770 ***
		(16.715)	(13.628)	(13.805)	(13.773)	(13.754)	(13.790)
Z-score		-14.816 ***	-8.454 ***	-8.452 ***	-8.765 ***	-8.698 ***	-8.531 ***
		(3.162)	(2.495)	(2.572)	(2.571)	(2.576)	(2.569)
Profitability		-218.397 ***	-201.059 ***	-199.450 ***	-197.365 ***	-197.874 ***	-198.513 ***
		(41.652)	(35.350)	(36.016)	(35.978)	(36.017)	(35.936)
Transparency		-8.281	2.273	-0.698	0.644	2.471	-1.911
		(14.762)	(14.015)	(14.653)	(15.338)	(14.892)	(14.992)
Firm size		-16.531 ***	-16.627 ***	-18.231 ***	-18.289 ***	-18.230 ***	-18.169 ***
		(2.133)	(2.459)	(2.494)	(2.520)	(2.502)	(2.509)
Prime Grade		-43.848 ***	-22.617 ***	-20.260 ***	-19.440 ***	-19.596 ***	-19.765 ***
		(7.262)	(5.941)	(5.909)	(5.732)	(5.779)	(5.916)
Junk Grade		62.951 ***	41.006 ***	38.702 ***	38.895 ***	38.519 ***	39.106 ***
		(6.715)	(5.965)	(6.103)	(6.043)	(6.083)	(6.093)
Loan characteristics							
Secured			50.048 ***	52.466 ***	52.628 ***	52.596 ***	52.660 ***
			(5.768)	(6.040)	(6.009)	(6.027)	(6.023)
Financial covenants			2.424	1.878	1.735	1.686	1.842
			(4.759)	(4.838)	(4.833)	(4.822)	(4.847)
Term loan			32.867 ***	35.743 ***	34.984 ***	35.728 ***	34.959 ***
			(4.010)	(4.168)	(4.168)	(4.122)	(4.208)
Senior			-388.253 ***	-394.341 ***	-404.202 ***	-396.059 ***	-401.567 ***
			(63.674)	(66.252)	(65.624)	(65.816)	(65.928)
Loan size			0.140	1.191	1.255	1.190	1.297
			(1.993)	(2.045)	(2.043)	(2.045)	(2.049)
Multiple tranches			7.604 *	8.842 *	8.862 *	8.996 *	8.571 *
			(4.495)	(4.611)	(4.654)	(4.618)	(4.621)
Currency			-10.531	-14.403	-14.295	-14.569	-13.840
			(9.170)	(9.594)	(9.809)	(9.726)	(9.735)
Maturity			-14.250 ***	-14.646 ***	-14.784 ***	-14.772 ***	-14.696 ***
			(3.422)	(3.465)	(3.522)	(3.508)	(3.480)
Relationship loan			-2.822	-1.832	-2.279	-2.300	-1.860
			(4.139)	(4.199)	(4.174)	(4.158)	(4.224)
Refinance			-9.349 *	-11.840 **	-11.731 **	-11.316 **	-12.401 **
			(5.138)	(5.414)	(5.448)	(5.330)	(5.542)
Performance pricing			-33.844 ***	-35.138 ***	-33.678 ***	-34.301 ***	-34.214 ***
			(4.484)	(4.539)	(4.455)	(4.503)	(4.480)
Country characteristics							
Democracy				11.333	13.885	12.269	15.201
				(20.218)	(20.128)	(20.244)	(20.276)
Financial development				-1.302 **	-1.276 **	-1.172 **	-1.424 **
				(0.546)	(0.591)	(0.581)	(0.577)
Economic growth				-3.622	-3.608	-3.672	-3.651
				(3.630)	(3.527)	(3.618)	(3.598)
Country governance				-13.585	-14.163	-15.282	-11.703
				(13.770)	(14.127)	(14.128)	(13.681)
Fixed effects							
Borrower industry	no	yes	yes	yes	yes	yes	yes
Borrower country	no	yes	yes	yes	yes	yes	yes
Loan signing year	no	no	yes	yes	yes	yes	yes
Loan purpose	no	no	yes	yes	yes	yes	yes
CFO characteristics	no	no	no	no	yes	yes	no
CEO characteristics	no	no	no	no	yes	no	yes
Percentage Female	12.73	13.13	13.13	12.82	12.82	9.74	3.62
Adjusted R-squared	0.000	0.270	0.463	0.464	0.465	0.465	0.465
Observations	14,039	6,855	6,855	6,550	6,550	6,550	6,550

Note: The dependent variable is the loan spread. Columns (1) to (5) reveal the relationship between executive gender and loan spreads while controlling for different control variables. In columns (6) and (7), we distinguish between the genders of the CFO and CEO. Definitions of the variables are provided in Table A1 of Appendix A. The number of observations refers to the number of loan tranches observed. Standard errors are clustered at the firm level. Standard errors are in parentheses. Significance at the 10%, 5%, and 1% levels are indicated by *, **, ***, respectively.

Table 4: Cultural influence on loan spreads

	Female Executives	Female CFO	Female CEO
	(1)	(2)	(3)
Female Executives	220.647 **		
	(92.900)		
Female Executive x Equality Score	-2.569 **		
	(1.081)		
Female CFO		151.771 ***	
		(40.933)	
Female CFO x Equality Score		-1.744 ***	
		(0.488)	
Female CEO			379.855
			(362.214)
Female CEO x Equality Score			-4.472
			(4.184)
Equality Score	0.109	-0.398	0.000
	(1.575)	(1.620)	(1.566)
Borrower characteristics			
Tangibility	0.519	0.357	2.549
	(13.200)	(13.161)	(13.149)
Leverage	78.040 ***	78.145 ***	75.710 ***
	(13.741)	(13.742)	(13.829)
Z-score	-8.758 ***	-8.741 ***	-8.424 ***
	(2.569)	(2.576)	(2.567)
Profitability	-193.688 ***	-194.997 ***	-199.944 ***
	(36.183)	(36.113)	(35.920)
Transparency	1.148	2.748	-2.048
	(15.382)	(14.941)	(14.995)
Firm size	-18.670 ***	-18.547 ***	-18.100 ***
	(2.497)	(2.476)	(2.481)
Prime Grade	-18.909 ***	-18.980 ***	-19.961 ***
	(5.719)	(5.755)	(5.885)
Junk Grade	39.248 ***	38.989 ***	38.947 ***
	(6.046)	(6.088)	(6.079)
Loan characteristics			
Secured	52.886 ***	52.686 ***	52.792 ***
	(6.001)	(6.025)	(6.018)
Financial covenants	1.520	1.497	1.851
	(4.827)	(4.804)	(4.822)
Term loan	34.429 ***	35.445 ***	34.828 ***
	(4.174)	(4.128)	(4.214)
Senior	-404.969 ***	-396.174 ***	-402.348 ***
	(65.186)	(65.700)	(65.669)
Loan size	1.573	1.388	1.372
	(2.031)	(2.030)	(2.047)
Multiple tranches	9.468 **	9.296 **	8.894 *
	(4.636)	(4.614)	(4.605)
Currency	-14.086	-14.487	-13.767
	(9.767)	(9.714)	(9.712)
Maturity	-14.912 ***	-14.830 ***	-14.846 ***
	(3.507)	(3.500)	(3.475)
Relationship loan	-2.353	-2.314	-1.885
	(4.172)	(4.151)	(4.237)
Refinance	-11.799 **	-11.078 **	-12.508 **
	(5.598)	(5.483)	(5.630)
Performance pricing	-33.610 ***	-34.208 ***	-34.288 ***
	(4.451)	(4.496)	(4.481)
Country characteristics			
Democracy	8.055	9.218	14.781
	(20.100)	(20.316)	(20.953)
Financial development	-1.250 **	-1.195 **	-1.426 ***
	(0.572)	(0.566)	(0.552)
Economic growth	-3.382	-3.448	-3.497
	(3.477)	(3.550)	(3.548)
Country governance	-15.838	-16.406	-11.171
	(14.007)	(13.950)	(13.590)
Fixed effects			
Borrower industry	yes	yes	yes
Borrower country	yes	yes	yes
Loan signing year	yes	yes	yes
Loan purpose	yes	yes	yes
CFO characteristics	yes	yes	no
CEO characteristics	yes	no	yes
Percentage Female	12.82	9.74	3.62
Adjusted R-squared	0.467	0.465	0.466
Observations	6,550	6,550	6,550

Note: The dependent variable is the loan spread. The table reveals the influence of the cultural perception of a top executive's gender on the loan spread. Equality Score represents the percentage of respondents who "disagree" or "strongly disagree" with the statement "Men make better business executives than women". Definitions of the variables are provided in Table A1 of Appendix A. The number of observations refers to the number of loan tranches observed. Standard errors are clustered at the firm level. Standard errors are in parentheses. Significance at the 10%, 5%, and 1% levels are indicated by *, **, ***, respectively.

