TAKING STOCK: TESTING THE LEHMAN SISTERS' HYPOTHESIS

DIVERSITY AND RISK TAKING IN THE FINANCE SECTOR

by

HAZEL HOLLINGDALE

B.A. (Hons), The University of British Columbia, 2010

M.A., The University of British Columbia, 2012

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Examining Committee:

Beth Hirsh, Associate Professor, Sociology, UBC

Supervisor

Jennifer Berdahl, Professor, Sociology, UBC

Supervisory Committee Member

Amy Hanser, Associate Professor, Sociology, UBC

Supervisory Committee Member

Neil Guppy, Professor, Sociology, UBC

University Examiner

Toni Schmader, Professor, Psychology, UBC

University Examiner

Abstract

After the 2008 global financial collapse, scholars and industry leaders alike hypothesized that had the Lehman Brothers instead been the Lehman Sisters, the crash might have been avoided. The "Lehman Sisters' Hypothesis" suggests that employing more women in the sex-segregated finance sector would not only promote gender equity, but could reduce the number of reckless risks taken, resulting in more stable economic markets. At the heart of this hypothesis is a belief that women handle risk differently than men, often stemming from essentialist understandings of gendered "differences". However, other research suggests that rather than innate differences, decision-making is improved when groups are made up of people form diverse backgrounds with unique perspectives that lead to enhanced knowledge elaboration.

In this mixed-methods dissertation, I use the Lehman Sisters' hypothesis as a point of entry to explore the effect of sex and racial compositional diversity on risk outcomes. For the quantitative portion, I draw on 10 years of sex and race occupational composition data from 245 finance firms and their subsidiary establishments in the United States to evaluate the effect of gender and race diversity on a firm's financial violations. In a series of negative binomial regression models, I find that higher levels of racial and gender diversity can reduce financial violations in firms, but I also find that diversity effects depend on occupation. I hypothesize that different occupations offer different levels of insulation from cultural pressures that normalize reckless risk-taking.

For the qualitative component, I interviewed 62 financial professionals to glean insight into the cultural context of finance firms to better understand how policy reforms have affected women's workplace experiences. I find that 20 years on from near industry-wide gender-equity policy reform, women in finance continue to face discrimination and harassment, yet are reluctant to use the gender equity policy that is in place. Finance firms still have gendered organizational cultures which tacitly (and sometimes explicitly) penalize women who do not conform to gendered expectations. I make a series of policy recommendations that can be used by financial firms to better catalyze diversity initiatives.

Lay Summary

This dissertation examines whether compositional diversity in finance affects risk outcomes, and explores how gender policies operate in these firms. I use interview data to gain insights into the organizational culture and everyday lives of those who work at finance firms. I use statistical analysis to explore whether race and sex composition have an impact on the number of a firms' regulatory violations. I find that diversity in professional occupations and senior management is mostly associated with decreased violations, but diversity in middle management is associated with increased violations. I suggest that occupations within the same firm have a different relationship with its organizational culture, which ultimately affects risk outcomes. I also find that current gender equity policies don't do enough to remedy the discrimination and harassment that women continue to face. I also make policy recommendations that can be used by financial firms to better catalyze diversity initiatives.

Preface

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Table of Contents

List of Tables

List of Figures

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Dedication

For S. & T.O. Y-O.M. (for taking the steps that were the hardest).

CHAPTER 1 - INTRODUCTION

All organizations deal with risk. In finance, managing risk is integral to an organization's functioning, since taking risks literally pays off. Studies that have explored what influences risk outcomes have tended to focus on market conditions or individual assessments and actions around risk-taking (Nicholson et al 2005; Coates et al 2010; Repollo 2004). Recently, researchers and industry leaders have begun to question whether gender and diversity in general play a role in how risk is carried out within financial firms.

The fall of the financial services firm, the Lehman Brothers, is widely seen as the tipping point that plunged the United States into the 2008 recession (De Haas & Van Horen 2012). But would things have been different, if the Lehman Brothers had been Lehman Sisters (van Staveren 2012)? This proposition has been coined the "Lehman Sister's hypothesis" (Kanter 2010): that is, if more women were employed within the finance sector, would fewer irresponsible risks, such as those that led to the 2008 crash, have been taken? I formally test this hypothesis in this research project, but I also take a broader perspective and ask whether gender *and* racial diversity lead to better risk outcomes. Specifically, I take up the relationship between compositional diversity and risk outcomes and ask whether gender and racially diverse firms make better decisions concerning risk, and I also explore the role of how a homogenous and gendered culture affects this process.

At the heart of the Lehman Sisters' hypothesis is a belief that women approach risk differently than men. Certainly, some research suggests women are more risk averse, fiscally responsible, and respectful of industry regulations, as compared to men (van Staveren, 2012; Apicella et al., 2008; Dwyer et al., 2002; Eckel & Grossman, 2002). Theories for why women may approach risk in more responsible ways range from social to biological explanations (Barber and O'Dean 2001; also see van Staveren 2014 for review of literature). Most of this work, however, has not engaged with research that explores the role of culture in male-dominated work organizations. Behaviour are not carried out in a vacuum, and we must consider how policies are carried out within a specific cultural context, and go beyond arguments which focus narrowly on individual behaviour or gender essentialism. Without interrogating the role that culture plays in how risk is carried out in finance organizations, we cannot fully understand risk behaviour that take place within them.

There is good reason to believe that the culture and structure of finance firms also affect risk outcomes. The finance sector, and specifically occupations in this sector which directly manage risks, are largely male-dominated (EEOC 2015). Research on other male-dominated and gender-typed occupations has found these organizations often have cultures that valourize and reward so-called masculine norms, like displays of autonomy, decisiveness, and risk-taking (Paap 2006; Ely & Meyerson 2010; Eagly & Carli 2007; Martin 1998). In these cultural contexts, behaviour that align with these norms can be conflated with markers of competence, incentivizing individuals to conform with these expectations (Ely and Meyerson 2010). If finance firms have cultures that valourize hegemonic masculine behaviour, like being overly-autonomous and decisive and rewarding displays of brash risk-taking, it is possible that individuals who enter into these organizations assimilate to these cultural norms. In an industry like finance, where risk-taking is necessary to maximize gains but careful assessment of that risk is crucial to minimize losses, how does gender and gendered organizational culture influence behaviour and evaluations of financial risk taking? As of yet, few studies have explored the relationship between occupational sex composition, gendered organizational culture, and outcomes of risk-taking in the finance sector. Thus, the first empirical focus on my dissertation is on the relationship between gender composition and risk outcomes in finance firms.

Scholars and some industry advocates have increasingly explored how diversity may offer firms a competitive advantage. There is evidence that under the right conditions, workforce diversity can be a catalyst for enhanced decision making and innovation, and increased profits (Galinsky et al 2017; Schulz-Hardt et al. 2000; Phillips and Loyd 2006; Herring 2009), though little to no research has explored the effect of diversity on risk outcomes. While diversity may be touted as a silver bullet for all sorts of organizational woes, researchers have also found diversity to have negative effects on organizational functioning (Milliken and Martins 1996; Skerry 2002; Tsui et al 1992; Richard 2000). Factors like organizational culture influence the efficacy of policies in organizations, including those that are intended to create better diversity outcomes (Ely and Thomas 2001; van Knippenberg, De Dreu and Homan 2004; van Dijk et al 2012). Researchers must account for organizational context to reach clearer conclusions for what conditions and what types of diversity help or hinder organizational progress and performance (Richard 2000).

In this project, I explore the relationship between compositional diversity and organizational outcomes within finance firms using a mixed method approach. My primary objectives are to assess the impact of sex and race composition on risk outcomes in finance firms. I do this by using quantitative models to estimate the impact of workforce composition on risk outcomes. My second objective is to better understand how workplace culture and diversity policies operate in finance organizations. I do this by interviewing finance professionals and performing a review of diversity policies in finance firms. By using a mixed-methods approach, I am able to reach more conclusive answers to whether compositional diversity affects risk outcomes, and understand how workplace culture mediates the potential impact of policies on a diverse workforce on-the-ground.

Diversity and Financial Risk Taking in the Finance Sector

Whether motivated by a business-case for diversity or social justice reasons, over the past two decades, many finance firms in the United States have implemented a variety of organizational strategies to increase diversity. Despite increased interest in the potential benefits of diversity, not all sectors have implemented diversity strategies in ways that have resulted in meaningful changes in compositional diversity. The race and sex composition of organizations in the finance sector, and specifically the Securities sub-sector, remain stubbornly homogenous. For example, in the Securities sector, women and people of colour hold an average of just 8% of senior management positions (EEOC 2015). Similarly, women and people of colour represent just 30% and 20% respectively of professional roles in the Security sector (EEOC 2015). This homogenous make-up has led some to wonder whether diversity (or lack thereof) affects risk outcomes in finance firms (van Staveren 2014).

Most scholars and industry leaders who have looked at the importance of diversity in finance firms have focused on gender. Gender diversity may affect risk outcomes in two ways. First, integration of more women into finance firms beyond token numbers could shift the gendered organizational culture in a way that delinks individualized gendered displays from markers of occupational competency. Secondly, some experimental research suggests that on average, women assess risk more carefully and consider more relevant information when making risk decisions (van Staveren, 2012; Apicella et al., 2008; Dwyer et al., 2002; Eckel & Grossman, 2002). If these results hold within an organizational setting, we would expect to see that more women employed within risk-facing occupations within a firm would lead to a decrease in negative risk outcomes.

Diversity may impact risk outcomes through other mechanisms as well. Whereas theories of gendered differences in approaches to risk rely on differences in socialization or essentialist beliefs around biological differences between men and women, we can gain a broader understanding of the structural and cultural mechanisms at play by evaluating the impact of other types of diversity on risk outcomes. What if rather than a function of aggregated risk-decisions of individual women, the presence of individuals who aren't as well-represented in finance firms (beyond gender diversity) improves an organization's capacity for enhanced decision making? Decision making can be enhanced when diverse members are present in group decisions. Diverse team members can bring more varied perspectives to the table, resulting in the consideration and exchange of more diverse information (Galinsky et al 2017; Frey Schulz-Hardt and Stahlberg 2013). In addition, the presence of diverse members can positively influence outcomes because having diverse teams encourages *all* members to prepare more thoroughly, think more creatively, and engage in more complex thinking and thorough deliberation (Phillips Northcraft and Neale 2006; Levine et al 2014; Bantel and Jackson 1989; Page 2007). Unlike gender, race is not linked theoretically or reputably to socialized roles or essentialist differences of how individuals might approach risk. Because of this, I also seek to evaluate the role that racial diversity has on risk outcomes.

Realizing Benefits of Diversity in the Policy Landscape of Finance Firms

Although many occupations in the finance sector remain sex segregated and largely racially homogenous (EEOC 2015), diversity policies have been relatively ubiquitous in the industry for 20 years (Roth 2007). Compositional diversity alone does not guarantee that the benefits that diversity can bring about will be realized. Some studies have found diversity has a positive effect on a number of outcomes, but others point to the possibility that it can increase the likelihood of conflict and diminish group cohesiveness (van Dijk et al 2012; Milliken and Martins 1996; Skerry 2002;.Tsui et al 1992). Qualitative studies that have explored the organizational context of firms that seek to realize the benefits a diverse workforce have found that diversity has the best chance of positively affecting outcomes in organizations that view, value, and instill it as a cultural resource (Ely and Thomas 2002).

The organizational culture of firms on Wall Street is certainly infamous for sexual harassment and discrimination (Antilla 2002; Roth 2007), and might be characterized as an industry outlier in gender equity progress in work environments. However, what is especially interesting about evaluating the cultural context of finance firms is that the industry's public reckoning with gender inequities came to a head two decades prior to the current #MeToo era, after a long history of noted gender discrimination and sexual harassment in the finance industry (Antilla 2002; Roth 2007), beginning in the late 1990s and into the mid 2000s, a slew of lawsuits ushered in a new policy era. After paying out some of the largest settlements in U.S. history to resolve hundreds of discrimination and harassment suits, firms began adopting diversity initiatives; including flex-time, more stringent anti-harassment and discrimination policies, formal mentorship opportunities, paid maternity leave (Roth 2007), and more recently, larger firms have started to establish Equity and Inclusion departments and appoint Chief Diversity

Officers. Now 20 years on, in the midst of the #MeToo era, what lesson can we glean from this industry?

Many scholars have criticized these initiatives for being window dressing, not substantively effective, and for being undermined by organizational cultures that are hostile to equity goals. In her interview of 44 women and 32 men who worked on Wall Street in the 1990s, Roth (2007) found that while gender equity policies reduce a firm's exposure to liability with regards to workplace harassment and discrimination, they don't necessarily address the underlying organizational culture that manifests the sources of discrimination and harassment (Roth 2007: 25). Although structural strategies are necessary to create better opportunities for women and minorities, they do not alone guarantee that equity goals are realized in ways that create sufficient or substantive change in their day-to-day lives (Blair-Loy 2009; Firestone and Harris, 2003; McDonald 2012). Tellingly, insurance companies that underwrite organizational sexual harassment coverage have increasingly refused to cover finance firms (Betterly 2019 as cited in Antilla 2019). Because the cultural context of organizations is an integral mediating factor in how effective diversity policies are with regards to their effect on the lived experiences of women and other minorities, it is important to not only consider the compositional diversity of firms, but to also consider the evolution of the policy landscape and organizational culture of finance firms.

The Lehman Sisters' Hypothesis is one attempt to understand different mechanisms that can contribute to financial crashes. Other factors have been explored for their contributions to economic crises. Over the past 50 years, daily life is increasingly tied up with financial markets like never before. This has been coupled with an increasing complexity of available financial products and an erosion of regulation. Consequently, the regulatory bodies in the United States are less capable of anticipating potential issues, and economic downturns affect the daily lives of millions of Americans, both on and off Wall Street.

Since the 1980s, the finance industry in the United States has experienced significant shifts in both form and function. Wall Street is no longer simply a physical location where financial business is conducted, but an organizing entity that pervades everyday life in the United States (Davis 2009). In his book which examines the post-industrial world of the 20th and 21st century, Davis makes the argument that the primacy of financial services in America has created a "portfolio society", where the United States economy and society is structured by finance, and its ensuing logic. With the primacy of the banking financial services industry, corresponding shifts have resulted in a much more interconnected economy where deregulation and securitization can have more widespread financial impacts (See also: Crotty 2009). Of particular concern are two interconnected issues: the erosion and inadequacy of the current regulatory systems, and the rise of complicated financial instruments (Davis 2009; Crotty 2009).

The problems with these changes in regulatory environments and securitization are exemplified by the sub-prime mortgage crisis that precipitated the 2008 crash. Davis suggests that regulatory system in the United States is "comically mismatched to the entities it is supposed to oversee" (2009: 102). Take as an example, the popularity of collateralized debt obligations (CDOs), which have grown in scope over the past three decades. CDOs are complex financial products backed by a pool of loans and assets; they are a type of derivative, in that they derive value from these underlying assets. Mortgage-backed securities are comprised of mortgage loans. In 2007, the preceding decades of deregulation in the financial services industry caught up to the reality of the downturn in housing market in the United States (Immergluck 2011). As a simplified explanation, when a consumer takes out a mortgage with a commercial bank, these mortgages may be repackaged, using the real estate as collateral, and sold as a CDO. However, as this financial product is further removed from its original lender and source of collateral, and is bundled with other CDOs, the level of risk that is attached to that investment can become muddied. This was especially the case preceding the 2008 crisis, because the risk-rating of these mortgage backed CDOs was unduly generous, which resulted in misleading risk profiles (Immergluck 2011). As interest rates rose, and the housing market slumped, millions of Americans were left with mortgages they simply could not pay, and the mortgage-backed CDOs that were largely sold and considered staid investments led to the downfall of the American economy.

