

# EXECUTIVE GENDER DIVERSITY AND CORPORATE BOND MARKETS

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## ABSTRACT

This study investigates how the appointment of female CEOs mitigates the trajectory of the default outlook. Our evidence indicates that bond yield and bond volatility are significantly lower after a female takes the helm at a firm. Executive gender diversity lowers the default component of the bond yield but has no material impact on the liquidity component. We use subsample analysis to verify the conditional effect of female CEOs on bond yield and bond volatility through the credit-risk channel. We consider the main mechanism of the proposed effect is through the improvement on solvency and information environment of the firm.

## INTRODUCTION

Over the last decade, we have witnessed more female executives steering their companies to overcome various challenges through engaging in corporate decision-making. These accomplished female executives have been recognized in various venues. For example, 7 out of 20 business leaders who are identified in Fortune Businessperson of the Year 2020 are women, such as Lisa Su (ranked #2, CEO of Advance Micro Devices) and Julie Sweet (ranked #14, CEO of Accenture). However, the glimpse provided by the Fortune Businessperson list paints a rosier picture than the official data do: only 6% of S&P 500 companies have female CEOs holding the upper echelons of high-caliber U.S. firms (Catalyst, 2021). In 2020, only 41 female CEOs oversaw Fortune 500 companies. Nonetheless, the rising number of female executives is far from satisfactory given that women constitute nearly half (49.7%) of the labor force, according to a 2020 news release from the U.S. Bureau of Labor Statistics. Although some noble campaigns (e.g., <https://5050wob.com/>) are propelling the movement for increased female representation on corporate boards, the number of female CEOs and chairpersons has not significantly moved a dial in this context. Over the years, many scholarly studies and practitioner commentaries have been devoted to examining the impact of gender diversity in leadership across different aspects (Dwyer, Richard and Chadwick, 2003; Maxfield et al., 2010; Shropshire et al., 2021). Thus, it is natural to ask whether CEO gender truly plays a significant role in this regard.

The underlying tone of our study is that the gender differences of executive officers to some extent make material impacts on firms' financial decisions after controlling firms' characteristics. Given the complexity of executive jobs, we are intrigued to explore how gender diversity could act as an underlying driving force to carry out different financial decisions or incite market reactions from investors. So, let us put forth a typical question: do females take as many risks as males? We will argue that this is not a rhetorical question even though females are perceived to be more risk averse or that males are perceived as prone to a greater level of overconfidence (Barber and Odean, 2001; Booth, 2009; Chen et al., 2019; Croson and Gneezy, 2009). Our main hypotheses are drawn from the breadth and depth of literature regarding gender behavioral differences as investigated in psychology, psychobiology, physiology,

education, sociology, investment, and other fields. This rich literature collectively supports the notion that females are more risk averse, less confident, and less optimistic than their male counterparts. Accordingly, in the context of the business environment, the influences of gender behavioral differences have been systematically documented in many studies (Adams & Ferreira, 2009; Barber and Odean, 2001; Huang & Kisgen, 2013; Maxfield et al., 2010). Notably, all these studies are centered on the equity spectrum associated with stock-trading behavior, mutual funds, start-up firms, and stock performance. In addition, other extant literature demonstrates a beneficial effect of board gender diversity on reducing firms' risk-taking (Arnaboldi et al., 2021; Berger, Kick, & Schaeck, 2014; Faccio, Marchica, & Mura, 2016; Levi, Li, & Zhang, 2014; Schopohl, Urquhart, & Zhang, 2021) and enhancing corporate governance (Chen et al., 2019; Francis et al., 2015; Huang & Kisgen, 2013; Lara et al., 2017). To expand the scope of gender diversity studies surrounding corporate decision-making, our study mainly explores the reaction of the U.S. corporate bond market to the appointment of a female CEO.

Jensen and Meckling (1976) present a well-documented agency cost theory, which asserts that potential conflicts of interest between shareholders and bondholders lead to the circumstance where shareholders can rip the upside benefits from undertaking risky projects, but bondholders bear all the downside risk. Such an asymmetry payoff structure sometimes brings in a tension between bondholders and shareholders. Nonetheless, we take a different angle to investigate whether the risk aversion of female executives may curtail bondholders' concern over firms' excess risk taking. In addition, Chapple and Humphrey (2014) report a lack of evidence regarding the relationship between board gender and firm performance. Taken together, will our proposed effect of risk reduction through the female executive channel impact the bond market? To the best of our knowledge, this study is one of only a few papers to assess how the bond market reacts when a female CEO takes the helm of a company.

To fill the gap of extant literature, we empirically investigate the corporate bond market reactions to the appointment of female CEOs. We focus on the effect of executive gender diversity on corporate bond yield and bond volatility. Our data sample spans from 2002 to 2019, and only 6.5% of the sample has female CEOs during the sample period. We document a significantly negative statistical and economic relation between executive gender diversity and bond yield and bond volatility. In other words, the presence of female CEOs contributes to reduce the firm's default risk and bond price uncertainty. Our results hold across various robustness checks and potential endogeneity controls.

According to Longstaff, Mithal, and Neis (2005), in addition to the default component which constitutes most of the corporate bond yield, the liquidity component is another important factor determining bond yield. One may raise concern that the reduction on the bond yield is simply due to the drop in the liquidity component of the corporate bond yield rather than the default risk component given the fact that female CEO usually attracts more investor and media attention. To rule out this possibility, we decompose bond yield into default and liquidity component (Dick-Nielsen, Feldhütter and Lando, 2012; Schwert, 2017) and re-run the analysis on each component separately. Overall, we find that the impact of female CEO is only significant for default component.

Our contribution to the extant literature is twofold. First, we provide the first empirical evidence on bond market reactions toward female CEO appointment. In particular, the firm's bond yield and bond volatility decrease after a female is appointed as CEO. Second, our empirical results provide alternative determinants influencing the bond spread and bond volatility in addition to typical determinants such as default prospects, private-sector savings, economic growth, interest rates, and inflation. Our results document executive gender diversity along with firm characteristics that play a pivotal role in forming credit risk expectation in the bond market.