Table 5: Cultural influence on loan spreads (Equality Income & Equality Job)

	"Problem if women have more income than husband"			"Job scace: Men should have more right to a job than women"		
	Female Executives	Female CFO	Female CEO	Female Executives	Female CFO	Female CEO
	(1)	(2)	(3)	(4)	(5)	(6)
Female Executives	295.775 ***			224.457 **		
	(109.520)			(96.039)		
Female CFO	-3.338 ***				172.697 ***	
	(1.222)				(61.563)	
Female CEO		298.926 ***				346.195
		(111.761)				(281.998)
Female Executive x Equality Income		-3.358 ***				
		(1.250)				
Female CFO x Equality Income			71.988			
			(222.637)			
Female CEO x Equality Income			-0.913			
			(2.479)			
Female Executive x Equality Job				-2.429 **		
				(1.038)		
Female CFO x Equality Job					-1.848 ***	
					(0.672)	
Female CEO x Equality Job						-3.810
						(3.035)
Equality Income	1.217	1.152	1.381			
	(3.220)	(3.292)	(2.843)			
Equality Job				-1.521	-1.474	-1.865
				(3.407)	(3.418)	(3.450)
Borrower characteristics						
Tangibility	-4.600	-2.356	-2.843	0.620	0.432	2.069
	(18.186)	(17.941)	(18.159)	(13.104)	(13.075)	(13.062)
Leverage	104.457 ***	105.729 ***	103.114 ***	78.008 ***	78.065 ***	75.425 ***
	(17.139)	(16.996)	(17.284)	(13.777)	(13.780)	(13.821)
Z-score	-7.160 **	-7.230 **	-6.551 **	-8.683 ***	-8.723 ***	-8.410 ***
	(3.235)	(3.253)	(3.235)	(2.567)	(2.574)	(2.567)
Profitability	-281.182 ***	-285.248 ***	-286.866 ***	-195.742 ***	-195.585 ***	-200.757 ***
	(51.231)	(51.187)	(51.098)	(36.007)	(36.013)	(35.909)
Transparency	-9.608	-7.948	-15.657	1.690	3.415	-1.868
	(24.904)	(23.325)	(23.359)	(15.368)	(14.953)	(15.009)
Firm size	-23.130 ***	-22.983 ***	-22.717 ***	-18.470 ***	-18.403 ***	-18.012 ***
	(3.457)	(3.440)	(3.491)	(2.516)	(2.505)	(2.512)
Prime Grade	-21.269 ***	-20.395 ***	-22.309 ***	-19.054 ***	-19.069 ***	-19.941 ***
	(7.769)	(7.708)	(8.004)	(5.712)	(5.762)	(5.892)
Junk Grade	35.279 ***	34.791 ***	35.892 ***	39.405 ***	39.031 ***	39.262 ***
	(7.295)	(7.201)	(7.284)	(6.004)	(6.023)	(6.036)
Loan characteristics						
Secured	51.039 ***	51.691 ***	51.047 ***	52.564 ***	52.547 ***	52.555 ***
	(7.827)	(7.847)	(7.782)	(5.990)	(6.015)	(5.996)
Financial covenants	-0.056	-0.378	0.085	1.768	1.755	2.007
	(5.760)	(5.813)	(5.740)	(4.873)	(4.853)	(4.874)
Term loan	32.743 ***	33.507 ***	33.378 ***	34.418 ***	35.400 ***	34.782 ***
	(5.187)	(5.152)	(5.207)	(4.170)	(4.122)	(4.221)
Senior	-255.871 **	-229.132 **	-232.026 **	-402.475 ***	-394.535 ***	-400.838 ***
	(113.005)	(92.654)	(101.490)	(64.924)	(65.391)	(65.520)
Loan size	6.503 **	6.388 **	6.213 **	1.467	1.316	1.314
	(2.575)	(2.555)	(2.581)	(2.042)	(2.045)	(2.055)
Multiple tranches	11.419 **	11.305 **	9.909 *	9.457 **	9.400 **	8.819 *
	(5.792)	(5.759)	(5.787)	(4.650)	(4.628)	(4.624)
Currency	-11.776	-11.856	-10.278	-13.571	-14.007	-13.205
	(12.120)	(12.092)	(12.181)	(9.972)	(9.912)	(9.948)
Maturity	-20.399 ***	-20.459 ***	-20.391 ***	-14.723 ***	-14.703 ***	-14.752 ***
	(4.832)	(4.830)	(4.782)	(3.514)	(3.504)	(3.474)
Relationship loan	3.742	3.724	3.672	-2.447	-2.428	-1.982
	(5.187)	(5.223)	(5.256)	(4.194)	(4.172)	(4.246)
Refinance	-7.718	-7.495	-8.134	-11.962 **	-11.450 **	-12.644 **
	(6.025)	(5.899)	(6.031)	(5.454)	(5.338)	(5.559)
Performance pricing	-30.685 ***	-30.621 ***	-31.573 ***	-33.809 ***	-34.348 ***	-34.304 ***
	(5.725)	(5.834)	(5.731)	(4.458)	(4.502)	(4.487)
Country characteristics						
Democracy	-33.798	-23.258	-27.040	8.589	9.297	13.139
	(42.709)	(40.502)	(42.656)	(19.664)	(19.945)	(20.638)
Financial development	0.788	0.946	0.443	-1.394 **	-1.276 *	-1.606 **
	(1.644)	(1.669)	(1.736)	(0.672)	(0.675)	(0.628)
Economic growth	0.453	0.457	0.220	-2.997	-3.184	-3.042
	(4.410)	(4.384)	(4.557)	(3.241)	(3.305)	(3.279)
Country governance	-48.346	-44.354	-40.604	-18.119	-18.222	-14.530
	(33.420)	(32.552)	(33.783)	(16.249)	(16.252)	(16.102)
Fixed effects						
Borrower industry	yes	yes	yes	yes	yes	yes
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
CFO characteristics	yes	yes	no	yes	yes	no
CEO characteristics	yes	no	yes	yes	no	yes
Percentage Female	13.66	10.29	3.95	12.82	9.74	3.62
Adjusted R-squared	0.430	0.429	0.425	0.467	0.466	0.466
Observations	3,945	3,945	3,945	6,550	6,550	6,550

Note: The dependent variable is the loan spread. The table reveals the influence of the cultural perception of a top executive's gender on the loan spread. Equality Income in columns 1-3 represents the percentage of respondents who "disagree" or "strongly disagree" with the statement "Problem if women have more income than husband". Equality Job in columns 4-6 represents the percentage of respondents who "disagree" or "strongly disagree" with the statement "Job scarce: Men should have more right to a job than women". Definitions of the variables are provided in Table A1 of Appendix A. The number of observations refers to the number of loan tranches observed. Standard errors are clustered at the firm level. Standard errors are in parentheses. Significance at the 10%, 5%, and 1% levels are indicated by *, **, ***, respectively.