The 2008 financial crisis is largely thought to be brought on by these types of investment-vehicles and opaque risk (Immergluck 2011). The level of risk was further compounded by changes in regulation that allowed banks to become increasingly over-leveraged, with an erosion in the required amount of capital they held against their assets (Acharya and Richardson 2009). These regulatory criteria also help highlight the potential mismatch between widely accepted measures of risk-taking in finance firms, such as profit-loss ratios or value-at-risk statistics (Szegö 2002), and how risk is conceptualized in the securities industry. In finance firms, where day-to-day risk behaviours are often carried out as regulatory rule-following (or breaking) (Burge and Richards 2013), these accepted measures offer us little insight into the on-the-ground decision making when it comes to regulatory risks. In sum, the last financial crisis brought home to roost the repercussions of two decades of deregulation and the consequences of the expanded financialization of day-to-day life, freed from the confines of Wall Street. However, although it is tempting to crystallize our understandings of an economic collapse through the mechanics of financial products, other factors must also be considered. Namely, the financial firms that are behind such investment products, and considering the decision-making processes that inform their conception and execution.

1.2. Research Design

I use a mixed-methods approach to explore the culture of finance firms and the effect of compositional diversity on decision-making outcomes. The quantitative components of my dissertation look at the effect that compositional diversity has on a firm's risk outcomes. To glean a better understanding of what policy is commonly in place at finance firms, and how individuals experience equity policies, I also interviewed men and women who work as finance professionals, and review the policy landscape of dozens of finance firms. By using a mixed-methods approach, I empirically test the effect of compositional diversity on concrete risk outcomes, and gain insight into how the culture of these firms impacts how individuals behave within them and experience diversity on-the-ground.

1.3. Data Sources

No large-scale study has yet examined the role of sex composition or racial diversity on financial risk-taking (van Staveren, 2014). I do this by examining whether establishments in the Securities sub-sector that employ more women and people of colour within them have fewer instances of excessive risk- taking. Using establishment-level data, as reported by the Equal Employment Opportunity Commission (EEOC), I measure the impact of sex composition and racial diversity of a sample of financial services firms in the United States. I operationalize excessive risk-taking as at-fault firm-level financial violations as reported by the Financial Industry Regulatory Authority (FINRA). I perform a longitudinal analysis to measure whether risk-taking varies based on the occupational sex composition and racial diversity of establishments. In order to understand the current culture in finance firms, I also perform interviews with men and women who work as finance professionals, managers, and executives in the financial services industry and create "diversity profiles" of their firms. Below, I discuss each of my data sources in turn.

Equal Employment Opportunity Commission - Race and Sex Composition Data

The United States Equal Employment and Opportunity Commission (EEOC) is a federal agency which monitors firm compliance with workplace anti-discrimination laws. As part of its mandate, it requires all private employers with more than 100 employees and government contractors with more than 50 employees to file annual EEO-1 reports. These reports contain the racial and sex composition of establishments across nine broad occupational categories, including management, sales, and professionals.

In my analysis, I include all unique establishments identified by the North American Industry Classification System code as involved in Securities, Commodity Contracts, and Other Financial Investments and Related Activities (NAICS 523). Using the 2005 population of Securities firms in the United States, I append ten years of EEO-1 sex and race composition data and then use this file to merge with FINRA financial violation data, as described below.

Financial Industry Regulatory Authority: Risk Outcome Indicator

How can we measure risk in an industry where it is a necessary part of the job? Whereas making informed and measured decisions around risk is necessary in finance, reckless risk-taking behaviour can lead to economic crashes (van Staveren 2014; United States Financial Crisis Inquiry Commission Report 2011). The difficulty measuring risk in finance lies in the ability to net out necessary or "positive" risk-taking, and focus only on reckless risk, and because of the slippery nature of quantifying risk in the first place. Because taking risks is a necessary and even positive trait in finance, the appropriate measurement of risk must be valid and reliable. To focus on reckless risk taking in the Securities sector, I use at-fault violations as the negative risk outcome measurement.

FINRA is a self-regulatory organization that governs the securities brokerage industry in the United States. FINRA is tasked with overseeing and enforcing both FINRA regulations and those set out by the federal Securities and Exchange Commission (SEC). All firms that participate as a broker or dealer in the transaction of securities are required to register with FINRA, which accounts for almost the entirety of securities firms in the United States (Burge and Richards 2013). Violations cover a vast range of behaviour. Though not exhaustive, they can range from financial advisors providing inaccurate or inappropriate investment advice, breaches of fiduciary responsibilities, unauthorized trading on a clients' behalf, and dealing in specific products when not licensed to do so. They also include more widespread issues, such as the misrepresentation and misleading marketing of collateralized debt obligations for sub-prime mortgages that contributed to the 2008 financial collapse. In short, because the SEC and FINRA are mandated to regulate the securities markets in the United States and protect consumers, violations always involve prohibited behaviour and actions. Securities firms are required to abide by these federal regulations, and day-to-day adherence to these regulations is managed by internal compliance departments within firms and reported to and by FINRA (Burge and

Richards 2013). In an era that is characterized by increasing deregulation (Davis 2009; Crotty 2009), regulatory compliance serves as a bare-minimum measure of responsible risk-behaviours in securities firms, and because of this, noted infractions offer a particularly stringent measure of excessive risk. I do not take the position that the Lehman Sisters' hypothesis is about the potential for financial gains. Instead, as a point of entry, I am interested in whether greater diversity can bring about more stable decision making, as defined by adherence to existing regulations. Defining risk in the securities industry is complicated given that financial risk taking is a necessary part of doing business. Financial risk-taking can be nuanced and measured, and carried out in ways that seek to maximize gains while minimizing potential exposure to loss. However even a measured approach to financial risk-taking can result in losses. Moreover, financial gains and losses can vary over time, and an annual measures of losses may not offer an accurate snapshot of whether a risk-strategy is reckless or affected by transient market conditions. In this analysis; I am most interested in netting out this kind of necessary or "positive" financial risk-taking.

I focus on reckless risks, which I measure using at-fault violations reported by FINRA. I do this for three main reasons. First, using at-fault regulatory violations instead of a measurement like a profit-loss ratio captures behaviour outside of those expected, accepted, and encouraged as necessary financial risks. It captures behaviour that exists beyond the agreed-upon bounds of regulation, what I refer to as reckless risks. Reckless risks flout objective regulatory expectations of accepted risk behaviour, and therefore net out the noise of a degree of risk-taking that is necessary to perform well in an industry that demands economic gains with an expected level of risk-taking. Secondly, measuring risk can be difficult, making it difficult to analyze. At-fault regulatory violations are objective, in that an agreed-upon standard of acceptable risk has been breached, and firms are legally required to report and have these violations documented by a regulatory body. Regulations are set in place to protect consumers and encourage market behaviour that are ideally advantageous to a healthy economy (United States Financial Crisis Inquiry Commission Report 2011; Verschoor 2012; Peck 2013). Because of this, regulatory violations can serve as an objective measurement of a type of risk that is damaging to the economy. Finally, at-fault violations are a conservative measurement of this type of risk behaviour. The Securities industry is largely self-regulated, and recent erosions to reporting requirements and issues with self-reporting and self-regulation have been noted (Verschoor 2012; Peck 2013). Once a violation is reported or suspected, a firm must be investigated and sufficient evidence must be found to support an at-fault finding. Because of this, regulatory violations likely represent a fraction of violations that take place. This serves as a high bar for detection of these kinds of risk behaviour.

I gathered annual violation data for all firms in my EEO-1 sample that fall under the regulatory reporting jurisdiction of FINRA. Although there are many factors that contribute to a financial collapse, such as the one in 2008, illegal risk activities such as the misrepresentation and misleading marketing of collateralized debt obligations were main contributing factors (United States Financial Crisis Inquiry Commission Report 2011).

Interview Data

In 2015, 2016, and 2019 I conducted interviews in Boston, New York, and various cities in Connecticut. I interviewed 62 investment professionals and led one group discussion at a women's finance organization with 11 participants. I initially recruited participants from the

Financial Industry Regulatory Authority's database. Any individual dealing in securities in the United States is required by law to be registered with FINRA. I recorded all but 6 interviews, and these lasted an average of 90 minutes. I provided participants with a brief summary of the research, explaining that I was broadly interested in men and women's perspectives on organizational culture and their experience with policy. I used semi-structured interviews, letting participants bring up issues they felt were most relevant.

Company Policy Profiles

To assess the policy environments of each interviewee's company, I created company policy profiles. Before each interview, I reviewed the participants' work history on their FINRA registration and/or their professional profile, creating a profile for each company where they had worked. I searched company websites and/or profiles on professional networking sites and identified whether a firm had an extensive, moderate, or minimal policy environment. I used information gleaned from the interviews to supplement the company profiles (especially for historical policy), and searched for news reports that provided information on policy (historical and present).

1.3. Overview of Dissertation

This dissertation consists of three empirical chapters, each highlighting a different aspect of the interplay between workforce composition, diversity policies, and risk.

In the first empirical chapter, I engage with the qualitative interview data and company policy profiles to glean a better understanding of the cultural context of finance firms, and how gender equity policies are taken up (or not) and experienced by finance professionals. In this chapter, I argue that two decades of diversity and inclusion policies have done little to shift the gendered culture of finance firms. I find that firms with extensive policy have similarly gendered cultures as minimal and moderate policy firms, and that women continue to face significant barriers, suggesting that structural initiatives have not done enough to undo gender at the cultural level. Ultimately, my findings suggest that in order for structural initiatives, like policy, aimed at gender equity to substantively change the on-the-ground experience of women in male-typed settings such as finance, they must be accompanied by efforts to deconstruct dominant cultures of masculinity and male privilege.

The second empirical chapter is a quantitative exploration, which formally tests the Lehman Sisters' Hypothesis. Do establishments with more women in risk-management roles have fewer at-fault violations? I find support for the Lehman Sisters' Hypothesis, but rather than the presence of women *overall*, it is their occupation that seems to matter. I find an increase of women in professional positions is associated with a decrease in negative risk outcomes. Conversely, an increase of women in management actually increases negative outcomes. I make sense of these findings by suggesting professionals' higher levels of strategic and operational autonomy, as compared to managers, may insulate them from the dominant gendered cultural pressures found in many finance firms. While it is tempting to conclude that hiring more women into finance firms will reduce a firms' negative risk exposure, more factors must be considered, including occupational interactions with cultural constraints on behaviour.

The third empirical chapter is another quantitative exploration which looks at the role of racial diversity on risk outcomes. In this chapter, I use a racial diversity index as the main independent variable to test the hypothesis that diversity mitigates negative risk outcomes. Does diversity improve group-decision making outcomes, as the literature suggests it might?

Ultimately, I find that firms with greater racial diversity in professional occupations have better outcomes around financial risk. This is true when controlling for organizational context and industry norms, suggesting racial composition diversity of professional occupations may have a positive effect on the process of decision-making, regardless of cultural context. Conversely, however, I again find that firms with increased racial diversity in their management ranks have worse decision-making outcomes around financial risk. I discuss each of these findings in relation to the diversity literature.

More broadly, the findings in these two chapters help clarify the positive effect of gender and racially diverse groups on group-decision making outcomes, net of organizational cultural influence. To isolate the effect that compositional diversity might have on decision outcomes, we must account for variation in cultural context. The existing conflicting evidence in the literature is due, at least in part, to the fact that the effects of compositional diversity on decision-making are difficult to observe and measure, but also because cultural context plays is an important mitigating factor in whether diversity enhances or hinders group processes. Because I am able to overcome these barriers in my data and research design, this is an important contribution.

In my conclusion, I discuss both the scholarly and policy-relevant contributions of my findings. I then discuss challenges and limitations of the research, and finally offer suggestions for future directions.

My research deepens understandings of gender, diversity, and organizations by showing how diversity can contribute to risk assessments and outcomes in the finance sector. From financial performance to innovation, other work has explored the potential benefits of diversity on many different outcomes (Cox 1991; Roberson and Park 2007; Hewlett, Marshall, and

Sherbin 2013). However, little research has looked at how diversity affects risk outcomes. Although all organizations must manage risk, how diversity affects risk outcomes is an especially pertinent exploration in the finance sector where taking prudent risks is central to a firms' operation and profits. This research offers important insights into the potential benefits of increasing compositional diversity in Securities firms. By using a mixed-methods approach, I have been able to both reach more conclusive answers as to whether compositional diversity affects risk outcomes, and how workplace culture moderates the potential impact of a diverse workforce on-the-ground. While I do find that increasing compositional diversity is one avenue that can lead to better risk outcomes in Securities firms, my findings also draw attention to the ways in which cultural context can amplify or impede these potential benefits. This research has also culminated in a policy brief intended for an industry audience. It is an empirically informed document that firms can use to pursue diversity strategies in ways that shifts culture, rather than simply increasing compositional diversity. The intent is not just to provide suggestions that amplify the potential benefits of a diverse workforce, but to also improve the lived experiences of women and other minorities within the finance sector.

CHAPTER 2 - DOING GENDER, UNDOING POLICY: POLICY AS A GENDER PRACTICE IN FINANCE FIRMS

Women who work in sex-segregated sectors, such as finance, face high rates of discrimination and harassment compared to those in more sex-integrated occupations (Berdahl 2007; Chamberlain et al. 2008; Gruber 1998; McCabe and Hardman 2005; McLaughlin et al. 2012; McDonald 2012; Roth 2006). In recent decades, an increasing number of gender discrimination lawsuits have required many finance firms to pay out some of the largest settlements in U.S. history (Roth 2006; Antilla 2002), and in response, the policy landscape is shifting. Organizations have implemented a number of gender-oriented equity structures to remedy past discrimination and reduce gender inequality. These include formalized personnel procedures to reduce the role of explicit and implicit gender biases in decision-making, policies that enable workers (especially women) to more adeptly balance work and family responsibilities (Reskin 2000; Reskin and McBrier 2000), and diversity offices to deal with problems of bias as they arise. Such structural strategies are an important avenue to improve gender equity outcomes but their impact on substantive experiences of gender equity may be limited (Edelman 1990, 1992; Kalev et al 2006; Williams et al 2014), and some women don't use policies when they are in place (Firestone and Harris, 2003; Kaiser and Major 2006; McDonald 2012; Williams 2012).

Although structural strategies are necessary to create better opportunities for women, they do not *alone* guarantee that gender equity goals are realized in ways that create sufficient or substantive change (Blair-Loy 2009; Firestone and Harris, 2003; McDonald 2012). Many finance firms are infamous for sexist antics and deeply entrenched gendered cultures; if policies are not designed in ways that challenge the entrenched norms and values of these firms, they will likely be insufficient. Given women's already precarious positions in these firms, their reluctance to raise issues of bias and make use of policy is understandable, especially in the male-typed environment of finance (Fisher 2012; Zaloom 2010; Roth 2006).

In an effort to explore the intersection between gender-oriented equity policies and gendered culture, this paper details how women and men 'do gender' in finance companies with varying gender-equity policy provisions through interviews with 51 women and men. Bringing together institutional approaches to organizational equity and 'doing gender' perspectives on workplace interaction, I argue that 'doing' gender is an overlooked mechanism that can undermine gender equity policies in the workplace, as women are reluctant to render their gender salient through the use of equity policies. Ultimately, my findings suggest that in order for structural initiatives aimed at gender equity to be effective in male-typed settings such as finance, they must be accompanied by efforts to deconstruct dominant cultures of masculinity and male privilege.