Table 6: Cultural influence on loan size for different cultural proxies

	Female CFO	Female CFO	Female CFO	Female CFO
	(1)	(2)	(3)	(4)
Female CFO	-1.567 ***	-1.106 ***	-0.907	-1.413 **
	(0.464)	(0.399)	(0.956)	(0.616)
Female CFO x Equality Score	0.018 ***			
	(0.005)			
Female CFO x Equality Politics		0.014 ***		
		(0.005)		
Female CFO x Equality Income			0.010	
			(0.011)	
Female CFO x Equality Job				0.015 **
				(0.007)
Equality Score	0.011			
	(0.014)			
Equality Politics		0.007		
		(0.013)		
Equality Income			0.006	
			(0.016)	
Equality Job				-0.018
				(0.014)
Borrower characteristics				
Tangibility	-0.253 **	-0.254 **	-0.297 **	-0.259 **
	(0.112)	(0.112)	(0.146)	(0.113)
Leverage	0.230 *	0.233 *	0.424 **	0.223 *
	(0.133)	(0.133)	(0.174)	(0.133)
Z-score	0.043 **	0.043 **	0.063 ***	0.042 **
	(0.019)	(0.019)	(0.020)	(0.019)
Profitability	1.482 ***	1.481 ***	1.853 ***	1.505 ***
	(0.251)	(0.250)	(0.339)	(0.250)
Transparency	0.116	0.119	0.114	0.115
	(0.138)	(0.137)	(0.177)	(0.139)
Firm size	0.579 ***	0.578 ***	0.556 ***	0.577 ***
	(0.018)	(0.018)	(0.023)	(0.018)
Prime Grade	0.133 **	0.134 **	0.082	0.135 **
	(0.054)	(0.054)	(0.066)	(0.054)
Junk Grade	0.236 ***	0.238 ***	0.153 ***	0.241 ***
	(0.048)	(0.048)	(0.054)	(0.048)
Loan characteristics				
Secured	-0.055	-0.055	-0.089 *	-0.055
	(0.039)	(0.039)	(0.049)	(0.039)
Financial covenants	-0.086 **	-0.086 **	-0.063	-0.087 **
	(0.037)	(0.037)	(0.042)	(0.037)
Term loan	0.011	0.011	-0.032	0.011
	(0.041)	(0.041)	(0.052)	(0.041)
Senior	0.537	0.539	-0.288	0.538
	(0.354)	(0.353)	(0.671)	(0.358)
Multiple tranches	-0.440 ***	-0.440 ***	-0.459 ***	-0.439 ***
	(0.057)	(0.057)	(0.081)	(0.057)
Currency	0.278 ***	0.278 ***	0.516 ***	0.285 ***
	(0.081)	(0.081)	(0.116)	(0.081)
Maturity	0.128 ***	0.128 ***	0.158 **	0.127 ***
	(0.043)	(0.043)	(0.066)	(0.043)
Relationship loan	0.023	0.024	0.018	0.023
	(0.031)	(0.032)	(0.042)	(0.031)
Refinance	0.101 **	0.104 **	0.105 **	0.106 **
	(0.043)	(0.043)	(0.043)	(0.043)
Performance pricing	0.283 ***	0.283 ***	0.303 ***	0.284 ***
	(0.040)	(0.040)	(0.051)	(0.040)
Country characteristics				
Democracy	0.075	0.091	0.138	0.088
	(0.172)	(0.170)	(0.306)	(0.169)
Financial development	0.016 ***	0.015 ***	0.012	0.014 **
	(0.005)	(0.005)	(0.010)	(0.005)
Economic growth	0.004	0.005	-0.014	0.010
	(0.019)	(0.019)	(0.024)	(0.019)
Country governance	0.093	0.094	0.157	0.072
	(0.100)	(0.100)	(0.166)	(0.102)
Fixed effects				
Borrower industry	yes	yes	yes	yes
Borrower country	yes	yes	yes	yes
Loan signing year	yes	yes	yes	yes
Loan purpose	yes	yes	yes	yes
CFO characteristics	yes	yes	no	yes
CEO characteristics	yes	no	yes	yes
Percentage Female	9.74	9.74	10.29	9.74
Adjusted R-squared	0.561	0.561	0.548	0.561
Observations	6,550	6,550	3,945	6,550

Note: The dependent variable is the natural logarithm of the loan size. The table reveals the influence of the cultural perception of a top executive's gender on the size of the loan. Equality Score in column 1 represents the percentage of respondents who "disagree" or "strongly disagree" with the statement "Men make better business executives than women". Equality Politics in column 2 represents the percentage of respondents who "disagree" or "strongly disagree" with the statement "Men make better political leaders than women". Equality Income in column 3 represents the percentage of respondents who "disagree" or "strongly disagree" with the statement "Problem if women have more income than husband". Equality Job in column 3 represents the percentage of respondents who "disagree" or "strongly disagree" with the statement "Job scarce: Men should have more right to a job than women". Definitions of the variables are provided in Table A1 of Appendix A. The number of observations refers to the number of loan tranches observed. Standard errors are clustered at the firm level. Standard errors are in parentheses. Significance at the 10%, 5%, and 1% levels are indicated by *, **, ***, respectively.

Appendix A: Variable Definitions

Table A1: Variable definitions

Variable	Definition	Source
Executive Gender		
Female Executives	Dummy equal to 1 if the loan is raised by a borrower with at least one female in the positions of CFO and CEO in the year of loan signing, 0	Orbis and Execucomp
Female CFO	Dummy equal to 1 if the loan is raised by a borrower with a female CFO in the year of loan signing, 0 otherwise	Orbis and Execucomp
Female CEO	Dummy equal to 1 if the loan is raised by a borrower with a female CEO in the year of loan signing, 0 otherwise	Orbis and Execucomp
Culture Borrower Country		
Equality Score	Percentage of the respondents in the borrower country who "Disagree" or "Strongly Disagree" with the statement "Men make better business executives than women"	Integrated Values Survey
Equality Income	Percentage of the respondents in the borrower country who "Disagree" or "Strongly Disagree" with the statement "Problem if women have more income than husband"	Integrated Values Survey
Equality Politics	Percentage of the respondents in the borrower country who "Disagree" or "Strongly Disagree" with the statement "Men make better political leaders than women"	Integrated Values Survey
Equality Job	Percentage of the respondents in the borrower country who "Disagree" or "Strongly Disagree" with the statement "Jobs scarce: Men should have more right to a job than women"	Integrated Values Survey
Executive Characteristics		
Age	Indicators for executive's age category: <50, between 50 and 65, >65, or unknown	Orbis and Execucomp
Experience	Indicators for executive's years with the borrower: <3, between 3 and 10, >10, or unknown	Orbis and Execucomp
Degree	Indicators for executive's highest educational degree: bachelor, master, PhD, other degree, or unknown	Orbis and Execucomp
Major	Indicators for executive's educational major/subject: Accounting; Business; Economics; Engineering; Finance; Languages and History; Law; Media and Arts; Medicine; Politics; Science; Technology; Statistics; Unknown	Orbis and Execucomp
Borrower Characteristics		
Firm size	Natural logarithm of a firm's total assets in $M, winsorized	Orbis
Tangibility	Ratio of tangible fixed assets to total assets, winsorized	Orbis
Leverage	Ratio of debt to total assets, winsorized	Orbis
Z-score	modified Z-score = (1.2* Working Capital + 1.48* Retained Earnings + 3.3*EBIT + 0.999*Sales) / Total Assets, winsorized	Orbis
Profitability	ratio of EBITDA to total assets, winsorized	Orbis
Transparency	Dummy equal to 1 if the borrower is listed, 0 if the borrower is private	Orbis
Capacity Difference	Difference between the percent change of revenue and the percent change in employees	Orbis
Loan Characteristics		
Spread	All-in-spread drawn in bps	LPC DealScan
Loan size	Natural logarithm of tranche size in USD million	LPC DealScan
Maturity	Natual logarithm of the loan maturity in months	LPC DealScan
Secured	Dummy equal to 1 if collateral is attached to the loan, 0 otherwise	LPC DealScan
Senior	Dummy equal to 1 if the loan is senior, 0 otherwise	LPC DealScan
Currency	Dummy equal to 1 if the loan is denominated in USD, 0 otherwise	LPC DealScan
Relationship loan	Dummy equal to 1 if at leas one of the current lead arrangers has lent to the borrower in the past five years, 0 otherwise	LPC DealScan
Term loan	Dummy equal to 1 if the loan is secured, 0 otherwise	LPC DealScan
Multiple tranches	Dummy equal to 1 if the loan belongs to deal which consists of multiple tranches, 0 otherwise	LPC DealScan
Financial covenants	Dummy equal to 1 if the loan has financial covenants, 0 otherwise	LPC DealScan
Refinance	Dummy equal to 1 if the loan is refinanced, 0 otherwise	LPC DealScan
Performance pricing	Dummy equal to 1 if the loan includes performance pricing metrics, 0 otherwise	LPC DealScan
Country characteristics (Borrower)		
Democracy	A country's level of democracy: A higher value indicates more democracy	Economist Intelligence Unit
Financial development	Financial institutions efficiency index: Higher values indicate more efficient financial institutions	IMF's Financial Development Index Database
Economic growth	Real GDP growth (Annual percentage change)	World Bank
Country governance	Control of corruption: Higher values indicate a better control of corruption	World Bank's Worldwide Governance Indicators
Fixed Effects		
Credit rating	Fixed effects for the borrower's long-term senior debt rating: Prime-Grade; Junk-Grade; Unknown	LPC DealScan & S&P
Loan purpose	Fixed effects for the loan purpose: General Purpose; General Purpose/Refinance; Takeover or Acquisition; Working Capital; Sponsored or Leveraged Buyout; Other Purpose	LPC DealScan
Industry	Indicators for borrower's industry group based on 2 digit-SIC codes	LPC DealScan
Country	Fixed effects for the country of the borrower	LPC DealScan
Year	Fixed effects for the year of the loan signing: 2003-2024	LPC DealScan

Notes: The table provides variable definitions of all variables used within the study. Borrower characteristics have been lagged one year behind (t-1).

Appendix B: Further Tables

Table B1: Distribution of loans by year

		Fraction of loans raised by firms with		
Year	Number of loans	Female Executives	Female CFO	Female CEO
2003	89	9.0%	9.0%	1.1%
2004	353	16.1%	14.4%	2.5%
2005	445	10.1%	8.1%	2.5%
2006	1,261	10.3%	8.4%	2.5%
2007	1,604	13.5%	10.4%	3.2%
2008	908	10.6%	9.0%	1.9%
2009	585	12.5%	8.7%	3.9%
2010	944	11.8%	9.2%	3.2%
2011	1,025	11.9%	9.5%	2.9%
2012	897	11.3%	8.0%	4.1%
2013	920	12.1%	9.2%	3.4%
2014	977	13.2%	10.4%	3.1%
2015	902	12.2%	10.1%	3.1%
2016	702	17.9%	11.8%	7.0%
2017	687	13.1%	10.6%	2.5%
2018	740	12.0%	8.1%	4.6%
2019	624	17.6%	14.4%	3.4%
2020	185	13.5%	11.9%	1.6%
2021	78	7.7%	5.1%	2.6%
2022	53	24.5%	17.0%	9.4%
2023	55	32.7%	32.7%	0.0%
2024	5	20.0%	20.0%	0.0%
Total Loans	14,039	14,039	14,039	14,039
Total Female		1,787	1,395	461
% Female		12.7%	9.9%	3.3%

Note: This table shows the total number of loans raised within each year and the fraction of these loans raised by female executives/ female CFOs/ female CEOs. The underlying unit of observation is the loan tranche. Definitions of the variables are provided in Table A1 of Appendix A.

Table B2: Distribution of loans by country

		Fraction of loans raised by firms with		
Country	Number of loans	Female Executives	Female CFO	Female CEO
Argentina	6	0.0%	0.0%	0.0%
Australia	398	19.1%	12.3%	6.8%
Austria	8	0.0%	0.0%	0.0%
Azerbaijan	12	0.0%	0.0%	0.0%
Belarus	3	0.0%	0.0%	0.0%
Brazil	79	1.3%	1.3%	0.0%
Bulgaria	2	100.0%	0.0%	100.0%
Canada	539	9.6%	7.8%	1.9%
Chile	46	0.0%	0.0%	0.0%
China	78	17.9%	17.9%	2.6%
Colombia	14	28.6%	28.6%	0.0%
Cyprus	6	16.7%	16.7%	0.0%
Czech Republic	9	0.0%	0.0%	0.0%
Denmark	6	50.0%	16.7%	33.3%
Egypt	23	0.0%	0.0%	0.0%
Finland	51	3.9%	0.0%	3.9%
France	726	8.1%	5.0%	3.3%
Georgia	4	0.0%	0.0%	0.0%
Germany	447	5.4%	4.5%	0.9%
Hong Kong	53	13.2%	11.3%	1.9%
Hungary	8	0.0%	0.0%	0.0%
India	203	2.5%	1.5%	1.0%
Indonesia	35	17.1%	17.1%	0.0%
Italy	91	5.5%	4.4%	1.1%
Japan	96	3.1%	1.0%	3.1%
Kazakhstan	1	0.0%	0.0%	0.0%
Kuwait	4	0.0%	0.0%	0.0%
Lithuania	5	100.0%	100.0%	0.0%
Malaysia	21	9.5%	9.5%	0.0%
Mexico	127	2.4%	2.4%	0.0%
Netherlands	187	11.8%	9.1%	2.7%
New Zealand	3	0.0%	0.0%	0.0%
Nigeria	9	11.1%	11.1%	0.0%
Norway	95	9.5%	6.3%	3.2%
Pakistan	11	0.0%	0.0%	0.0%
Peru	14	64.3%	57.1%	7.1%
Philippines	21	14.3%	14.3%	0.0%
Poland	26	0.0%	0.0%	0.0%
Portugal	4	0.0%	0.0%	0.0%
Qatar	10	0.0%	0.0%	0.0%
Romania	13	23.1%	23.1%	0.0%
Russian Federation	232	23.7%	23.7%	1.3%
Singapore	94	19.1%	16.0%	9.6%
Slovenia	10	10.0%	10.0%	0.0%
South Africa	42	0.0%	0.0%	0.0%
South Korea	20	10.0%	10.0%	0.0%
Spain	221	20.4%	19.0%	1.8%
Sweden	175	4.6%	4.6%	0.0%
Switzerland	114	0.9%	0.9%	0.0%
Taiwan	327	20.2%	18.7%	6.1%
Thailand	8	12.5%	12.5%	0.0%
Turkey	134	0.0%	0.0%	0.0%
Ukraine	12	100.0%	100.0%	0.0%
United Kingdom	1,002	20.5%	16.9%	3.9%
United States	8,141	12.9%	9.7%	3.6%
Vietnam	12	0.0%	0.0%	0.0%
Zambia	1	0.0%	0.0%	0.0%
Total loans	14,039	14,039	14,039	14,039
Total Female		1,787	1,395	461
% Female		12.7%	9.9%	3.3%

Note: This table shows the total number of loans raised within each country and the fraction of these loans raised by female executives/ female CFOs/ female CEOs. The underlying unit of observation is the loan tranche. Definitions of the variables are provided in Table A1 of Appendix A.

Table B3: Distribution of loans by industry

Industry	Number of loans	Fraction of loans raised by firms with Female Executives	Female CFO	Female CEO
Agriculture, Forestry, Fishing	54	9.3%	7.4%	1.9%
Mining	961	8.3%	8.0%	0.3%
Construction	250	3.2%	3.2%	0.0%
Manufacturing	4,893	12.2%	9.3%	3.5%
Transportation, Communications, Electric, Gas, Sanitary Services	1,822	13.4%	10.3%	3.3%
Wholesale Trade	562	8.7%	7.3%	2.8%
Retail Trade	885	16.6%	11.5%	6.3%
Finance, Insurance, Real Estate	2,213	14.1%	10.3%	4.2%
Services	2,378	14.5%	12.2%	2.5%
Public Administration	21	14.3%	14.3%	0.0%
Total Loans	14,039	14,039	14,039	14,039
Total Female		1,787	1,395	461
% Female		12.7%	9.9%	3.3%

Note: This table shows the total number of loans raised within each industry and the fraction of these loans raised by female executives/ female CFOs/ female CEOs. Firms are classified according to their 2 digit-SIC codes. The underlying unit of observation is the loan tranche. Definitions of the variables are provided in Table A1 of Appendix A.