2.1 Gender and Finance

Due to the high levels of gender inequality in the U.S. finance industry and a relatively recent explosion of structural equity policies implemented at many firms, the finance sector offers a unique opportunity to examine the efficacy of structural gender equity initiatives and how they are taken up by individuals. The finance sector remains stubbornly sex-segregated, and women who work as securities and commodities professionals face high levels of pay disparities, and have historically been plagued by biased client allocation procedures, and non-objective performance evaluations (USBLS 2014; Catalyst 2014; Roth 2006). Further, many finance firms have cultures notoriously hostile towards women (Fisher, 2012; McDowell 1997; Prügl 2012; Antilla 2002).

Because many male-dominated occupations construct 'gendered' traits as important for doing a job well, doing gender becomes an important part of doing one's job (Connell 2005). In finance, so-called "masculine" traits like overconfidence, bravado, and conforming to ideal worker norms, are conflated with competency (Felton et al. 2003; Roth 2006; van Staveren 2014). Further, evaluation and compensation decisions often rely on assessments of cultural fit and networking, benefitting men more than women (Roth 2006; Rivera 2012). In sum, the financial services sector is ripe for structural solutions to address gender inequities.

Gender scholars have long called for organizations to remedy gender inequities through structural initiatives (Acker 1990; Kanter 1977). In reaction to costly lawsuits over the last three decades, many finance firms have created extensive initiatives to address gender inequities, including positions responsible for diversity and inclusion; mentorship and networking programs; formalized hiring, evaluation, and promotion criteria; flex-time; and leave policies (Roth 2006; Fisher 2012; Blair-Loy 2009). However, structural efforts to undo gender in organizations do not necessarily realize gender equity goals (Kelly et al. 2010; Blair-Loy 2009). Looking at how individuals interact with policy in the shifting structural landscape of finance firms can offer insight into why this might be the case.

2.2. Structural Initiatives for Gender Equity

Organizational structures affect gender equity. This has been supported by research which suggests that sex composition and gender-oriented policies are important predictors of gender equity (Cohen and Huffman 2007; Reskin 2000; Reskin and McBrier 2000). When representation of minority members (e.g. women) in an organization moves beyond 'token' status (more than 15 percent of the total population), individuals are subjected to less stereotyping, performance pressure, and scrutiny, increasing the likelihood of advancement (Kanter 1977). Increasing the number of women in executive positions, corporate boards, and in senior management narrows the wage gap within an organization and is associated with less overall segregation (Cohen and Huffman 2007; Stainback et al. 2016; Huffman et al. 2010) and organizations with higher proportions of female managers are more likely to have and promote diversity programs (Dobbin et al. 2011). This body of research suggests that increasing women's numbers in organizations, especially within senior roles, could enhance gender equity.

We know that more integrated sex composition and increased numbers of women (especially within senior positions) create better gender equity outcomes, but to hire and promote women into leadership positions, policy must be put in place to overcome biases and change organizational norms around what productive workers look and behave like. Organizations have adopted policies and practices to promote gender equity that lie broadly in two camps: (1) formalization procedures to reduce the influence of implicit and explicit gender biases in decision-making and (2) policies geared toward supplanting ideal worker norms, enabling workers, particularly women, to better combine work and family responsibilities. First, because implicit biases and networks often lead to discriminatory human resource decisions and sex-segregated applicant pools (Reskin and McBrier 2000), formalized policies that promote open recruitment methods, objective evaluation, and promotion decisions have been shown to reduce these biases, and lead to more women holding management positions (Reskin and McBrier 2000; Reskin 2000). Kalev et al. (2006) found that some gender equity measures are more effective when a department and/or manager is explicitly responsible and held accountable for equity outcomes. Second, because gendered organizations have structures that make androcentrism appear neutral and cultures that reward hegemonic norms of masculinity and overwork (Acker 1990; Connell 2005; Ely and Meyerson 2010; Blair-Loy 2003), structural initiatives must extend beyond goals of sex composition, and include policy that challenges these existing norms. Ideal worker norms, which expect individuals to prioritize work above other demands, disproportionately and negatively affect women, because women often face greater work-life time constraints (Cha 2013). Although not all firms demand 80-hour weeks, broader industry norms include overwork, after-hours socializing, and other aspects of gendered cultures (Roth 2006; McDowell 1997) Thus, organizations have also adopted various policies, including flexible schedules, schedule control, and parental leave, to enable workers to manage both career and family obligations.

Although structural initiatives aim to promote gender equity, some research suggests they have limited effects on equity outcomes (Edelman 1990, 1992; Kalev et al. 2006; Kelly et al. 2010). Policies that are enacted to remedy gender inequities are often interpreted as 'women-only' initiatives, and workers can face stigma and backlash for using them (Berdahl and Moon 2013; Williams et al. 2013; Kelly et al. 2010). These policies, then, are often decoupled from practice, as many women (and most men) do not make use of them (Kaiser and Major 2006; McDonald 2012; Marshall 2008; Wahl 2014). This, then, begs the question: as organizations seek to address gender equity through structural initiatives, how do workers interact with these efforts, and how do these responses reinforce or undermine these initiatives?

2.3. Doing and Undoing Gender in Organizations

Although gender policy initiatives may promote objectivity in decision making and aim to reduce the influence of the ideal 'male' worker norm, informal norms and culture within organizations can still lead to gendered outcomes (Castilla 2008; Stainback et al. 2010; Madden 2008; Kelly et al. 2010). Because gender operates at multiple levels (Deutsch 2007), structural equity initiatives must consider how interactional-level doings interact with these initiatives, and how this affects the efficacy of policy (Hallett and Ventresca 2006). By understanding the social processes that underlie how gender is enacted at an individual-level, we glean insight of how gender can be or is undone at work (Kelan 2010). Do structural efforts to reduce bias in decision-making and better accommodate family and care obligations enable individuals to participate in the undoing of gender at the individual level? Although some research suggests organizational initiatives can influence individual gender practices (e.g.: Ely and Meyerson 2010), very little research explores the interplay between structural gender equity initiatives and individual practices of gender.

Organizational research must examine how gender is practiced in the workplace because it shows how inequalities are created and maintained (Martin 2003). West and Zimmerman's (1987) work on doing gender draws attention to how individuals are encouraged and do enact gender in ways that create an invisible routine which constitutes a gendered order. In work contexts, this takes place within the organizational culture: a system of rituals and local knowledge informed by the underlying values, beliefs, and norms that are valued and rewarded within the organization (Perlow 1998). Martin (2001) distinguishes between 'gendering practices' and 'practices of gender'. Gendering practices are the physical, narrative, and discursive actions given meaning to *as gendered* in an organization's cultural context and made available to individuals to enact as "practices" of gender. Gender operates as cultural scaffolding that organizes and encourages an interpretation of doings, interactions, and behaviour, that makes gender intelligible (Connell 1987). When behaviors and actions are interpreted within a system of gender relations, interpretations are given meaning through cultural understandings that use gender as a framing device (Martin 2001). Put another way, "the gender institution makes gendering practices available for practising, and practising them keeps the institution going" (Martin 2006, 269). It can be a mutually reinforcing system, where actions are given meaning to *as gendered* and then carried out in a way that reiterates that structure when it conforms to expectations of individual adherence to gendered expectations. Practices of gender can also be read as deviating from those gendering practices, when, for example an individual who is recognized as a women behaves in ways that do not align with expectations of what practices of gender are expected from them. For example, if women act "like men" in ways that are recognized as appropriate for men in that context, they deviate from the gendering practices of that cultural context. However, the cultural context gives meaning to the practices, and without supplanting that system that gives these actions gendered meaning, these actions remain gendered (but recognized as deviant). Because structural attempts to undo gender in organizations can leave this cultural scaffolding intact, individuals may still enact practices and be held accountable for behaviors as *gendered*.

Drawing on Martin's (2001) conceptualization of "mobilizing masculinities", Kelan (2017) found that men do gender in work organizations in ways that create gender difference and increase their privilege. These practices include sexually objectifying women, undermining women's authority, forging social connections with other men, publicly criticizing and excluding women, and not supporting diversity initiatives. In organizations that pay a patriarchal dividend to those who enact gender in privileged (hegemonically masculine) ways, doing gender becomes shorthand to identify who belongs and who doesn't. In finance, this can mean men doing gender in ways that emphasize bravado, overconfidence, risk-taking and so on (Felton et al. 2003; van Staveren 2014; Zaloom 2010). In effect, work organizations, especially gender-segregated ones such as finance, are sites where men can socially construct themselves *as men* (Martin 2003; Connell 2005).

Martin (2001) argues many men have only "liminal" awareness of doing gender in these ways, since privilege is comfortable and taken for granted. Regardless of intent, when men do gender in ways that exacerbate gender difference, they become complicit in creating and maintaining gender inequities (Connell 2005; Martin 2006). Kelan (2017) suggests men can work to undo gender at organizations by using their power to advance women, visibly supporting and attending gender diversity events, implementing and using affirmative promotion and hiring practices. Other strategies include showing a dedication to demands external to work and displaying emotional intelligence, such as by refusing unreasonable scheduling demands, displaying emotions and vulnerabilities, or discussing family problems and fear (Wahl 2014; Ely and Meyerson 2010). She argues these strategies undo gender by reducing, rather than exacerbating, gender difference.

Whereas many men may only be liminally aware of doing gender, women are often more conscious of it (Martin 2003; McDowell 1997). Women's gender creates barriers to their advancement, especially in male-dominated occupations (Martin 2001). If undoing gender is accomplished through minimizing gender difference (Deutsch 2007), women's gender practices are especially fraught in gendered organizational cultures, such as those found in finance, where doing masculinity is conflated as essential to the job. Women are most often evaluated and discriminated against based on their “assumed” characteristics [and] traits *as women* (Bobbitt-Zeher 2011). Evaluations of women's *gender* can take precedence over their objective evaluation as *workers* (Ridgeway 2009).

Women are left to negotiate their work identity and their gender practices, which are often conceptualized as mutually exclusive. Women in management and senior positions have been found to practice a “respectable femininity” (Mavin et al. 2014), which straddles doing gender well (i.e. “like women”) and doing gender differently (i.e.: “like men”). Other research has found some women try to act ‘like men’ and minimize or accept gender discrimination to try and fit in (Powell et al. 2009; Kerfoot and Knight 2004; McDowell 1997). Women in finance have been found to employ both strategies; including emphasizing conventional femininity and heterosexuality (McDowell 1997) and also deemphasizing femininity in attempts to become ‘honorary men’ (McDowell 1997). However, doing gender strategies are atomized responses to discrimination. Arguably, addressing gender bias through formal grievance procedures or other equity-oriented initiatives may provide a more reliable strategy to cope with the barriers women face. However, in male-typed environments, such as finance, evidence suggests this might not be the case. Women may be reluctant to complain about harassment (Firestone and Harris, 2003; Kaiser and Major 2006; McDonald 2012) or make use of gender-equity policies (Kelly et al. 2010), as both render their gender as women salient and remind co-workers that they are not just “one of the boys.” However, minimizing perceived and enacted gender differences is not a foolproof strategy for women. They may face repercussions for not conforming to prescriptive gender norms, such as presenting as “too aggressive” and departing from a “respectable femininity” (Rudman and Glick 2001). Moreover, when individuals conform to hegemonic standards of gender in these organizations, it does little to challenge the gendered status-quo (Powell et al. 2009) or leverage equity policy to force change, especially when policy use itself is viewed as a liability.

As I will show below, the culture of finance organizations remains steeped in cultures of masculinity. Against this backdrop, women who work in such organizations – even in those with extensive diversity policy – still rely on strategies of doing gender 'like men' rather than invoking equity policies to remedy the discrimination they continue to face. Doing gender like men becomes a strategy for establishing legitimacy in an intensely male-typed culture, where norms of overwork and the ideal male worker abound. The use of equity policy, though available, may accentuate women's enacted gender difference and jeopardize their already precarious positions in these organizations. This is not to 'blame the victim,' as doing gender like men, and the policy avoidance that follows, is a rational response to the entrenched gender cultures that women in finance encounter. I interpret these findings by suggesting that structural initiatives can have the unintended consequences of reinforcing gender *difference,* rendering women's (problematic) gender more salient. Women, in turn, respond by trying to undo gender by doing gender 'like men,' which arguably weakens the substantive effect of gender equity policy and leaves male-typed cultures largely intact.

2.4. Data and Methods

Data for this study come from interviews conducted over seven months in 2015 in Boston and New York. I conducted interviews with 51 investment professionals and led one group discussion at a women's finance organization with 11 participants.

Interviews

To obtain insight into how individuals in finance do gender, I recruited participants from the Financial Industry Regulatory Authority's (FINRA) database. FINRA is a regulatory organization for individuals that deal in securities. I searched for registrants within a 25-mile radius of the major finance districts in both cities, and participants were chosen randomly. I contacted participants through a professional networking website, e-mail, or letters, recruiting a total of 36 participants, with a response rate of 26.2 percent. Snowball sampling was relied on to recruit 15 (usually senior) finance professionals. Interviews lasted an average of 90 minutes and were recorded, with the exception of 6 documented through note-taking at the participant's request and during the group discussion. Immediately following non-recorded interviews I recorded quotes and impressions. I interviewed 27 (52.9 percent) men and 24 (47.1 percent) women[1]. Among the participants, 46 were white (90 percent), 3 were asian (.05 percent), and 1 was black (.02 percent)[2]. 16 participants held undergraduate degrees (31 percent), and 35 held graduate degrees (69 percent).

I provided a brief summary of the research, explaining I was interested broadly in men and women's perspectives on organizational culture and their experience with policy. I used semi-structured interviews, letting participants bring up issues they felt were most relevant. I asked participants to take me through their work history keeping these topics in mind and I would interject and ask follow-up questions.

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[1] Sex composition of professionals in NY: 69 percent men and 31 percent women; MA: 59 percent men and 41 percent women. Sex composition of Executive and senior management in the Securities industry in NY: 84 percent men and 16 percent women; MA: 77 percent men and 23 percent women (EEOC 2015)

[2] Racial make up of professionals in Securities: 75.3 percent white, 7 percent black, 4.4 percent hispanic, 13.1 percent asian, and .2 percent American Indian.(EEOC Diversity in Finance Industry 2006).

I recorded and transcribed interviews and my own post-interview memos, and then coded and analyzed them using MAXQDA software. I used pseudonyms and removed identifying details. I open-coded transcripts, using theoretical memos to identify dominant themes and relationships (Glaser 1998). I then relied on analytic and integrative memos to refine sub-themes and codes (Charmaz 2008; Glaser and Strauss 1967). Once refined, I re-read the transcripts to code for the themes developed in this chapter; specifically participants' accounts of gendered organizational culture, policy, and accounts of 'doing gender'. I then located these accounts in the policy environment to assess any variability.

Company Policy Profiles

To assess the policy environments of each interviewees' company, I created company policy profiles. Before each interview, I reviewed the participants' work history on their FINRA registration and/or their professional profile, creating a profile for each company they worked. I searched company websites and/or profiles on professional networking sites and identified five aspects of the gender equity policy environment of each firm: (1) whether there was a diversity mission statement; (2) whether there were mentoring or networking programs in place; (3) whether there were flex policies; (4) whether maternity leave was available; and (5) whether there was an individual or department responsible for diversity. I used information gleaned from the interviews to supplement the company profiles (especially for historical policy), and searched for news reports that provided information on policy (historical and present). I used this information to classify each firm's policy environment. I classified firms as having minimal policies if they had none of the five policies in place; as moderate policy environments if they had 1 to 3 measured supports in place; or as extensive policy environments if they had 4 to 5 supports in place.