Table B4: Descriptive statistics (Executive Characteristics)

		CFO		CEO	
Executive characteristics		Number of loans	Fraction of loans raised by firms with female CFO	Number of loans	Fraction of loans raised by firms with female CEO
Age	<50	3,465	12.0%	1,421	3.8%
	50 to 65	4,812	8.8%	6,283	4.1%
	>65	200	1.0%	790	0.6%
	Unknown	5,562	9.9%	5,545	2.6%
Experience	<3 years	458	12.2%	2,506	5.1%
	3 to 10 years	2,592	11.2%	6,773	3.1%
	>10 years	2,711	8.7%	4,490	2.6%
	Unknown	8,278	9.8%	270	0.4%
Degree	Bachelor	0	0.0%	0	0.0%
	Master	191	11.5%	49	8.2%
	Ph.D.	39	5.1%	29	0.0%
	Other	3	0.0%	4	50.0%
	Unknown	13,806	9.9%	13,957	3.3%
All executives		14,039	9.9%	14,039	3.3%

Note: This table provides summary statistics regarding the executives' characteristics. The fourth management characteristic included in the analysis is the major, which is not shown in this table due to the number of different majors considered. The underlying unit of observation is the loan tranche. Definitions of the variables are provided in Table A1 of Appendix A.

Table B5: Correlation matrix

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)
(1) Female Executives	1.00																												
(2) Female CEO	**0.51**	1.00																											
(3) Female CFO	**0.85**	0.03	1.00																										
(4) Equality Score	**0.06**	**0.04**	**0.04**	1.00																									
(5) Equality Income	**0.07**	**0.04**	**0.05**	**0.78**	1.00																								
(6) Equality Politics	**0.06**	**0.03**	**0.04**	**0.97**	**0.74**	1.00																							
(7) Equality Job	**0.06**	**0.04**	**0.04**	**0.95**	**0.81**	**0.92**	1.00																						
(8) Spread	**-0.04**	**-0.04**	-0.02	**-0.14**	**-0.14**	**-0.15**	**-0.14**	1.00																					
(9) Loan size	0.01	**0.04**	-0.01	**0.03**	**0.04**	**0.05**	**0.04**	**-0.13**	1.00																				
(11) Maturity	-0.01	**-0.04**	0.01	**-0.10**	**-0.06**	**-0.07**	**-0.10**	**0.08**	**-0.15**	1.00																			
(12) Secured	**-0.04**	**-0.03**	-0.03	**0.04**	**0.07**	0.03	**0.07**	**0.39**	**-0.14**	**0.23**	1.00																		
(13) Senior	0.01	0.01	0.01	0.02	0.00	0.02	0.03	**-0.04**	-0.01	**-0.46**	0.00	1.00																	
(14) Currency	0.02	0.03	0.01	**0.23**	**0.20**	**0.16**	**0.28**	**-0.05**	**0.06**	**-0.08**	**0.09**	**0.07**	1.00																
(15) Relationship loan	0.00	-0.01	0.01	**-0.05**	**-0.04**	**-0.04**	**-0.04**	**-0.06**	**0.13**	0.01	**-0.09**	-0.01	**-0.08**	1.00															
(16) Term loan	-0.01	**-0.04**	0.01	**-0.20**	**-0.15**	**-0.19**	**-0.22**	**0.22**	**-0.07**	**0.21**	**0.13**	-0.02	**-0.11**	**0.05**	1.00														
(17) Multiple tranches	**-0.04**	**-0.07**	-0.01	0.02	0.01	**0.06**	0.03	**0.11**	-0.01	**0.13**	**0.13**	0.01	**-0.14**	**0.08**	**0.20**	1.00													
(18) Financial covenants	**-0.05**	-0.03	**-0.04**	**0.19**	**0.19**	**0.14**	**0.21**	**-0.05**	**-0.05**	-0.02	**0.17**	0.02	**0.23**	**-0.07**	**-0.08**	**-0.07**	1.00												
(19) Refinance	-0.02	-0.02	-0.01	**0.07**	0.01	**0.06**	0.03	**-0.04**	**-0.06**	**0.08**	**0.10**	0.02	**-0.03**	**0.05**	-0.01	**0.07**	**0.22**	1.00											
(20) Performance pricing	-0.01	-0.01	0.00	**0.21**	**0.19**	**0.16**	**0.22**	**-0.18**	**0.08**	**-0.05**	0.02	0.00	**0.19**	0.00	**-0.18**	**-0.09**	**0.54**	**0.19**	1.00										
(21) Firm size	**0.04**	0.02	**0.04**	**-0.06**	**-0.08**	**-0.05**	**-0.06**	**-0.16**	**0.42**	**-0.14**	**-0.19**	-0.02	**-0.03**	**0.15**	0.01	-0.01	**-0.12**	**-0.06**	-0.03	1.00									
(22) Tangibility	**0.04**	0.02	0.03	**-0.20**	**-0.22**	**-0.20**	**-0.17**	**0.07**	**-0.04**	**0.03**	-0.01	-0.02	-0.02	0.00	**0.04**	**-0.09**	**-0.07**	-0.03	**-0.05**	**0.08**	1.00								
(23) Leverage	0.00	0.00	-0.01	**-0.05**	**-0.08**	-0.03	**-0.05**	**0.16**	**0.04**	**0.08**	**0.11**	-0.02	0.03	**0.17**	**0.12**	**0.10**	**-0.10**	0.01	**-0.12**	**0.08**	**0.21**	1.00							
(24) Z-score	**0.06**	**0.05**	**0.03**	**0.10**	**0.13**	**0.08**	**0.13**	**-0.20**	0.01	-0.02	**-0.09**	0.01	**0.09**	**-0.05**	**-0.11**	-0.02	**0.10**	0.01	**0.14**	**-0.14**	**-0.25**	**-0.33**	1.00						
(25) Profitability	**0.04**	0.02	**0.03**	0.01	-0.01	0.00	**0.04**	**-0.17**	**0.05**	-0.01	**-0.11**	0.02	**0.05**	-0.02	**-0.03**	-0.02	**0.03**	**-0.04**	**0.08**	**-0.04**	**0.05**	**-0.05**	**0.47**	1.00					
(26) Transparency	0.02	0.01	0.02	-0.02	**0.09**	-0.03	0.00	**-0.08**	0.01	-0.02	**-0.06**	**0.06**	0.02	**-0.03**	-0.03	0.00	**0.06**	-0.01	**0.06**	**-0.04**	**-0.10**	**-0.21**	**0.09**	**-0.07**	1.00				
(27) Democracy	0.01	0.00	0.00	**0.69**	**0.60**	**0.74**	**0.68**	**-0.07**	0.01	-0.01	**0.07**	-0.01	**0.05**	0.01	**-0.19**	**0.07**	**0.14**	**0.08**	**0.16**	**-0.11**	**-0.10**	0.01	**0.05**	-0.01	0.02	1.00			
(28) Financial development	**0.04**	0.02	**0.03**	**0.04**	**0.16**	**0.13**	**-0.06**	**-0.14**	**0.05**	**0.06**	**-0.15**	**-0.04**	**-0.17**	**0.04**	**0.10**	**0.11**	**-0.17**	0.00	**-0.16**	**0.04**	**-0.05**	**0.05**	**-0.08**	**-0.09**	0.01	**0.11**	1.00		
(29) Economic growth	-0.01	0.03	-0.01	**-0.25**	**-0.17**	**-0.23**	**-0.28**	**-0.09**	0.00	**0.08**	**-0.07**	**0.04**	0.00	0.03	**0.10**	**0.07**	**-0.06**	**0.04**	**-0.07**	-0.01	0.02	**0.05**	**-0.04**	**-0.06**	0.00	**-0.21**	**0.40**	1.00	
(30) Country governance	**0.05**	**0.04**	**0.03**	**0.77**	**0.79**	**0.77**	**0.73**	**-0.12**	0.02	**-0.05**	0.03	-0.02	-0.01	0.01	**-0.18**	**0.06**	**0.13**	**0.08**	**0.15**	**-0.10**	**-0.24**	**-0.09**	**0.06**	**-0.06**	**0.07**	**0.76**	**0.18**	**-0.16**	1.00

Note: This table provides the Spearman pair-wise correlation between the main variables. Correlations depicted in bold are significant at the 10% or higher level. Definitions of the variables are provided in Table A1 of Appendix A.