2.5. Results

I find that regardless of policy environment, accounts of the culture of finance firms remain largely homogenous. Further, I find that even women who work in firms with extensive policy described doing gender 'like men' as a means to fit in and advance. This includes modifying language, appearance, and behaviors in ways women identified as being 'like men', and avoiding equity policies. I theorize that structural initiatives that are not designed and implemented in ways that challenge the existing norms and values within organizations with entrenched gendered cultures can stoke and reinforce cultural understandings of gender *difference,* and render women's (contextually problematic) gender more salient. In response, some women try to minimize perceived gender difference by trying to do gender 'like men'.

The Policy Landscape of Finance Firms

What does the structural landscape of finance firms look like? Table 1.1 provides a summary of the gender-equity oriented policies among the firms covered in my data. Amongst the 51 participants in this study, 67[3] firms were represented in their work histories, with 19 firms represented in multiple participants' accounts. I classified nine (13 percent) as minimal policy; 33 (49 percent) as moderate; and 25 (37 percent) as extensive policy. Sixty percent of extensive policy firms had all five measured structural supports in place, and 92 percent had an individual

[3] 22 companies were removed from the analysis that were sole-proprietorships (3), that were not in finance (10), that were located outside of the United States (3), or where there was not sufficient information to assess the structural landscape (6).

or department responsible for diversity, identified as integral to bolstering the efficacy of diversity programs (Kalev et al. 2006).

Table 2.1. Policy Environment breakdown of finance firms in sample

Firm Policy Environment	% Firm Sample	% Women in Policy Environment	% Men in Policy Environment	Diversity Mission Statement	Mentoring/ Networking	Flex	Maternity	Diversity Officer/ Department
Minimal Policy (N = 9)	**13.4%**	**40%**	**60%**	**0%**	**0%**	**0%**	**0%**	**0%**
Moderate Policy (N = 33)	**49.3%**	**46%**	**54%**	**39.4%**	**21.2%**	**48.5 %**	**87.9%**	**3%**
Extensive Policy (N = 25)	**37.3%**	**48%**	**52%**	**96%**	**96%**	**24.2 %**	**100%**	**92%**
TOTAL = 67	**100%**	-	-	-	-	-	-	-

Finance Firms and Gendered Culture

In all policy environments, almost all participants described markers of gendered cultures, including norms of overwork and social hours, a lack of cultural support for leave policies, and sexual harassment and banter.

Overwork and Social Hours

Norms of overwork and expectations of socializing outside of work hours were prevalent. 10 hour days and 6-day weeks were cited as typical to the industry, as were inflexible schedules, and expectations of attending social events. Ben had been an analyst at an extensive-policy firm:

> *"There's a strong culture of young ambition…partying because you're always taking clients out and hedge funds that love to party and love to get taken out all the time… there were plenty of people that would be going to strip clubs after client dinners."*

Don became disillusioned by the demands of his last policy-extensive firm:

> *"[Working there was] the whole 9 yards of crap, meaning timed bathroom breaks, [quotas for] how many dials you make…I was living that nightmare. I'll tell you frankly, I didn't like when my son got cancer they didn't really acknowledge it… Like, he's still getting chemo…some days he doesn't feel well enough to get out of bed. They wanted me to [work more]…it was 60 hours [a week]."*

Accounts of after-hour socializing and Don's firm's disregard for family obligations were not unique, but women described this as problematic more often than men. If women had children, most either continued working long hours or their careers tapered off. When I asked Frances, an executive director at an extensive-policy firm, whether her experience as a rising star at her firm changed after becoming a mother for the first time, she held out her hand flat in front of her:*"When my daughter was young, and I was working very little. My career was like this"*. During the group discussion at the women's association, I asked what kinds of people advanced. Petra, an investment consultant, gave a cynical chuckle: "*My coworkers that excel have a wife at home"*. Women around the table nodded in agreement, including Laura:

> "*For [women], your employer is going to see you as needing to provide care for your children, your husband, your life."*

Women described their frustration of being excluded from social events, one even being asked to babysit for her boss while the rest of the office went out for a poker night. Petra's last firm had implemented extensive policy reform in the early 2000s. Exasperated when she found out she had been excluded from a golf tournament, she went with a junior colleague, strategizing that he would get her through the door but because her seniority, they would talk to her:

"They all pretty much ignored me and talked to him…even though I knew more than most of them there about golf and *business."*

Women who did attend social events sometimes described other ways they were treated differently than the men they worked with. Danielle said she was usually "*sent home at night before the boys [went out]"* but described what happened when her client invited her to a an initial public offering networking trip she had been the lead on:

[The client] said 'I'm sending you tickets', *and the next thing I know I have 2 tickets… they made me reservations at the most expensive hotel, and when I told my boss this, the first thing he said is '*What's going on between you and [the CEO]*' and basically I was accused of having a relationship with him, you know, a sexual relationship".*

Leave Policies

As Bobbitt-Zeher (2011) discusses in her study of sex discrimination, the women I interviewed described being evaluated and discriminated against based on their gender and "assumed" characteristics and traits of women. Eighty percent of firms had leave policies in place, making it the most prominent gender equity policy, but still women expressed reluctance to use it or described facing repercussions if they did. Some women expressed concern that using maternity leave put their evaluation as a dedicated worker at odds with gendered assumptions.

Jasmine, a portfolio manager who had worked at a policy-extensive firm, had won industry awards and was considered a leader in her field. I asked her why she thought she was demoted after returning from leave:

"*I never asked. I suspect the reason was that [they] thought that I might not really be able to handle both my home life and my work life."*

Jasmine's role as a mother and her company's assumptions of her need and ability to "handle" her home and work life meant her gender superseded her objective worth as an employee. By taking leave, she behaved antithetically to her firm's cultural expectations.

Other women described similar repercussions for taking leave. Nina was a manager at a low-policy firm in her late-thirties:

> *"…When I was pregnant I was the only woman that worked there. They hadn't been through a leave policy situation. They had to literally dust of the HR manual and see what I was even entitled to…I took my 30 days, and at the end of those 30 days, they saw that it could work without me, and I lost my job."*

Being the only woman at a firm with maternity leave available meant taking leave was an inherently gendered act - something to accommodate women, but incongruent with the cultural fabric of the company. These supports may *accommodate* women, but they do little to insulate them from the repercussions of using them.

Sexual Harassment and Sexist Banter

One of the clearest demonstrations of the entrenchment of gendered cultures was evident in accounts of sexual harassment and sexism. Loti was a managing director at a firm lauded for its extensive gender policies, though she described her frustration with the misogynistic culture:

> *"…I was leading a meeting with our senior team - all guys, and I'm presenting stats on [the importance of] increasing women's labor force participation and [my peer] shouts across the table* 'What's wrong with women staying home?' *this junior guy yells back:* "Yeah? What's wrong with that? I prefer women barefoot, pregnant, and in the kitchen?*' and they all laugh at this…"*

These men undermined Loti's authority and used sexist banter to build group cohesion amongst one another, which depended on creating and reinforcing Loti's (and women's) difference. As Martin (2001) described, by conflating masculinity and work dynamics, these men mobilized a hegemonic masculinity and shored up their subject position and privilege. Almost all women gave illustrations which exemplified how cultural norms reinforced men (and hegemonic masculinity) as the tacit norm, and constructed women as outsiders, which sometimes happened through sexism or sexual harassment. One woman described finding a sex toy left on her chair; another, open speculation about which colleagues she had sex with. Women's narratives illustrated how these cultures normalized the objectification of women, constructed them as outsiders, and divested them of their professional identity and power. Tanya was an investment advisor and had worked at four firms with differing policy levels:

> "*There are definitely coworkers where…you know I feel like they see me as maybe less than a man in my same position… I feel like [my extensive-policy company] is gender-blind…and then there have been comments made where I'm like, 'that was sexual harassment'…I won't even realize it until later on because you think, oh, that's 'Mad-Men' era…that doesn't happen anymore.*"

Tanya saw women evaluated as less competent than men and faced sexual harassment. She expressed warranted surprise at the anachronism. The policy environment has changed since the days of unchecked sexual harassment of male-dominated industries fifty years ago. Successful lawsuits and broader changing cultural attitudes towards gender equity have meant gender equity policies have gained momentum. They are often held up as proof of how the industry has evolved. However these policies have not eradicated the underlying norms, values, and beliefs that circulate. They have not dismantled a culture that continues to make gender intelligible, and more importantly, relevant.

Few men I spoke with about organizational culture raised issues of gender, and only one man talked openly about the sexual harassment he saw and (now regrets) being complicit in. Ben worked as a hedge fund manager at both moderate policy and extensive policy firms. I asked him to describe the cultures of these firms:

> *"Well, [a film depiction of men harassing women in finance] is my experience… explicit, degrading [talk] about women in the firm, I don't even want to say the words they say, talking about the most sort of salacious things[…] [At my first firm] I was just aware that there [were] all these stories about trips to Vegas with crazy drugs and prostitutes[…]It wasn't as much overt anymore, because you knew there was this sort of 'PC' stuff and you couldn't be doing that, but you would definitely know people were…There are so many times there is a group of male traders standing around talking… and they're always either talking about the markets, or what bonuses are going to be, but then there is also quite a lot of conversation about the waitress or girls on the floor…"*

Ben's descriptions suggest the cultures of the firms he worked at hadn't changed with equity initiatives. The salacious and degrading conversations about "girls on the floor" was still prevalent, though he says not as overt, and the 'PC' equity policies seem to have done little to disrupt this.

It appears that many finance firms still have cultures that are at best favorable to men but often hostile towards women. This gendered culture is no longer explicitly or even latently condoned through a dearth of policy, but what became clear was not just the prevalence of these cultural norms, but the prevalence of them in *all* kinds of policy environments. Despite the presence of gender-equity policies, it appears that women still experience considerable discrimination, harassment, and sex-typing.

Doing and Undoing Gender as a Response to Structural Gender Initiatives

Research has explored the efficacy of structural equity practices on gender composition (Kalev et al. 2006), but we know relatively little about their effect on women's qualitative experience of inequity. As more finance firms implement gender equity initiatives, it seems a fair assumption that women's experiences in these firms will improve. However, women I interviewed in all policy environments - even those with extensive gender equity initiatives - described similarly gendered cultures and described doing gender 'like men' in an effort to fit in and succeed. Doing gender 'like men' involved embodied and behavioral practices, and in extensive policy environments, it also involved the avoidance of equity policies.

Practicing Gender 'Like Men'

Women described how they modified their language, appearance, and behaviors in ways they identified as being more 'like men'. Star was an investor relations manager in her forties, and she worried her gender held her back:

> *"If you're seen as a woman you're not seen as an equal…When I give a talk in front of a group of guys, I talk like a guy. I'll drop 'F-bombs', swear, spit, wear suits - like the Hillary Clinton pants-suit - because I don't want them to be like, '*Oh. How do we treat you?*'. If I walk out of a meeting and one of those guys holds the door open for me, I know there's going to be a problem."*

For Star, being treated 'like' a woman (e.g.: holding a door open) was a red flag. In an effort to be respected, she tried to embody 'masculinity'. In all, 17 of the 24 women I interviewed discussed how doing gender 'like men' was advantageous. To be 'like' men: to behave, to think, and dress in so-called 'masculine' ways was preferable to being 'like' a woman.

I described the ideal worker norm to Jasmine and asked if it matched her perception of what's necessary to advance:

> *"The women I know who have been most successful in my industry - they fit pretty well with that…I honestly think that the women in my business who I see who are [successful]…all have these qualities that I have which are they're committed to their work, they're driven in a way, they really want to excel, they think like men… [They're] able to take the hits and knock them down and get up again. You have to be able to stomach it…[Finance] is not nurturing. The only conclusion I came up with [for why I have difficulty hiring women] is that what I present to them, maybe sounds too male…"*

Far from problematic, Jasmine interpreted androcentric ideal worker norms as aspirational. Being 'like' men; thinking, acting, being driven in ways that she saw as being 'like' men was necessary. If a woman needed nurturing, if she couldn't "stomach it", it isn't that finance is 'too male': women weren't enough 'like' men.

Charlotte worked in marketing at an extensive policy investment firm and volunteered at a non-profit organization to advance women in finance. We I asked why she thought women still faced challenges advancing, even at firms with progressive policies:

> *"You get the respect you ask for. Women can't wear high heels or lace, low-cut blouses, or short skirts. When you do that, you aren't asking to be treated as equal..."*

Although Charlotte advocated for structural solutions to gender equity, she still endorsed minimizing acting ‘like’ a woman; acting ‘like men’ was what earned women respect.

There were notable exceptions in women’s gender strategies; most significant, three provided examples of so-called ‘feminine’ embodiments of gender. Two women described wearing tight pants and stiletto heels: a highly feminized display in stark contrast to the Hillary-Clinton-pantsuit described by Star. These women were both executives, and arguably in positions of power that afforded them more liberties. However, both still described facing a reiteration of the same gender bind other women had, and perhaps practiced a “respectable femininity” instead (Mavin et al. 2014). Ben discussed the “*flirty*” and “*gorgeous*” women who worked in marketing:

> “*It sort of makes sense, right?…their job is to make clients choose to trade with them… hedge funds often will have zero [women] traders but they’ll always have like a drop dead gorgeous woman whose job is to bring in investors…”.*

This example, however, does little to challenge the normalized objectification of women described in other accounts.

Women’s descriptions of doing gender ‘like’ men to advance fits with literature which suggests women practice gender strategically in an effort to fit in and succeed in male-dominated work contexts (Martin 2003; Powell et al. 2009). Although that alone is not surprising, women endorsed these gender strategies regardless of their policy environment. Further, instead of abandoning efforts to do gender ‘like men’ in policy-extensive environments, some women avoided policy in a way that suggests policy avoidance becomes another way to practice gender ‘like’ men.

Policy Avoidance as Doing Gender

Women in all kinds of organizations experienced discrimination and harassment, and although women in policy extensive environments had more available resources to cope with this, they did not necessarily embrace policy use.

Susan was in her early thirties when she managed research at a hedge fund. I asked how she dealt with the discrimination she experienced:

> *"I have a cadre of men that I go to for advice which is kind of like the WWMD - "what would man do" - because men play this game very differently[…]I have been smacked on the ass at work, I have been propositioned at work… I've been followed to my hotel room at conferences, I mean I've had bad stuff happen, but you just kind of take care of it and move on…It's never occurred to me [to use policy]."*

Susan sought advice from men in the field for how 'play the game' like men. Instead of using policy to cope with the sexual harassment she experienced, she 'took care of it'. In the same way women described dressing or talking, or thinking 'like men', Susan relied on her WWMD mantra.

How *do* men do policies? It's a valid question, and it is one that we largely know the answer to. Women may underutilize policies like leave and flexible work schedules, but men use them far less and face stigma when they do (Marshall 2008; Murgia and Poggio 2009). The majority of women I spoke with endorsed doing gender 'like men', and doing policy 'like' men arguably means avoiding it. I asked Jasmine about her career trajectory at an extensive-policy firm, and she discussed her reluctance to use leave after her first pregnancy with twins:

> "*I told [my company]* 'I'll take off as little time as I can' *and I only took a week off…I was trying to make a point: 'Here I am: I am a worker, you can rely on me'…There were no supports within the organization…they just didn't have any women that had kids there.*"

There were no *cultural* supports that facilitated leave; men didn't use it and *reliable* women acted accordingly. Jasmine tried to make a point that she was a *worker;* differentiated from a woman or a mother. She endeavoured to live up to the ideal of a reliable and available man, "subsumed in the image of" the supposedly "gender neutral worker" (Acker 1990: 139).