Table B6: Cultural influence on loan spreads (Equality Politics)

	Female Executives	Female CFO	Female CEO
	(1)	(2)	(3)
Female Executives	158.737 ***		
	(59.247)		
Female Executive x Equality Politics	-1.986 ***		
	(0.740)		
Female CFO		110.595 ***	
		(35.461)	
Female CFO x Equality Politics		-1.360 ***	
		(0.453)	
Female CEO			279.471
			(252.908)
Female CEO x Equality Politics			-3.545
			(3.121)
Equality Politics	-0.157	-0.559	-0.436
	(1.636)	(1.637)	(1.522)
Borrower characteristics			
Tangibility	0.592	0.318	2.581
	(13.164)	(13.133)	(13.122)
Leverage	77.705 ***	77.867 ***	75.883 ***
	(13.753)	(13.742)	(13.803)
Z-score	-8.759 ***	-8.753 ***	-8.365 ***
	(2.570)	(2.576)	(2.569)
Profitability	-193.625 ***	-194.584 ***	-200.233 ***
	(36.263)	(36.216)	(36.013)
Transparency	0.632	2.353	-2.078
	(15.400)	(14.960)	(15.001)
Firm size	-18.652 ***	-18.518 ***	-18.170 ***
	(2.500)	(2.478)	(2.488)
Prime Grade	-19.000 ***	-19.059 ***	-19.956 ***
	(5.722)	(5.764)	(5.895)
Junk Grade	39.126 ***	38.874 ***	39.023 ***
	(6.027)	(6.073)	(6.076)
Loan characteristics			
Secured	52.814 ***	52.677 ***	52.659 ***
	(5.995)	(6.013)	(6.017)
Financial covenants	1.515	1.493	1.779
	(4.836)	(4.813)	(4.837)
Term loan	34.455 ***	35.479 ***	34.859 ***
	(4.174)	(4.126)	(4.209)
Senior	-404.881 ***	-396.399 ***	-401.836 ***
	(65.455)	(65.820)	(65.789)
Loan size	1.532	1.363	1.366
	(2.033)	(2.032)	(2.049)
Multiple tranches	9.443 **	9.245 **	8.923 *
	(4.649)	(4.620)	(4.610)
Currency	-14.181	-14.507	-13.690
	(9.774)	(9.714)	(9.704)
Maturity	-14.841 ***	-14.790 ***	-14.806 ***
	(3.514)	(3.502)	(3.481)
Relationship loan	-2.433	-2.375	-1.958
	(4.182)	(4.166)	(4.243)
Refinance	-11.853 **	-11.135 **	-12.477 **
	(5.549)	(5.437)	(5.607)
Performance pricing	-33.599 ***	-34.227 ***	-34.259 ***
	(4.455)	(4.500)	(4.486)
Country characteristics			
Democracy	8.269	8.743	14.951
	(19.702)	(19.903)	(20.494)
Financial development	-1.223 **	-1.138 **	-1.404 **
	(0.586)	(0.579)	(0.576)
Economic growth	-3.362	-3.418	-3.350
	(3.466)	(3.530)	(3.573)
Country governance	-15.566	-16.317	-11.188
	(14.095)	(14.085)	(13.679)
Fixed effects			
Borrower industry	yes	yes	yes
Borrower country	yes	yes	yes
Loan signing year	yes	yes	yes
Loan purpose	yes	yes	yes
CFO characteristics	yes	yes	no
CEO characteristics	yes	no	yes
Percentage Female	12.82	9.74	3.62
Adjusted R-squared	0.467	0.465	0.465
Observations	6,550	6,550	6,550

Note: The dependent variable is the loan spread. The table reveals the influence of the cultural perception of a top executive's gender on the loan spread. Equality Politics represents the percentage of respondents who "disagree" or "strongly disagree" with the statement "Men make better political leaders than women". Definitions of the variables are provided in Table A1 of Appendix A. The number of observations refers to the number of loan tranches observed. Standard errors are clustered at the firm level. Standard errors are in parentheses. Significance at the 10%, 5%, and 1% levels are indicated by *, **, ***, respectively.

Table B7: Cultural influence on loan spreads without US borrowers

	Female Executives	Female CFO	Female CEO
	(1)	(2)	(3)
Female Executives	260.258 **		
	(103.007)		
Female Executive x Equality Score	-2.936 **		
	(1.247)		
Female CFO		167.692 ***	
		(52.329)	
Female CFO x Equality Score		-1.657 **	
		(0.659)	
Female CEO			452.800
			(396.483)
Female CEO x Equality Score			-5.475
			(4.740)
Equality Score	1.045	0.495	1.442
	(1.861)	(1.950)	(1.907)
Borrower characteristics			
Tangibility	-2.624	1.584	3.373
	(28.369)	(27.713)	(28.010)
Leverage	87.404 **	89.648 **	79.500 **
	(38.473)	(38.054)	(37.062)
Z-score	-14.277 *	-13.456 *	-11.876
	(7.602)	(7.502)	(7.286)
Profitability	-154.039 **	-161.607 ***	-165.745 ***
	(60.212)	(59.521)	(59.446)
Transparency	14.688	18.486	2.026
	(21.511)	(20.635)	(21.634)
Firm size	-27.367 ***	-26.700 ***	-23.666 ***
	(5.699)	(5.658)	(5.679)
Prime Grade	-29.371 **	-31.536 **	-31.909 **
	(12.631)	(12.745)	(13.343)
Junk Grade	42.809 ***	43.397 ***	39.944 ***
	(12.833)	(12.972)	(13.083)
Loan characteristics			
Secured	34.477 *	34.027 *	34.126 *
	(18.842)	(18.509)	(19.219)
Financial covenants	17.197	12.694	16.423
	(16.424)	(15.716)	(15.604)
Term loan	25.603 ***	29.439 ***	28.647 ***
	(8.490)	(8.278)	(8.596)
Senior	-419.541 ***	-406.796 ***	-411.980 ***
	(61.232)	(62.288)	(62.977)
Loan size	4.424	3.788	2.796
	(4.709)	(4.633)	(4.704)
Multiple tranches	21.289 *	21.323 *	18.752 *
	(11.288)	(11.242)	(10.858)
Currency	-27.441 **	-26.231 **	-25.365 *
	(13.398)	(13.342)	(13.114)
Maturity	-9.560	-10.168	-11.035
	(7.254)	(7.389)	(7.115)
Relationship loan	6.659	6.766	8.253
	(11.434)	(11.375)	(11.528)
Refinance	-52.168 ***	-49.234 **	-52.513 ***
	(19.453)	(19.231)	(19.313)
Performance Pricing	-10.257	-12.024	-11.867
	(10.839)	(11.469)	(10.784)
Country characteristics			
Democracy	1.847	5.970	10.838
	(22.426)	(22.412)	(23.107)
Financial development	-0.847	-0.830	-0.810
	(0.773)	(0.768)	(0.741)
Economic growth	-2.989	-3.344	-3.361
	(3.902)	(3.933)	(4.110)
Country governance	-30.718 *	-29.683 *	-22.047
	(15.804)	(15.304)	(15.232)
Fixed effects			
Borrower industry	yes	yes	yes
Borrower country	yes	yes	yes
Loan signing year	yes	yes	yes
Loan purpose	yes	yes	yes
CFO characteristics	yes	yes	no
CEO characteristics	yes	no	yes
Percentage Female	10.07	7.67	2.81
Adjusted R-squared	0.443	0.438	0.438
Observations	1,996	1,996	1,996

Note: The dependent variable is the loan spread. The table reveals the influence of the cultural perception of a top executive's gender on the loan spread for all countries except US borrowers. Equality Score represents the percentage of respondents who "disagree" or "strongly disagree" with the statement "Men make better business executives than women". Definitions of the variables are provided in Table A1 of Appendix A. The number of observations refers to the number of loan tranches observed. Standard errors are clustered at the firm level. Standard errors are in parentheses. Significance at the 10%, 5%, and 1% levels are indicated by *, **, ***, respectively.