Nora was in her early forties, and worked at an extensive-policy investment firm. She described her decision not to pursue an in-house grievance process after facing pregnancy discrimination:

> *"After my leave my co-worker got my job…[she] was single so she's probably not going to take leave anytime soon. Not only did she get my job but she became a Vice-President as a result…I could have made something of that but at that point I was already wanting to get new experience and I didn't want to jeopardize that, so I just sucked it up."*

By taking leave, Nora knew she wasn't conforming to ideal worker norms, noting her replacement *did*. Extensive equity policies available seem to do little to change what behaviors are valued and rewarded and, tellingly, which aren't. Nora's avoidance of the grievance procedure is a response that *is gendered*. If equity policies are in place to accommodate women and not challenge the cultural status-quo, using policy becomes a gendered act in an inhospitable culture. Using policy is acting 'like' a woman, and not using policy is acting 'like' a man. Nora didn't want to jeopardize her career further by pursuing a grievance, a process that interrogated the gendered cultural norms she had already faced consequences for interrupting, so she "sucked it up".

Tanya described facing sexual harassment in firms with extensive gender equity policies, and I asked her why she hadn't reported it:

> *"I just felt like if I went to HR [my coworkers] would subconsciously take me less seriously now…because I'm complaining…and you know I guess as a woman I felt a little bit insecure about that."*

Tanya had expressed concern that being a woman meant she was treated "lesser" than men. She worried that relying on structural supports would mean she'd be evaluated more negatively. Rather than assimilating to the androcentric culture which objectified her, using policy would further construct, stigmatize, and exclude her as a woman.

Women often couched their reluctance to use policy in terms of "taking care of things", "sucking it up", and not wanting to "complain" or "create problems". Although women didn't explicitly state that avoiding policy was a way of doing gender 'like men', these illustrations show how using (and not using) policy is tied to doing gender 'like' women and 'like' men, respectively. When women use gender equity policies in these firms they are challenging the gendered culture, acting *against* the entrenched norms and values. Women in minimal, moderate, and extensive policy firms all described doing gender 'like' men, and women in policy-extensive firms used policy avoidance as another way to do gender 'like' men.

2.6. Discussion and Conclusions

This chapter explores how gendered cultures and gender-equity practices interact in the finance industry. My findings show that women continue to face barriers in finance firms despite extensive structural gender equity initiatives. Instead of undoing gender (Deutsch 2007; Kelan 2017), I find that gender equity policies may actually exacerbate perceptions of gender difference, if such structural equity strategies are implemented without parallel strategies to supplant the gendered cultures which make gender relevant and legible. When the male-typed gendered cultural scaffolding of these firms remains intact, it encourages a gendered interpretation of doings and behaviors (Connell 1987). To be sure, this is not solely endemic to finance, but it does seem to be an industry that values and rewards a subculture of an unexpectedly anachronistic kind of hegemonic masculinity. Gender equity policy in gendered cultures may become both a gendering practice (in place to accommodate women) and its avoidance, a practice of gender (a way to demonstrate competency and cultural fit) (Martin 2003). In response, women avoid using policy as to minimize their perceived gender difference from men, negating the potentially positive impact that policy alone might otherwise have on gender equity outcomes. Policy avoidance, then, becomes another way to do gender "as men."

This is especially problematic given that many gender equity policies require individual women to set them in motion. Although some gender equity policies, such as formalized hiring procedures and using objective criteria for evaluation, can be initiated by firm leadership and HR professionals, many gender-equity oriented policies, such as taking leave, using flexitime, or grievance procedures require that women themselves initiate their use. Rather than undoing gender by minimizing their gender difference *from men*, women's attempt to minimize the perceived gender differences between them and men mean they actually do gender in ways that undermine structural strategies to address gender inequality, and ultimately reinforce the existing cultural status-quo. As organizational scholars have long pointed out (Edelman 1992, Kalev et al.

2006), equity-oriented policies on the books can be decoupled from actual practice. If women are largely avoiding policy use in an attempt to do gender ‘like men,’ this policy avoidance likely contributes to the limited impact of equity policies. Advancing gender inequity cannot rely on solely on individualized strategies or policy use; instead, policy must be designed and implemented in ways that challenge and change the underlying gendered organizational culture.

Far from suggesting that it is women’s individual doing gender strategies that undermine structural initiatives, there must be a change to the cultural environment that communicates that doing gender 'like men’ is the best (and only) strategy for getting ahead. The organizational culture of these firms continue to incentivize workers to conform to hegemonic norms of masculinity, but it goes beyond this. The gendered norms in these organizations result in women (and anyone else that does not conform to the preferred version of masculinity) being subverted, objectified, and marginalized. In an environment where women and others who do not fit the rigid expectations of this masculinity are already disadvantaged, it is not difficult to understand why women (and some men) resist using policy.

The gendered culture in these organizations may benefit men more explicitly, but overwork and ideal worker norms fit the needs of corporate work structures at the expense of workers’ personal time and development (Connell 2005). Further, men who don’t conform to hegemonic standards of masculinity have uneven access to the accompanying privilege (Yavorsky 2016; Connell 2005; Wingfield 2009). Kelan (2017) suggests that men’s gender practices can play an important role in undoing gender in organizations by showing a dedication to demands external to work and displaying emotional intelligence; strategies that undo gender by reducing perceptions of gender difference. Although individualized gender strategies don’t remedy structural and cultural sources of inequality, policies should aim to reduce perceived gender differences, and undo the gendered application of policies. This can be accomplished, at least in part, by implementing more defined boundaries between work and home hours (e.g. Blair-Loy 2009), and by encouraging men and women to make use of work-life balance policies, including leave-taking (Kelly et al 2010).

Although this study provides an important understanding of how structural solutions to gender equity can be undermined by culture and individual gender practices, there are some considerations for generalizability and future research. Because I used a semi-structured format, participants were free to raise issues they felt were most relevant. My own identity as a white, cisgendered woman arguably influenced both the rapport with interviewees and content of interviews. Women often raised gender without prompting, which was not the case with men. It is possible women felt more comfortable raising gender in a way men did not (Pini 2005). I also identify three primary limitations. First, the gendered nature of finance organizations is especially entrenched, and may not be representative of organizations in other industries. Future research needs to consider whether women engage in similar doing gender strategies in other male-dominated industries with potentially less entrenched gendered cultures. Second, because my sample is racially and ethnically homogenous, I have not been able to consider issues of intersectionalities. Opportunities and hierarchies in work organizations are gendered but they are also cisgendered, raced, and classed (Yavorsky 2016; Acker 2006). Diversity initiatives focus on all kinds of diversity, and qualitative studies should be undertaken to better understand how and if policies are taken up by members of other marginalized populations. Lastly, this paper has focused on women's experiences in these organizations, but future studies should look at the experiences of minority men in these organizations (e.g.: racialized or non-heteronormative), and whether they rely on similar cultural assimilation practices.

CHAPTER 3 - TESTING THE LEHMAN SISTERS' HYPOTHESIS: GENDER, PROFESSIONALS, AND RISK IN THE FINANCE SECTOR

When the financial services firm, the Lehman Brothers, filed for bankruptcy protection in September of 2008, it marked the beginning of the global financial crisis. Although many factors contributed to the crisis, most agree that excessive risk exposure was the driving force. Many began to look at who was responsible for the risk that led the economy down this path and eyed the male-dominated sex composition and gendered aspects of the finance sector, questioning whether there was a gendered nexus of the financial crisis at the root. Christine Lagarde, the Managing Director of the IMF, openly hypothesized that if Lehman Brothers had instead been Lehman Sisters, the crash may have been avoided.

At the heart of this hypothesis is the belief that women handle risk differently than men. The "Lehman Sisters' Hypothesis", as it has since been coined, suggests that employing more women in the sex-segregated finance sector would create not just greater gender equity, but would mitigate or reduce the number of reckless risks taken, resulting in more stable economic markets. Certainly, some empirical evidence lends support to this hypothesis: on average, women have been found to assess risk more thoroughly, generate higher revenues, and can be more conscientious of regulatory provisions than men (van Staveren 2014; Olsen and Cox 2010; Barber and Odean 2001). However, despite this evidence and the calls to improve gender equity in finance for both social justice and economic reasons, women continue to face significant barriers to entry and advancement in finance firms. In addition to this, the belief that women inherently have more responsible approaches to risk is often informed by essentialist beliefs where the reality is likely more complicated and involve deeper cultural and structural roots.

In this paper, I investigate the effect of sex composition on risk taking, drawing on 10 years of data from 245 finance firms and their subsidiary establishments. Rather than just assess the presence of women in a firm, I suggest that the effects of women in key occupations will have different effects on risk outcomes. Specifically, I examine how variation in the presence of women in key professional and managerial positions affects firms' exposure to risk. If more women are employed in these roles, do risk outcomes improve? In the discussion below, I begin by describing the gendered nature of work in the finance sector. I then discuss the complexity in measuring risk in an industry where risk-taking is a necessary part of the job. Finally, I make the case for how gender composition of key occupations might affect risk outcomes.

3.1. Gender and Financial Risk Taking

As a whole, the financial services sector is stubbornly sex segregated. 60% of overall employees and 82% of executive and senior leadership positions are held by men (Catalyst 2014). In the most lucrative jobs in the financial services sector (those in securities, commodities, and corporate investment banking), over 66% of these positions are held by men (Catalyst, 2014). While finance firms may not be swayed by equity reasons alone to increase gender diversity, what if employing more women positively affected a company's bottom line? Over the past 30 years, there has been a growing movement that has presented the "business case" for diversity (Cox, 1993; 2001). Arguments for diversity include enriched and diverse perspectives leading to greater innovation, problem solving capability, and better financial outcomes (Cox, 2001; Herring, 2009; Francoeur et al., 2008; Welbourne et al., 2007).

Providing support for the business case for gender diversity, research looking at individual behaviour around risk-taking suggests that, on average, women make better decisions and have better outcomes around risk. Women are shown to be more risk averse and fiscally responsible, more balanced in strategizing, and more likely than men to invest in sustainable ways (van Staveren, 2014; Apicella et al. 2008; Dwyer et al, 2002; Eckel & Grossman 2002; Croson & Gneezy 2009; Niederle & Vesterlund 2007; Jianakoplos & Bernasek 1998). In van Staveren's (2014) review of the empirical literature on the gender differences in the finance sector, she finds that female fund managers had better financial outcomes than their male counterparts, and lost on average less than half as much as men during the 2008 financial crisis (Chang, 2010). In their study of university students using a simulated stock brokerage competition, Felton and his colleagues (2003) found that men took greater investment risks than women overall, and were exposed to greater risk because they were often more optimistic about outcome-potentials in high-risk investment choices. When evaluating stockbrokers' trading habits, Barber and Odean (2001) found similar patterns in stockbrokers' gendered risk behaviour. Men tended to be overconfident in their investment habits and traded more excessively than women, resulting in lower net returns. Olsen and Cox (2010) evaluated whether there were gender differences in how investment professionals approach and measure risk, holding training, experience and information constant. They found women weighed the probability of loss more thoroughly and were more cautious than men when investing in areas with moderate to high levels of ambiguity. Using corporate fraud as a measurement of risk, Capezio and Mavisakalyan (2016) found that increasing women's representation on corporate boards was associated with decreased probability of fraud.

Explanations for such observed gendered differences in risk behaviour abound. While most of the behavioural finance and biological research has focussed on essentialist explanations of hormone levels (Apicella et al 2008; Wood and Eagly 2012), the sociological literature maintains that socialized understandings of gender are structured and practiced in recognizable patterns across different contexts (West and Zimmerman 1987; Acker 1990; Deutsch 2007; Martin 2006). Focusing on gender as a practice allows research to observe how it becomes realized in relation to work, and furthers our understandings of how it can be interrupted or reinforced depending on how structural and individual practices converge or diverge.

Not all research finds such compelling support for the Lehman Sisters' hypothesis. The relationship between gender and risk is not straightforward, and the solution to reducing risk exposure of firms is likely more complicated than just hiring more women. For instance, research that compared betting behaviour in managers and non-managers in the United Kingdom, found gendered differences in risk-taking disappeared when focusing on management populations. In their survey of directors of public firms in Sweden, Adams and Funk (2012) asked questions about risk attitudes towards investments and found that women were actually less risk averse than men, even when holding individual and firm level characteristics constant. In their review of gendered differences in risk preferences, Gneezy and Croson (2009) found when studies focus specifically on risk behaviour of management and professionals, there is less evidence of gendered risk preferences, with little to non-existent differences.

One possible explanation for differences between these findings and the gendered findings discussed above may be that those who self-select into leadership positions differentiate in ways that set them apart from the general population (Adams and Funk 2012; Gneezy and Croson 2009). While Powell and Butterfield (2013) found no significant difference between whether men and women MBA students aspired to senior management, students who did, rated highly on an administered index meant to measure conventional masculine attitudes and behaviour when compared that those who did not. In their survey of 368 professionals, Litzky and her colleagues (2013) did find that women were significantly less likely to express aspirations to pursue senior management, but that it was due largely to the perceived incongruence between their gender and the assumed gendered characteristics necessary for the job. This could indicate that individuals who self-select into management are attuned to the presumed gendered nature of leadership roles and adjust their aspirations in accordance to these expectations and their own self-perception. In effect, the expectations and broader framework for understanding who is best suited in those occupations inform how individuals practice gender when they occupy these roles (Martin 2006).

Differences between management populations and the general population may also be explained by gendered occupational norms and organizational cultures. Gendered organization mask structures which benefit many men over women, and are arenas in which individuals interact and behave in ways which reinforce and give structure to gendered interpretations of identities and practices (Acker 1990; Martin 2003). As McDowell argues in her exploration of gender in the financial services sector, jobs aren't gender neutral, but are constructed and often culturally prescribed as appropriate for either men or women, and involve characteristics and behaviour that are understood as gendered (1997: 25) Theorizing the practice and practicing of gender at work draws attention to how gender is accomplished in specific contexts and identifies it as "a configuration of practice within a system of gender relations" (Connell 2005: 84). Martin (2003) suggests that in occupations commonly associated with men, gendered traits construed as "masculine" are institutionalized, and often not interpreted or understood explicitly as gendered.

Gender of course is not static, but instead is a practice that is accomplished in context and in concert with others (West & Zimmerman 1987; Connell 2005; Martin 2003). Martin describes it as “dynamic, emergent, local, variable, and shifting” (2003: 351).

In male dominated industries, organizational culture has been shown to be gendered in ways that reinforce and reward forms of gendered behaviour that are associated with specific forms of masculinity, and reinforce its hegemony. Culture, however, is embedded and carried out in everyday organizational practices and routines, and its gendered nature is therefore largely invisible (Acker 1990; Zaloom 2006; Paap 2006; Collinson and Hearn 1994). Because many male-dominated occupations, such as management, construct culturally-prescribed gendered traits as important for doing a job well, doing gender in ways that align with what is culturally construed as “masculine” becomes an important part of doing one’s job (Connell 2005).

Occupations that are male-dominated come to be associated with traits that are culturally construed as masculine, but this can be a very specific kind of masculinity (Martin 2003; Ridgeway 2009; Connell 2005). In different contexts what becomes hegemonic — that is what gendered practices and behaviour — are given the most power, authority, and prestige varies (Connell 2005; Martin 2003). This can vary occupation to occupation or sector to sector. Gendered behaviour that are granted the most power, authority, and prestige on a construction site might be physical displays of strength and a lackadaisical attitude towards physical safety (Paap 2006). Others have found that workers in culturally male-typed occupations, like oil-rigging, change gendered displays of masculinity to conform to organizational cultural change initiatives (Ely and Meyerson 2010). Desmond (2007) draws attention to the ways in which behaviour that conform to hegemonic masculinity shift depending on environment in his work exploring wild land firefighting crews. He notes that firefighters engage in gendered linguistic and behavioural code-switching as they come and go from the city to the rural headquarters to work. The city, he argues, requires men to use "courteous language[…]and etiquette of civilization - delicate, soft, mannered, clean, educated" (2007: 75). He contrasts this to the "transformation" (75) when these men come to work as firefighters, where they swear, pass gas and speak loudly, and wear dirty clothes. Hegemonic masculinity, then, is contextual and shifts over time and place (Connell 2005). Qualitative work helps us understand the cultural context that gives meaning to the gendered behaviour that takes place within it.

In corporate settings, management (which is still male-dominated) has been shown to have an engrained "monoculture" that values specific kinds of masculinity. So-called "masculine" traits like overconfidence, decisiveness, bravado, conforming to ideal worker norms, and taking reckless risks (even when they result in negative outcomes) are often conflated with markers of competency and loyalty (Felton et al. 2003; Roth 2006; van Staveren 2014; Berdahl et al 2018; Kerfoot and Knights 1993; Eagly and Carli 2007; Mumby 1998; Collinson and Hearn 1994; Nelson 2012). Individuals who adhere to traits and behaviour that fit within a specified paradigm of hegemonic masculinity, reap the benefits that are paid out by way of a "patriarchal dividend", such as favourable reviews, increased security, power, and wealth (Connell 2009; Paap 2006; Ely and Meyerson 2010; Martin 2001; Collinson and Hearn 1994). Individuals who succeed in these roles likely conform to gendered organizational and occupational norms and expectations. While some may self-select into management based on assumptions of what characteristics are more suited for these roles, Gneezy and Croson (2009) also suggest that women may adapt risk behaviour to fit within company requirements or expectations.

Men may fit into these gendered cultures, but women face different assumptions, which place them at a disadvantage. Women's gender creates barriers to their advancement, especially in male-dominated occupations (Martin 2001; Acker 1990). This may be especially the case for managers, as leadership positions remain culturally male-typed and as especially important for symbolizing and reinforcing the social construction of white-collar masculinity (Knights and Tullberg 2012). Although women's representation in management has increased, the discourses of management are still predominantly and hegemonically masculine (Knights and Tullberg 2012). In occupations that reward those who enact gender in hegemonically masculine ways, women must navigate how they do their job and their gender.

Women are most often evaluated and discriminated against based on their "assumed" characteristics [and] traits as women, and "femininity" continues to be conflated with incompetency in leadership roles (Bobbitt- Zeher 2011; Jamieson 1995; Oakley 2000). Evaluations of their gender can take precedence over their objective evaluation as workers (Ridgeway 2009). In response to this, some women engage in gender-monitoring practices to try to minimize their assumed gender difference, and instead act in ways that conform to hegemonically masculine expectations. In their field work and review of literature of financial service firms in Britain, Kerfoot and Knight (1993) found a very specific kind of masculinity was sustained, reproduced, and privileged by the practices of managers. This involved control and domination over others, high levels of competitiveness, heterosexism, suppression of emotionality, and the subordination of other masculinities and rejection of women and behaviour constructed as feminine. Other studies have found that when women are objectified or otherwise "othered" in gendered organizations, they may rely on assimilation strategies to fit in. Powell and her colleagues (2009) found that women engineers worked to gain the acceptance of the men they worked with by accepting discrimination, acting like "one of the boys", and voicing "anti-woman" stances. In her study of the finance sector in the United Kingdom, McDowell found the organizational culture of most finance firms offered limited options for gender performance and embodiment. For women, McDowell notes women in particular have few gendered roles available to them in finance firms. In her interviews with women who worked in finance, she noted that women described the roles available to them to be largely familial or sexualized (1997: 152). In response women in male-dominated occupations strategically enacted gender in ways they hoped would allow them to side-step these stereotypical constructions. Women she interviewed sometimes tried to be accepted as "honorary men" (152) in attempts to assimilate with the gendered organizational culture. Some described going out for drinks 'with the boys' or being "aggressive", but most agreed this strategy did not successfully sidestep they social construction as a gendered "other" in the long run (1997). Because cultural sex-typing constructs some jobs to be more appropriate for men (and presumed "masculine" traits), women will continue to face a double bind; pressure to conform to masculinist notions of competency and a continual uphill battle to succeed regardless of these efforts (Oakley 2000).

Women in token numbers are often subjected to more scrutiny and pressures than men, as they are more visible and monitored (Kanter 1978). In response to this increased scrutiny and pressure, women may respond by attempting to present themselves as atypical of other women, and assumptions about their gender, and conform more to the dominant culture (Kanter 1978;

Izraeli 1983). However, minimizing perceived and enacted gender differences is not a foolproof strategy for women. Unfortunately, women in management are often subjected to a behavioural double-bind; perceived as acting too aggressively for pursuing the same strategies for leadership as men (Oakley 2000). In response, women in management have been found to practice a “respectable femininity” (Mavin et al. 2014), which straddles doing gender differently (i.e.: “like” men) and well (i.e.: “like” women). Management continues to be a strongly culturally male-typed occupation, and the traits seen as important for performing this role are still overwhelmingly gendered and hegemonically masculine in these contexts. Women who pursue management positions may self-select into these occupations, seeing themselves as more able to fulfill these expectations, or they may adopt so-called “masculine” behaviour or discourses as an adaptive strategy to negate the increased scrutiny and pressure they face because they are women.

Although gendered work expectations remain strong for managers (Knights and Tullberg 2012), women in professional occupations may be able to rebuff gendered cultural pressures more successfully. Professionals are highly skilled and trained employees with specialist knowledge, certifications, and extensive competence in their field of expertise (Davis 1996; Witz 1992; de Bruijn 2012). In finance firms, this includes compliance officers, financial analysts, financial specialists, and sale professionals who deal in and advise clients on securities. Professionals are socialized both within and external to an organization. Professional communities outside of a work organization such as certifying bodies and associations have professional codes and expectations which will also affect an individual’s behaviour. (de Bruijn 2012). Because of this, professionals often have a strong professional identity they bring with them when they work at a firm. Individuals may still successfully internalize aspects of a firm's organizational culture, however, professional identities informed by factors external to an organization are also influential in how they carry out their identity and work.

Because the number of professionals who work in organizations has grown so significantly in recent years, there has been growing attention to how to best integrate and incentivize professionals, as they have different expectations and more power than more traditional occupations. Traditional methods of attraction, motivation and retention, such as pay increases and promotions are less effective in incentivizing performance of professionals (Von Glinow 1986). Instead, effective rewards and incentives which increase job satisfaction are less tangible, such as flexible work arrangements, decreased managerial control, and greater autonomy over how professionals carry out their work and use their skillset to reach their objectives (Boyt Lusch & Naylor 2001). Strategic autonomy (the ability to choose one's work objectives) and operational autonomy (the freedom to carry out work objectives in an autonomous fashion) are both important incentives for how professionals operate within organizations (Tremblay and Genin 2010; Bailyn 1985). It is exactly this autonomy which may insulate professionals from dominant pressures of workplace culture.

Beyond the strategic and operational autonomy that many professionals have within organizations, the sex composition of professional occupations on average is more balanced than management. On average, women occupy 30 percent of professional positions, but just 18 percent of management positions in finance firms, and 12.8 percent of senior leadership positions in the Securities sub-sector (EEOC 2015; Catalyst 2014).

Using Kanter's definition of tokenism (occupying roughly 15 percent of a group) women in senior leadership in finance fit within this definition (Kanter 1977). When women exist in token numbers, presumed gendered differences are highlighted and dominant group members may magnify the relevance of gender in risk-decisions, leading to women facing greater scrutiny around their decisions towards risk (Kanter 1977; Izraeli 1983). When women occupy so few positions in senior leadership, adaptive risk behaviour to fit within existing organizational norms make strategic sense (Gneezy and Croson 2009). However, counter to women who are represented in the token and skewed sex composition of senior management of finance firms, women professionals in finance firms are more balanced in occupational composition. As women move beyond token status and towards more balanced representation, their presence and behaviour are more likely to be viewed by the dominant culture as less tied to their gendered category (Kanter 1977; Izraeli 1983). Further, organizational culture may influence professionals and managers differently. Professionals are more likely to identify both with their profession's ethos outside an organization as well as their role within it. Managers are socialized more idiosyncratically within a firm's organizational culture, and tasked with articulating and carrying out its goals and vision (de Bruijn 2012; Raelin 1989). Following this, it likely that women professionals have more operational and strategic autonomy than women in management, and are perhaps less influenced by the constraints of a gendered organizational culture. When considering how risk is carried out in finance firms, this autonomy might play an important role in mediating the relationship between organizational culture and risk behaviour.

3.2. Empirical Expectations

Regardless of the explanation for variances in women's risk behaviour, the current literature offers inconsistent support for the Lehman Sisters' hypothesis. Experimental and convenience-sample data does seem to suggest that on average, women make better decisions around risk and have more positive outcomes; however these data may not be generalizable to those who self-select into finance firms or to behaviour that take place within them, and are likely affected by gendered organizational cultures. Because occupational sex composition data at the firm or establishment level are difficult to obtain, research that evaluates women and risk decisions within the context of finance firms often rely on publicly available data, such as senior leadership or board sex composition. This literature tells a more complicated story around gender and risk, and suggests that women within finance firms may even take greater risks than men.

As of yet no wide-scale empirical studies have directly tested the hypothesis of whether more women in financial organizations, especially within key occupations, are associated with negative risk outcomes. Using 10 years of occupational establishment-level sex composition data for 245 securities firms in the United States and their corresponding financial violation history, I hypothesize that employing more women reduces a firm's exposure to risk, but that these effects are structural, rather than additive. Specifically, I hypothesize that it is not the presence of women, but the presence of women in key occupations in non-token numbers that reduce a firm's exposure to risk. I suggest this can shift the culture of these firms away from interpreting and acting on risk as a *gendered* performance, and towards the use of making risk decisions based on occupational expertise instead. Many finance firms still have engrained gendered cultures, which normalize and reward individuals who behave in ways that align with so-called masculine traits such as overconfidence and reckless risk-taking. If occupations which are more insulated from gendered pressures through strategic and operational autonomy, does this result in a more expertise-informed orientation towards risk? Are women in professional roles less affected by gendered organizational culture and expectations than women in management in ways that free them to assess risk more thoroughly? Does the skewed sex composition of management or greater influence of gendered cultural forces affect risk outcomes? I propose three hypotheses: 1) women in professional and sales roles that make decisions around risk on-the-ground will have an overall negative effect on the number of risk outcomes; 2) that women in management positions will have no effect on risk outcomes, or 3) will increase the number of risks taken.

3.3. Issues with Measuring Financial Risk Taking

Because taking risks is a necessary and even positive trait in finance, the appropriate measurement of risk must be valid and reliable. A certain amount and kind of risk is necessary and advantageous, since carefully calculated risk-behaviour can result in increased financial gains. Healthy approaches to risk would include thoughtful and nuanced assessments, which is where some literature suggests women outperform men. Overconfidence and reckless risk-taking - behaviour without due consideration for outcome or careful weighing of potential cost - can result in maladaptive behaviour which can result in monetary losses, fraud, and regulatory penalties. Further, while many studies rely on individual assessments of risk-management habits these may be unreliable indicators of actual behaviour and approaches to risk that take place within the context of finance firms (Adams and Funk 2012; Gneezy and Croson 2009).

Reported violations of finance regulations and laws provides a particularly reliable and stringent measurement of maladaptive risk behaviour. These violations are detailed in the FINRA manual, and sanctioned behaviour include actions like trading without a clients’ permission or without a license, misrepresenting level of financial risk to a client, or having conflicts of interest during an initial public offering. The Financial Industry Regulatory Authority (FINRA) regulates every brokerage firm that does business with the American public and provides firm-level data of at-fault prosecutions. Nearly all investor-brokerage agreements in the United States include a clause where parties waive their right to trial in a court of law, and must enter FINRA arbitration procedures to resolve complaints (Burge and Richards 2013). All regulatory violations (including class action lawsuits) are reported to and by FINRA. While FINRA does have its own investigative unit, it depends on firm self-reporting, consumer complaints, and whistleblowers. The presence of a documented infraction reflects a process whereby a violation must first be detected, then reported, and finally brought through arbitration or legal hearing with sufficient evidence to be prosecuted and found guilty. The 'dark figure' of corporate crime are unreported or unnoticed infractions and therefore not included in official records (Young 2015; MacDonald 2001). Recent erosions to reporting requirements and issues with self-reporting and self-regulation have been noted (Verschoor 2012; Peck 2013). Although the dark figure of violations cannot be known, given the dependence on a firm's self-detection and reporting, as well as the erosion of reporting requirements, the regulatory violations likely represent only a fraction of violations that take place. This serves as a high bar for detection of maladaptive risk behaviour. Because of this, it is expected this measurement provides a particularly stringent and conservative measurement of risk-taking in finance firms.

3.4. Data and Methods

Data

I use two data sources to evaluate the effect of sex composition on financial violations. Sex composition data come from the Equal Employment Opportunity Commission (EEOC) and finance violation data come from the Financial Industry Regulatory Authority (FINRA) database. Below I discuss each data source in turn.

Sex Composition Data: EEO1 Reports

The U.S. EEOC is a federal agency which monitors firms' compliance with workplace anti-discrimination laws. As part of its mandate, it requires all private employers with more than 100 employees and government contractors with more than 50 employees to file annual EEO-1 reports. These reports contain the racial and sex composition of establishments across nine broad occupational categories, including management, sales, and professionals.

I used the population of finance establishments that filed EEO-1 reports in 2005 as a sampling frame. From the 2005 EEO-1 file, I included all unique establishments identified by the North American Industry Classification System code as involved in Securities, Commodity Contracts, and Other Financial Investments and Related Activities (NAICS 523). The NAICS 523 code designates firms that: (1) underwrite securities issues and/or make markets for securities and commodities; (2) act as agents (i.e., brokers) between buyers and sellers of securities and commodities; (3) provide securities and commodity exchange services; and (4) provide other services, such as managing portfolios of assets; provide investment advice; and trust, fiduciary, and custody services. This resulted in an initial analytic file of 1,684 finance establishments (357 firms). A prospective sample was chosen because the finance sector contracted substantially after the 2008 financial crash due to mergers, acquisitions, and bankruptcies. I assumed that firms with an increased exposure to risk had an increased chance of closure, and therefore a prospective sample helped capture firms at all levels of risk-exposure, rather than introducing the possible bias of capturing only firms that only had minimal risk-behaviour.

Using this 2005 sample of 1,684 establishments, I extracted and appended prospective annual EEO-1 reports for these establishments from 2006 to 2015. Merging all ten years of EEO-1 data produced a longitudinal file of 10,386 establishment-year observations. I then used this file to merge with FINRA financial violation data, as described below.