Table B8: Cultural influence on loan spreads (only countries with at least 6 loans to female executives)

	Female Executives	Female CFO	Female CEO
	(1)	(2)	(3)
Female Executives	145.948 ***		
	(43.798)		
Female Executive x Equality Score	-1.704 ***		
	(0.518)		
Female CFO		146.630 ***	
		(44.478)	
Female CFO x Equality Score		-1.695 ***	
		(0.528)	
Female CEO			-104.788
			(183.371)
Female CEO x Equality Score			1.123
			(2.127)
Equality Score	-2.289	-2.717 *	-1.972
	(1.682)	(1.649)	(1.671)
Borrower characteristics			
Tangibility	-16.486	-17.424	-13.768
	(12.211)	(12.203)	(12.234)
Leverage	70.741 ***	71.697 ***	68.453 ***
	(13.603)	(13.608)	(13.600)
Z-score	-8.300 ***	-8.219 ***	-8.304 ***
	(2.656)	(2.668)	(2.653)
Profitability	-180.643 ***	-179.257 ***	-182.599 ***
	(35.801)	(35.885)	(35.603)
Transparency	-10.477	-9.480	-9.707
	(16.144)	(15.531)	(16.041)
Firm size	-16.846 ***	-16.874 ***	-16.565 ***
	(2.231)	(2.233)	(2.217)
Prime Grade	-14.199 ***	-14.350 ***	-15.663 ***
	(5.329)	(5.339)	(5.390)
Junk Grade	42.797 ***	42.569 ***	42.148 ***
	(6.145)	(6.178)	(6.184)
Loan characteristics			
Secured	54.489 ***	54.599 ***	54.509 ***
	(4.660)	(4.678)	(4.646)
Financial covenants	1.505	1.508	1.944
	(4.895)	(4.883)	(4.887)
Term loan	40.158 ***	40.394 ***	40.765 ***
	(3.893)	(3.890)	(3.902)
Senior	-595.300 ***	-596.662 ***	-594.995 ***
	(74.583)	(74.208)	(76.199)
Loan size	-0.145	-0.186	-0.231
	(1.707)	(1.709)	(1.737)
Multiple tranches	3.042	3.275	2.611
	(4.074)	(4.084)	(4.093)
Currency	-3.192	-3.284	-3.632
	(6.988)	(6.931)	(7.098)
Maturity	-16.001 ***	-15.776 ***	-15.899 ***
	(3.453)	(3.448)	(3.462)
Relationship loan	-8.172 **	-8.038 **	-7.567 **
	(3.658)	(3.662)	(3.649)
Refinance	-3.155	-3.037	-3.380
	(4.770)	(4.738)	(4.797)
Performance Pricing	-35.728 ***	-36.203 ***	-36.328 ***
	(4.368)	(4.369)	(4.360)
Country characteristics			
Democracy	25.435	22.244	28.739
	(24.584)	(24.456)	(24.259)
Financial development	-2.066 ***	-2.049 ***	-2.051 ***
	(0.617)	(0.605)	(0.600)
Economic growth	-4.976 *	-4.722 *	-4.935 *
	(2.813)	(2.800)	(2.800)
Country governance	-6.213	-8.239	-3.364
	(15.773)	(15.576)	(14.959)
Fixed effects			
Borrower industry	yes	yes	yes
Borrower country	yes	yes	yes
Loan signing year	yes	yes	yes
Loan purpose	yes	yes	yes
CFO characteristics	yes	yes	no
CEO characteristics	yes	no	yes
Percentage Female	13.89	10.59	3.9
Adjusted R-squared	0.499	0.498	0.497
Observations	5,852	5,852	5,852

Note: The dependent variable is the loan spread. The table reveals the influence of the cultural perception of a top executive's gender on the loan spread for countries in which at least five loans with female executives are in the sample. Equality Score represents the percentage of respondents who "disagree" or "strongly disagree" with the statement "Men make better business executives than women". Definitions of the variables are provided in Table A1 of Appendix A. The number of observations refers to the number of loan tranches observed. Standard errors are clustered at the firm level. Standard errors are in parentheses. Significance at the 10%, 5%, and 1% levels are indicated by *, **, ***, respectively.

Table B9: Cultural influence on loan spreads (country of syndication)

	Female Executives	Female CFO	Female CEO
	(1)	(2)	(3)
Female Executives	214.275 **		
	(92.135)		
Female Executive x Equality Score	-2.500 **		
	(1.074)		
Female CFO		145.325 ***	
		(41.719)	
Female CFO x Equality Score		-1.672 ***	
		(0.499)	
Female CEO			398.334
			(360.901)
Female CEO x Equality Score			-4.702
			(4.168)
Equality Score	0.813	0.453	0.668
	(1.639)	(1.667)	(1.693)
Borrower characteristics			
Tangibility	3.291	3.222	4.679
	(13.126)	(13.109)	(13.058)
Leverage	73.606 ***	73.721 ***	71.045 ***
	(13.599)	(13.611)	(13.638)
Z-score	-8.505 ***	-8.447 ***	-8.154 ***
	(2.565)	(2.574)	(2.558)
Profitability	-199.556 ***	-201.609 ***	-205.810 ***
	(36.332)	(36.314)	(36.165)
Transparency	0.072	1.544	-4.097
	(15.027)	(14.565)	(14.733)
Firm size	-18.163 ***	-18.013 ***	-17.700 ***
	(2.513)	(2.491)	(2.494)
Prime Grade	-17.889 ***	-17.902 ***	-18.532 ***
	(5.751)	(5.778)	(5.863)
Junk Grade	40.581 ***	40.267 ***	40.721 ***
	(5.984)	(6.029)	(5.994)
Loan characteristics			
Secured	53.292 ***	53.198 ***	53.093 ***
	(6.004)	(6.048)	(6.029)
Financial covenants	1.257	1.362	1.632
	(4.869)	(4.850)	(4.849)
Term loan	33.972 ***	34.922 ***	34.233 ***
	(4.214)	(4.153)	(4.232)
Senior	-420.465 ***	-412.559 ***	-418.564 ***
	(67.382)	(68.102)	(67.979)
Loan size	1.442	1.228	1.276
	(2.043)	(2.040)	(2.060)
Multiple tranches	9.879 **	9.792 **	9.388 **
	(4.690)	(4.671)	(4.650)
Currency	-19.272 *	-19.583 *	-19.362 *
	(11.399)	(11.377)	(11.374)
Maturity	-14.553 ***	-14.426 ***	-14.622 ***
	(3.484)	(3.479)	(3.441)
Relationship loan	-1.772	-1.801	-1.233
	(4.200)	(4.182)	(4.260)
Refinance	-9.582 *	-9.205 *	-10.252 *
	(5.524)	(5.406)	(5.546)
Performance Pricing	-34.096 ***	-34.519 ***	-34.898 ***
	(4.473)	(4.510)	(4.523)
Country characteristics			
Democracy	4.136	3.178	4.359
	(6.354)	(6.074)	(6.205)
Financial development	-0.949 *	-0.932 *	-1.169 **
	(0.521)	(0.510)	(0.523)
Economic growth	-2.819	-2.851	-2.806
	(3.139)	(3.159)	(3.200)
Country governance	-6.661	-6.138	-4.801
	(8.989)	(8.239)	(9.145)
Fixed effects			
Country of Syndication	yes	yes	yes
Borrower industry	yes	yes	yes
Borrower country	yes	yes	yes
Loan signing year	yes	yes	yes
Loan purpose	yes	yes	yes
CFO characteristics	yes	yes	no
CEO characteristics	yes	no	yes
Percentage Female	12.79	9.73	3.59
Adjusted R-squared	0.469	0.467	0.468
Observations	6,513	6,513	6,513

Note: The dependent variable is the loan spread. The table reveals the influence of the cultural perception of a top executive's gender on the loan spread. Equality Score represents the percentage of respondents for the country of syndication who "disagree" or "strongly disagree" with the statement "Men make better business executives than women". Definitions of the variables are provided in Table A1 of Appendix A. The number of observations refers to the number of loan tranches observed. Standard errors are clustered at the firm level. Standard errors are in parentheses. Significance at the 10%, 5%, and 1% levels are indicated by *, **, ***, respectively.