FINRA DATA

My second source of data comes from regulatory violations as reported by FINRA. FINRA is a self-regulatory organization, with oversight from the federal Securities and Exchange Commission, to govern the securities brokerage industry in the United States to protect investors and the public interest. It was formed in 2007 in an effort to centralize resources and industry oversight and is responsible for the regulation of any firm or individual that engages in the business of securities for itself or on behalf of another party (Burge and Richards 2013; Cole 2007). All firms that participate as a broker or dealer in the transaction of securities is required to register with FINRA, which accounts for almost the entirety of securities firms in the United States (Burge and Richards 2013). FINRA oversees and reports upwards of 90% of all arbitration and regulation discrepancies of securities disputes (Burge and Richards 2013; Robbins 2005).

I gathered annual violation data for all reporting EEO-1 firms under the regulatory reporting jurisdiction of FINRA (N=245). Of the initial 357 finance firms included in my EEO-1 sample, 112 firms did not fall under FINRA jurisdiction. These firms and their establishments were then dropped from the sample, resulting in a total of 9,813 establishment-year observations.

BrokerCheck is FINRA's online, searchable database of reports for all registered firms. Reports include details on a firm's history, operation details, and violation disclosures. All firms are required to report violations within 30 days of a ruling; including civil, regulatory, and arbitration decisions. A firm might have multiple securities branches registered with FINRA, which are each assigned a unique Central Registration Depository (CRD) number. Each CRD record has its own report, and I therefore needed to assign all CRDs to their appropriate parent company.

To assign violations to appropriate firms, I first created a spreadsheet that listed all CRD numbers of each firm in the EEO-1 sample, using the CRD number as a unique identifier. If a company was acquired by or merged with another company, CRDs were matched to their respective parent company in the appropriate years. I searched and extracted regulatory reports for all CRDs listed for each firm from BrokerCheck. Extracted violation data included headquarter number (matched from EEO-1 data), CRD number, an assigned unique violation identifier, the parent company's name, the date the firm was founded, the initiating agency of the violation, the year the violation was reported, the docket number, the amount of the each fine if applicable, and whether the action was regulatory, civil, or arbitration. I used the date and docket number of individual violation records to identify and delete duplicate violations, which could occur if a company reported a unique violation on multiple CRD reports or if there was a merger or acquisition.

Because the initial population of firms was drawn from the EEO-1 data, firms that existed in the EEO-1 data were active during all reported years. I therefore assigned zero for violation values for years where sex composition data were present in EEO-1 data but did not have corresponding FINRA data. There were 203 FINRA violations that did not match back to sex composition data in the appropriate year. These unmatched observations were sorted by firm, and any firm that had four or more unmatched observations were investigated manually using FINRA records and news reports. Publicly documented firm acquisitions and mergers accounted for 112 of these unmatched cases, and these observations were reassigned (and added to the existing year's violation data if necessary) to the appropriate firm in those years. The remaining 91 observations were dropped.

Because I anticipated a delay between the initial violation and the year of the violation decision, I pulled a random sample of 500 violations and assessed the average length of time between the year a violation was documented to have occurred (if information was available) and the year of the violation decision. I found an average delay of two years. I then populated a database with each violation involving each firm in my EEO-1 sample from 2007 to 2017. This two-year lag was used to accommodate the appropriate matching of EEO-1 and FINRA data that reflected the sex composition of an establishment at the time a violation took place.

Because FINRA violations are reported at the firm level, I created a collapsed FINRA dataset at the firm-level, with variables for the total number of violations and total amount of fines for each firm, and then merged EEO-1 and FINRA data using headquarter number and year identifiers. Data were then were disaggregated back to the establishment-level to preserve the establishment-level sex composition data. Analyzing composition at the establishment level enables a deeper analysis of how variance in sex composition affects violations, as compositional dynamics occur at the establishment rather than firm level (Hirsh and Cha 2017).

Measures

Dependent Variable

The dependent variable is the number of reported violations a company was found to be at fault for by FINRA. There are 9,951 establishment-year violations, with a mean of 15.27 and standard deviation of 21.53. The dependent variable is measured annually, at an interval of two years after the independent variables. This was done to account for the average length of time it takes for a violation to be reported and decided upon.

Key Independent Variables

To test the hypotheses concerning whether the presence of women in key positions in finance firms affects decisions around risk I use the following compositional measures:

Percentage of women in professional positions

Using EEO-1 job categories, the percentage of women who work as professional occupations at an establishment is the main independent variable. I included the sales occupational category, as their role within finance firms fits the standard definition of professionals within an organization (Davis 1996; Witz 1992). Occupations that are designated under the sales and professional category include positions involved in on-the-ground decisions of adherence to regulation and policy and the day-to-day decision-making around risk. Occupations in the professional designation include compliance officers, financial analysts, personal financial advisors, financial examiners, and financial specialists. Occupations in the sales designation include securities, commodities, and financial services sales agents.

Percentage of women in management

Using EEO-1 job categories, the percentage of women who work in management at an establishment is the main independent variable.

Percentage of women in senior and mid management

Beginning in 2007, the EEO-1 reports differentiate between senior and mid levels of management. For the second model, I use the percentage of women who work in senior and mid-level management at an establishment as independent variables to test the second and third hypotheses.

Categorical Measurements for Sex Composition

In the third model, I created a series of three dummy variables for each occupational category of interest (professional, mid-management, and senior management) to measure the effect women have in token, skewed and balanced representation at an establishment (Kanter 1977). These measurements range from 0 to 15 percent (token), 15 to 30 percent (skewed), and 30 percent and over (more balanced). I use the token category as the referent.

Control Variables

I also included a variety of control variables in all models. To control for the establishment-level variation in sex composition, I include a measurement of the percentage of women employed in all other occupational categories at the establishment level. Percentage of women in the local labour market is a variable that accounts for the annual and regional percentage of women employed in the North American Industry Classification System code for the securities sub-industry (NAICS 523) in each of the regional areas (North-Eastern, Southern, Mid-Western, and Western). This controls for the possibility of regional variation in sex composition due to the gender composition of local labour markets. Establishment size is the annual establishment size based on the number of employees at each subsidiary establishment as an organizational control, since workforce size inevitably affects composition. Firm size is the annual firm size based on the number of total employees of all subsidiaries of the same parent firm, to control for the possibility that the number of violations a firm has may vary depending on its size. I also included a series of dummy variables for region (North-East, South, Mid-West, and West), and used the Mid-West as the excluded referent to control for regional differences in where finance firms are primarily located. Finally, I also included a series of dummy binary variables for year, omitting 2005 as the referent in the first model and 2007 in the second and third models, to capture temporal changes that could affect number of violations, and are not specific to a particular establishment, such as changes in federal regulation[4].

Methods

I performed a series of three negative binomial regression models to assess the impact of sex composition of finance professional occupations and management, net of other organizational, sector, and regional factors, on the subsequent changes in the number of violations. The first model includes the percentage of women in professional positions and management as the main independent variables, the second model includes the percentage of women in professional positions and in mid and senior-level management as the main independent variables, and the third model includes categorical occupational composition measures for professionals and mid and senior level management. I use fixed effects for establishments to account for unobservable and stable characteristics of establishments that

[4] Federal regulations are often enacted in response to financial crises, when areas or procedures are deemed in-need of increased regulation. The most recent example of this is the Dodd-Frank Wall Street Reform and Consumer Protection Act, which was passed in 2010. Dodd-Frank is intended to address failures in the regulatory system which partially led to the 2008 financial crisis. It includes measures to prevent predatory mortgage lending, proprietary trading, the expansion of protections to whistleblowers, and the establishment of a federal Office of Credit Ratings. Because increased regulation may result in corresponding increases in violations, including years in the model allows for these potential fluctuations to be accounted for.

cannot be effectively measured, such as organizational culture. This enables me to isolate the effect of sex composition of these occupations on the variation in violations within-establishment over time, which provides a stringent test of my hypotheses.

Fixed effects require longitudinal unit-level data and variation over time within each unit. For the first model, observations for establishments that had only one year of data (214) and establishments that received zero violations over the ten year period (2,086)[5] were therefore excluded from analysis. The first regression model includes data on 967 establishments from 2005 to 2015, resulting in a total of 7,070 observations. For the second model, only observations where disaggregated management categories were reported for management were included. Establishments that had only one year of data (140) and establishments that received zero violations over the ten year period (1,471) were again excluded from analysis. The second regression model includes data on 456 establishments from 2007 to 2015, resulting in a total of 2,819 observations. For the third model, I used categorical measures for professionals and disaggregated management categories. Observations for establishments that had only one year of data (140) and establishments that received zero violations over the ten year period (1,471) were excluded from analysis. The third regression model includes data on 456 establishments from 2007 to 2015, resulting in a total of 2,819 observations.

3.5. Results

Descriptives

[5] These models predict the number of violations among those establishments that experienced violations over this ten year period. While it is not ideal, I have had to exclude cases with no variation over the 10 year time period, because fixed effects requires variation.

The mean number of violations is 15, with a standard deviation of 21.53. The mean average of women who work in sales and professional positions is 30.1 percent, with a standard deviation of 16.23[6]. The mean of women in the combined management category is 34 percent, with a standard deviation of 22.41. Mid-level and senior level management categories were reported separately from 2007 onwards. The mean average for women in mid management was 38 percent with a standard deviation of 22.41 and the average for women in senior management positions is 18 percent with a standard deviation of 23.56. The mean of women in all other occupational categories is 54 percent, with a standard deviation of 21.83. All occupational categories had a range of 0 to 100 percent. The mean percentage of women in local labour markets was 41.25, with a standard deviation of 4.85, and a range of 29 to 70 percent. The average establishment size was 321, with a range of 0 to 21,976, and a standard deviation of 805.94 and the average firm size was 10,232 with a range of 0 to 35,221 employees.

Fixed Effects Regression Analysis

In this section, I provide an analysis of the impact of sex composition for each of the three regression models, net of other organizational, sector, and regional factors, on the subsequent changes in the number of violations. Since negative binomial regression requires a logarithm link function, coefficients of most interest in the models are exponentiated and converted to percentage change measures ((exp(B)-1)*100) to facilitate meaningful interpretation. The first model examines the impact of percentage of women who work in professional positions and the combined management category, the second model examines the impact of percentage of women who work in professional positions and the disaggregated

[6] EEO-1 data protocol prohibits the reporting of range statistics.

management category, and the third model examines both of these as categorical compositional measures. I will discuss models 1 and 2 first, and then turn to model 3.

Table 3.1 - Sex Composition Models - Fixed Effects Negative Binomial Regression Analysis

	Model 1	Model 2
% Female Professional	-.002*	-.02***
% Female Management	.003***	-
% Female Mid-Management	-	.001**
% Female Senior Management	-	-0.0003
Firm Size	.002***	.005***
Establishment Size	-0.004	-.016***
% Female in all other occupational categories	-.003***	.003**
% Female in local labour market	0.003	.01┼
2006	.62***	-
2007	1.08***	-
2008	0.05	-.45***
2009	-.15**	-.53***
2010	.89***	-.08┼
2011	.82***	-.35***
2012	1.01***	-0.004
2013	1.03***	-0.02
2014	.81***	-.22***
2015	0.09	-1.05***
Region - North-East	0.06	-0.19
Region – South	-.35***	0.10
Region – West	.12┼	.36*
	N = 7,070	N = 2,819

*Note: ┼p<.10, *p<.05, **p<.01, ***p.001*

Percentage of women in professional and management positions

In Model 1, shown in the first column of Table 3.1, the percentage of women in professional positions shows a significant ($p < .05$) negative effect on the number of violations an establishment receives. Every percentage increase in the number of women employed in professional occupations at an establishment is associated with a 1% decrease *(*exp β(-.002)=.99) in the expected number of violations, holding constant all other variables in the model. This indicates that the number of women employed in these occupations does lead to a significant decrease in negative risk outcomes. Conversely, the percentage of women in management positions shows a significant ($p<.01$) positive effect on the number of violations an establishment receives. Every percentage increase in the number of women employed in management at an establishment is associated with an 0.3% increase *(*exp β(.003)=1.003) in expected number of violations, holding constant all other variables in the model. This indicates that the number of women employed in management positions leads to a significant increase in negative risk outcomes. This result would support the expectation that women in management may self-select or conform to gendered expectations of these male-typed positions. It is not necessarily adding more women to a firm that can lead to reduced criminal violations, but instead women in professional occupations that does.

Several of the control variables also have significant effects. Having more women employed overall at the establishment level has a significant negative impact on the number of violations an establishment receives. Firm size also has a significant positive effect on the number of violations an establishment has - not a surprising finding, given larger firms will likely have higher volumes of transactions and garner greater regulatory attention. Most years are positive and significant, indicating that when compared to the 2005 referent, there are significantly more violations through 2006 to 2015. The regional dummy variables indicate finance establishments in the South have significantly fewer violations than the Mid-West referent. The percentage of women in the local labour market and the establishment size do not have any significant effect on the number of violations an establishment receives.

Percentage of women in professional and disaggregated management positions

In Model 2, shown in the second column of Table 3.1, I provide the results of the women in professional occupations, and in disaggregated management categories that are available from 2007 onwards. This model gives us the opportunity to parse out any differential effects that women have in mid or senior level management. The percentage of women in professional positions still shows a significant ($p < .01$) negative effect on the number of violations an establishment receives. Every percentage increase in the number of women employed in professional occupations at an establishment is associated with a 2% decrease (exp β(-.02)=.98) in expected number of violations, holding constant all other variables in the model. The percentage of women in mid-management has a significant ($p < .05$) positive effect on the number of violations an establishment receives. Every percentage increase in the number of women employed in mid-management is associated with an increase of 0.1 % (exp β(.001)=1.001) in expected number of violations, holding constant all other variables in the model. Interestingly, when we look at the effect that women in senior management have on the associated number of violations, these results are not significant. This could indicate that women in mid-level management are driving the increase in the associated number of violations an establishment receives.

Several of the control variables also have significant effects. Having more women employed overall at the establishment level has a significant negative impact on the number of violations an establishment receives. Firm size has a significant positive effect on the number of violations an establishment has. Most years are negative and significant, indicating that when compared to the 2007 referent, there are significantly fewer violations in 2008 to 2015, with the exceptions of 2012 and 2013. The regional dummy variables indicate finance establishments in the West have significantly more violations than the Mid-West referent. The percentage of women in the local labour market have a marginally significant ($p < .10$) positive effect on number of violations.

Table 3.2 - Sex Composition Model -
Fixed Effects Negative Binomial Regression Analysis: Categorical Independent Variable

	Model 3
Female Professional (15-30%)	-.096*
Female Professional (30% and up)	-.43***
% Female Mid-Management (15-30%)	0.003
% Female Mid-Management (30% and up)	.08┼
% Female Senior Management (15-30%)	-0.02
% Female Senior Management (30% and up)	-.08*
Firm Size	.005***
Establishment Size	-.016***
% Female in all other occupational categories	.003**
% Female in local labour market	.01┼
2008	-.447***
2009	-.52***
2010	-0.07
2011	.34***
2012	0.005

2013	-0.01
2014	-.22***
2015	-1.05***
Region - North-East	-.22┼
Region – South	-0.13
Region – West	.32*
	N = 2,819

*Note: ┼p<.10, *p<.05, **p<.01, ***p.001*

In Model 3, shown in Table 3.2, I use categorical compositional measurements to assess the impact of tokenism and more balanced representation in professional occupations and mid and senior management on risk outcomes. When women are represented in more substantial proportions in professional occupations, they have an incrementally larger negative effect on risk outcomes. Compared with the token representative referent (0 to 15%), having more women in professional occupations has a significant, negative impact on the number of violations. When women represent between 15 to 30 percent of professionals in an establishment, there is a 9% (exp β(-.096.)=.91) decrease in the number of violations ($p < .05$) as compared to less than 15% representation. When women represent over 30 percent of professionals in an establishment (N=402), there is a 35% (exp β(-.43)=.65) decrease in the number of violations ($p < .01$), when compared to establishments with less than 15% representation (N=307). Substantively, the more women who work in professional positions at an establishment, the fewer violations a firm receives, especially when represented in more balanced proportions.