Table B10: Cultural influence on loan spreads (additional ethics control)

	Female Executives	Female CFO	Female CEO
	(1)	(2)	(3)
Female Executives	138.458 *		
	(70.693)		
Female Executive x Equality Score	-1.620 *		
	(0.829)		
Female CFO		143.894 *	
		(75.607)	
Female CFO x Equality Score		-1.665 *	
		(0.886)	
Female CEO			77.860
			(128.981)
Female CEO x Equality Score			-0.968
			(1.517)
Equality Score	-0.183	-0.886	-0.338
	(1.989)	(2.066)	(1.951)
Borrower characteristics			
Capacity Difference	0.647	0.679	0.628
	(0.536)	(0.542)	(0.517)
Tangibility	-3.705	-3.943	-2.367
	(11.717)	(11.714)	(11.643)
Leverage	75.582 ***	75.974 ***	73.203 ***
	(13.391)	(13.361)	(13.478)
Z-score	-8.079 ***	-7.972 ***	-8.132 ***
	(2.562)	(2.567)	(2.559)
Profitability	-178.581 ***	-179.298 ***	-180.111 ***
	(35.611)	(35.613)	(35.446)
Transparency	0.400	2.994	-2.743
	(18.158)	(17.527)	(17.371)
Firm size	-14.845 ***	-14.727 ***	-14.706 ***
	(2.172)	(2.158)	(2.165)
Prime Grade	-18.340 ***	-18.924 ***	-19.283 ***
	(5.366)	(5.468)	(5.572)
Junk Grade	40.010 ***	39.314 ***	40.242 ***
	(6.098)	(6.148)	(6.143)
Loan characteristics			
Secured	57.303 ***	57.197 ***	57.091 ***
	(4.914)	(4.919)	(4.948)
Financial covenants	2.240	2.300	2.829
	(4.887)	(4.881)	(4.914)
Term loan	31.016 ***	31.726 ***	31.115 ***
	(4.093)	(4.037)	(4.106)
Senior	-430.152 ***	-417.311 ***	-427.476 ***
	(69.444)	(69.948)	(69.126)
Loan size	-0.898	-1.082	-0.883
	(1.764)	(1.750)	(1.758)
Multiple tranches	8.290 **	8.538 **	8.008 *
	(4.166)	(4.138)	(4.147)
Currency	-4.250	-4.799	-4.830
	(7.336)	(7.272)	(7.204)
Maturity	-16.603 ***	-16.447 ***	-16.665 ***
	(3.471)	(3.467)	(3.438)
Relationship loan	-3.121	-2.875	-2.653
	(3.728)	(3.736)	(3.749)
Refinance	-8.698 *	-8.204 *	-9.345 **
	(4.808)	(4.770)	(4.749)
Performance Pricing	-34.632 ***	-35.293 ***	-35.087 ***
	(4.551)	(4.578)	(4.575)
Country characteristics			
Democracy	11.378	10.123	12.076
	(23.545)	(24.025)	(24.110)
Financial development	-1.355 **	-1.420 **	-1.764 ***
	(0.659)	(0.656)	(0.604)
Economic growth	-7.040 **	-7.104 **	-7.131 **
	(2.801)	(2.873)	(2.862)
Country governance	-11.391	-13.296	-9.257
	(14.243)	(14.131)	(14.324)
Fixed effects			
Borrower industry	yes	yes	yes
Borrower country	yes	yes	yes
Loan signing year	yes	yes	yes
Loan purpose	yes	yes	yes
CFO characteristics	yes	yes	no
CEO characteristics	yes	no	yes
Percentage Female	12.57	9.36	3.72
Adjusted R-squared	0.507	0.506	0.506
Observations	6,024	6,024	6,024

Note: The dependent variable is the loan spread.The table reveals the influence of the cultural perception of a top executive's gender on the loan spread. Equality Score represents the percentage of respondents who "disagree" or "strongly disagree" with the statement "Men make better business executives than women". Definitions of the variables are provided in Table A1 of Appendix A. The number of observations refers to the number of loan tranches observed. Standard errors are clustered at the firm level. Standard errors are in parentheses. Significance at the 10%, 5%, and 1% levels are indicated by *, **, ***, respectively.

Table B11: Cultural influence on loan size

	Female Executives	Female CFO	Female CEO
	(1)	(2)	(3)
Female Executives	-1.496 ***		
	(0.490)		
Female Executive x Equality Score	0.018 ***		
	(0.006)		
Female CFO		-1.567 ***	
		(0.464)	
Female CFO x Equality Score		0.018 ***	
		(0.005)	
Female CEO			-0.823
			(1.137)
Female CEO x Equality Score			-5.475
			(4.740)
Equality Score	0.008	0.011	0.006
	(0.013)	(0.014)	(0.013)
Borrower characteristics			
Tangibility	-0.235 **	-0.253 **	-0.242 **
	(0.110)	(0.112)	(0.111)
Leverage	0.236 *	0.230 *	0.246 *
	(0.133)	(0.133)	(0.134)
Z-score	0.040 **	0.043 **	0.037 *
	(0.019)	(0.019)	(0.020)
Profitability	1.478 ***	1.482 ***	1.482 ***
	(0.247)	(0.251)	(0.246)
Transparency	0.122	0.116	0.157
	(0.137)	(0.138)	(0.136)
Firm size	0.578 ***	0.579 ***	0.578 ***
	(0.018)	(0.018)	(0.018)
Prime Grade	0.130 **	0.133 **	0.120 **
	(0.054)	(0.054)	(0.054)
Junk Grade	0.231 ***	0.236 ***	0.229 ***
	(0.047)	(0.048)	(0.047)
Loan characteristics			
Secured	-0.060	-0.055	-0.059
	(0.039)	(0.039)	(0.039)
Financial covenants	-0.086 **	-0.086 **	-0.083 **
	(0.037)	(0.037)	(0.037)
Term loan	0.011	0.011	0.006
	(0.041)	(0.041)	(0.041)
Senior	0.690 **	0.537	0.687 **
	(0.311)	(0.354)	(0.315)
Spread	0.000	0.000	0.000
	(0.000)	(0.000)	(0.000)
Multiple tranches	-0.437 ***	-0.440 ***	-0.437 ***
	(0.057)	(0.057)	(0.057)
Currency	0.280 ***	0.278 ***	0.269 ***
	(0.080)	(0.081)	(0.079)
Maturity	0.134 ***	0.128 ***	0.132 ***
	(0.043)	(0.043)	(0.043)
Relationship loan	0.024	0.023	0.030
	(0.031)	(0.031)	(0.031)
Refinance	0.101 **	0.101 **	0.100 **
	(0.043)	(0.043)	(0.043)
Performance Pricing	0.283 ***	0.283 ***	0.283 ***
	(0.039)	(0.040)	(0.039)
Country characteristics			
Democracy	0.071	0.075	0.069
	(0.168)	(0.172)	(0.176)
Financial development	0.016 ***	0.016 ***	0.014 ***
	(0.005)	(0.005)	(0.005)
Economic growth	0.009	0.004	0.007
	(0.018)	(0.019)	(0.019)
Country governance	0.074	0.093	0.085
	(0.099)	(0.100)	(0.098)
Fixed effects			
Borrower industry	yes	yes	yes
Borrower country	yes	yes	yes
Loan signing year	yes	yes	yes
Loan purpose	yes	yes	yes
CFO characteristics	yes	yes	no
CEO characteristics	yes	no	yes
Percentage Female	10.07	7.67	2.81
Adjusted R-squared	0.443	0.438	0.438
Observations	1,996	1,996	1,996

Note: The dependent variable is the natural logarithm of the loan size. The table reveals the influence of the cultural perception of a top executive's gender on the loan size. Equality Score represents the percentage of respondents who "disagree" or "strongly disagree" with the statement "Men make better business executives than women". Definitions of the variables are provided in Table A1 of Appendix A. The number of observations refers to the number of loan tranches observed. Standard errors are clustered at the firm level. Standard errors are in parentheses. Significance at the 10%, 5%, and 1% levels are indicated by *, **, ***, respectively.