Interestingly when we look at the sex compositional effects of mid and senior management, we see diverging effects. Compared with the 0 to 15% representative referent category, when women represent 30% or more of middle managers, there is a marginally significant ($p = .11$) positive increase of an establishment's number of violations. However, when women occupy more than 30% of the senior management category, when compared to the 0 to 15% representative referent category, there is a significant ($p < .05$) decrease of 8% *(*exp $\beta(.08)=.92$) in the number of establishments' violations. Substantively, this suggests that the increase in violations that is associated with the aggregated management category is driven by women in mid-level management. These results indicate that women in senior management can have a similar effect as when women are represented in professional positions, especially when they exist in more substantial ratios. Clearly, an occupation's sex composition ratio is an important factor to consider when we try to understand these effects on risk outcomes.

Several of the control variables have significant effects in this model. Having more women employed overall at the establishment level has a significant positive impact on the number of violations an establishment receives. Firm size again has a significant positive effect on the number of violations an establishment receives, whereas establishment size has significant negative effect on the number of violations. Years vary in effect and significance. When compared to the 2007 referent, 2008 and 2011 are positive and significant, and 2009, 2014, and 2015 are negative and significant. These results provide a nuanced overview of the effect of women in professional occupations and management, and suggest that non-token representation may be an important factor in understanding their different effects on risk outcomes. In all models, increasing the presence of women in professional positions is associated with a decrease in the expected total number of violations an establishment receives, and this is especially the case when women occupy more than 30 percent of the professionals at an establishment.

Although initial analysis in the first model indicates that while women in management have a positive effect on the number of violations an establishment receives, the second and third models tell a more nuanced story. It appears that women in middle management are driving this relationship, and having women in substantial proportions in senior management may actually lead to a decrease in violations. The implications of these findings are discussed in the next section.

3.6. Postestimation and Robustness Analysis

To facilitate interpretation of the estimates given by the regression equations, I calculated the predicted number of annual violations, by percentage of women in professional and management positions, given by the models. All other covariates are held at their means.

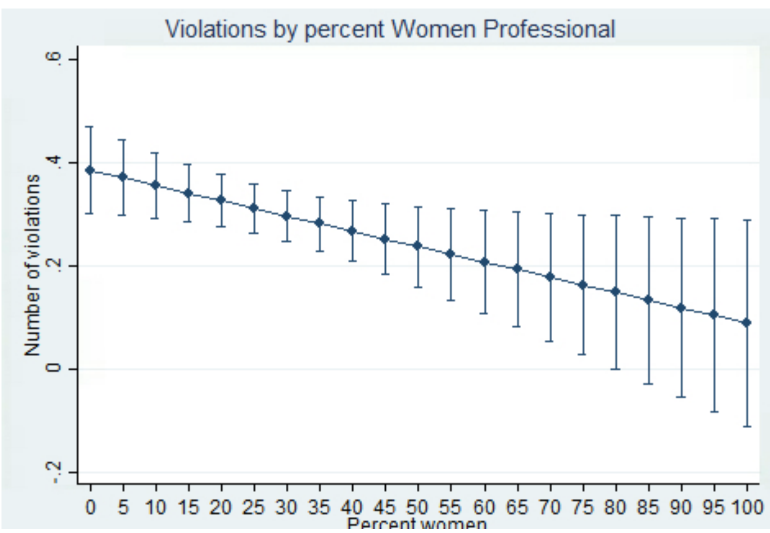

Figure 3.1
Predicted number of annual violations, by percent women professionals

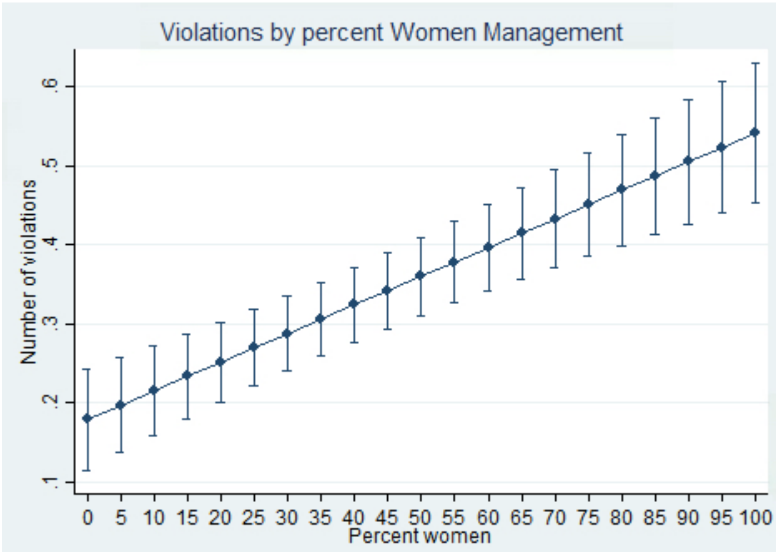

Figure 3.2
Predicted number of annual violations, by percent women managers

Note: The predicted number of violations in both figures 3.1 and 3.2 and are predicted based on estimates of Model 1 in Table 3.1, with all of the controls set at their means.

Although the effect of sex composition on violations may seem relatively small, when considering the high bar for the level of violation detection and the cumulative effect over time, the findings are more compelling. In Figure 3.1, we can see the predicted number of violations at various levels of percent women professionals. Establishments that have relatively low levels (15%) of women employed in professional occupations have .34 violations per year, while those with balanced composition (50%) have .23 violations per year. Over a 10 year period, establishments with balanced sex composition for professionals are expected to have 1.1 fewer violations than those with skewed sex composition. Conversely, when we examine the effect of establishments' sex composition of managers in Figure 3.2 on the expected number of violations, we see more women in these positions is associated with an increase in the expected number of violations. Establishments that have relatively low levels (15%) of women employed in management have have .23 expected annual violations. We can compare this with establishments with more balanced sex composition in their managerial ranks. Organizations with 50% women in management have .36 expected annual violations. Over a 10 year period, establishments with 50% women managers have 1.3 more violations than establishments with 15% women managers.

Due to erosion of reporting requirements and the nature of a self-regulating industry that largely depends on internal policing and whistleblowers, regulatory violations likely represent only a fraction of violations that actually take place. These estimates therefore likely underestimate the extent of risk behaviour outcomes.

Various additional analyses and robustness checks were run to assess the validity of the data and robustness of the models. First, I explored models using various lag functions. The two year lag between EEO-1 and FINRA data was chosen based on the preliminary analysis of a random sample of 500 FINRA violations, to assess when a violation occurred and when it was documented in FINRA records. The two-year lag was used to accommodate the appropriate matching of EEO-1 and FINRA data that reflected the sex composition of an establishment when a violation took place. When EEO-1 and FINRA data were matched to equivalent year (which was possible for 2007-2015) and with a one year lag, similar findings in the same direction occurred, but with stronger significance and higher coefficient values. Second, given the association among gender compositional measures, multicollinearity is a concern. However, all of the variance inflation factors indicated low collinearity in all three models.

Although both Poisson and negative binomial models are appropriate for count data and show similar results, I present the negative binomial model results as the main models for this analysis. Count data are often overdispersed, where the variance of the dependent variable exceeds the mean (Ismail and Remain 2007; Cameron and Trivedi 2009). An assumption of Poisson regression is that mean and variance are roughly equal. This was the case with these data, where the conditional mean is 15.27 and the conditional variance is 21.53. Negative binomial distribution has the same mean structure as Poisson, but with an extra parameter that models overdispersion, which allows the variance to exceed the mean. I also compared the quality and fit of each model and both BIC and AIC favoured the negative binomial model.

3.7. Discussion

This study benefits from two unique datasets that allow me to evaluate the effect of establishment-level occupational sex composition data on number of documented violations of finance regulations and laws. Although my data do not allow me to directly observe risk behaviour, the results suggest that the sex composition of different occupations within finance firms seem to have an impact on negative risk outcomes. The Lehman Sisters' hypothesis suggests that employing more women in the sex-segregated finance sector would create better risk outcomes for finance firms. At the heart of this hypothesis is the belief that women handle risk differently than men. Research has shown, however, that risk behaviour are not necessarily inherent to individuals, but that an organization's structure and culture influences how individuals behave within them (Acker 1990; Ely and Meyerson 2010; Martin 2006). I find support for the hypothesis that an increase of women in professional positions and senior management has an overall negative effect on the expected number of risks taken, and this is especially the case when sex composition exists in more balanced proportions (Kanter 1976). However, I also find that this isn't the case in all occupations: more women in mid-management is associated with an increase in violations. These results find support for the Lehman Sisters' hypothesis, but they also indicate that the balance of sex composition and different occupations are also important factors in risk outcomes.

Some research has found that, on average, women make better decisions and have better outcomes around risk (van Staveren 2014; Apicella et al. 2008; Dwyer et al 2002; Eckel & Grossman 2002; Croson & Gneezy 2009; Niederle & Vesterlund 2007; Jianakoplos & Bernasek 1998), but the story is more complicated when we look at the effect of sex composition on negative risk outcomes in finance firms. How can we explain that more women in middle management are associated with an increase in negative risk outcomes whereas more women in professional occupations and senior management are associated with a decrease? I first discuss the findings for professionals and senior management and then turn to the relationship between sex composition in middle management and risk.

In gendered cultures, how one approaches risk can become shorthand for how one successfully performs as a (gendered) ideal worker (Acker 1990) or an appropriate (gendered) cultural fit (Rivera 2012). When behaviour take place within a gendered culture, the ways that individuals do gender can become conflated as markers of competency for doing a job well (Ely and Meyerson 2010). Part of doing masculinity in male-dominated gendered organizations is tied to how one approaches risk, often in ways that prioritize bravado and unmerited confidence over measured consideration (Courtenay 2000; Paap 2006; Mullen 2004; Messing et al 2004; Collinson and Hearn 1994; Ely and Meyerson 2010; Connell 2005). In finance, where measured and considered approaches to risk are necessary for the best possible outcome, gendered organizational culture may impede this.

I argue that when women exist in proportions that exceed token or minority status (Kanter 1976), at least within senior management and professional occupations in Securities firms, this has the potential to undo the impact of gendered culture on risk outcomes. Having more women in professional occupations overall has an incremental negative impact on risk outcomes; the more women that are employed within these positions, the fewer violations a firm is likely to receive. Interestingly, I find that although women in any proportion in professional occupations have a negative effect on risk outcomes, the greatest impact is when women exist in more balanced proportions (over 30 percent). I find the same is true for the compositional effect of women in senior management. Although I can't directly observe the risk behaviour that lead to these different outcomes, this suggests that composition affects culture. It likely isn't the aggregated effects of individual women's decisions that change risk outcomes, but for professional occupations and senior management, there is a compositional tipping point that shifts a firm's culture away from reckless risk taking and towards a more considered approach to risk. As women's representation in these occupations increases, it could have the effect of neutralizing the gendered culture that can impede measured approaches to risk. As how individuals approach risk is distanced from conflations with gender, it might free individuals to rely on occupational logic and expertise instead, not just for women, but for all professionals and senior managers. In effect, sex composition can influence culture in meaningful ways, but this might be especially the case in occupations that have insulating professional identities and higher status.

Some occupations are more insulated from dominant organizational norms than others. Professionals are highly skilled and have extensive competence in their field of expertise (Davis

1996; Witz 1992; de Bruijn 2012), and are socialized both within and external to an organization. Although they are embedded within specific firms, they are certified by external bodies and are often members of associations that have professional codes and expectations which govern behaviour and ethics (de Bruijn 2012). Professionals often have greater flexibility and freedom to carry out their objectives in an autonomous fashion (Tremlay and Genin 2010; Bailyn 1985). Although professionals may still successfully internalize aspects of a firm's organizational culture, it is this autonomy that may insulate professionals from dominant pressures of workplace culture. This may be especially compounded in gendered organizational cultures where gender might also be undone by more balanced sex composition. Senior management is arguably insulated from dominant organizational culture as well, but in a different way. Although gendered work expectations remain strong for managers (Knights and Tullberg 2012), women who occupy senior positions have greater immunity to ramifications for not abiding by organizational norms. Cohen and Huffman (2007) find that it is not just the presence of women in management that can undo gender in organizations, but rather it is their status and position in the management hierarchy that matters. High-status, senior management are more likely to have the institutional power to undo an organizations' gendered culture. My results find that women in senior management are associated with a decrease in risk outcomes, but only when they are represented in proportions greater than 30 percent, indicating that it is likely both status *and* composition of senior management that are associated with changes in risk outcomes.

The finding that increasing women in professional positions and senior management is associated with better risk outcomes is important for several reasons. First, these unique datasets have provided the first opportunity to directly test the Lehman Sisters' hypothesis *within* finance companies: something that has not been done as of yet in a wide-spread, systematic way. The findings show that increasing women in key occupations within these firms is associated with a decrease in negative risk outcomes, providing further evidence that desegregating these occupations is advantageous. Secondly, these finding lend support to Kanter's theory of structural influence on behaviour. Rather than risk-behaviour being inherent to men or women as individuals, group dynamics in more balanced compositional structures can lead to more nuanced and balanced approaches to risk. When women gain meaningful representation in senior management, the consequences of tokenism (emphasized difference, increased scrutiny, and over conformity to cultural norms) may decrease, allowing for the possibility for a deeper integration and normalization of diverse approaches and ideas (Kanter 1977). This has important implications for how organizations should approach sex integration. Rather than an 'add gender and stir' approach, organizations should work to create compositional diversity in balanced and more meaningful proportions. Lastly, these results highlight how professional autonomy might be an effective strategy to undo gender in organizations. Are women in these positions less constrained by organizational culture and more free to do gender (and risk) in ways that are more in line with gendered behaviour we would expect to see outside the organization? Could external processes of professionalization offer protection from the constraining effects of internal gendered cultures in other ways? Further research should be conducted that explores this mechanism as a potential piece that could help undo gender within organizations.

How can we make sense of the finding in the second model, that more women in middle management may be associated with more negative risk outcomes? Because my research design allows me to control for organizational culture, I suggest these results highlight how the process of acculturation can vary by different occupations within the same organization. Management remains a male-dominated and culturally male-typed occupation, subjected to gendered assessments that are conflated with competency (Knights and Tullberg 2012; Bobbitt- Zeher 2011; Jamieson 1995; Oakley 2000). Women in mid-level management do not have the same resources, status, or prestige as they would in a senior management position, and occupy a more tenuous position within the organization. Research that has compared internal labour markets in different sectors has found that the financial services sector has a higher prevalence of internal promotions and longer career paths than most other industries (Eriksson and Werwatz 2004). Women in mid-level management may feel more pressure and be more constrained by the gendered culture and gendered occupational expectations in order to receive more favourable evaluations and to have a greater potential to be promoted within their company. In an occupation that is so closely associated with gendered assessments of competency, and is a rung down from senior management on the institutional status ladder, women in middle management may be more likely to engage in gender-monitoring practices that aim to minimize assumed gender differences. How one does risk can be a demonstrative way to perform gender, and taking reckless risks may in turn signal appropriate cultural fit and willingness to conform (Kerfoot and Knight 1993; McDowell 1997; Oakley 2000). Women in mid-management may over conform to gendered cultural norms around risk behaviour to avoid increased scrutiny. Although internal hiring pools mean senior-level managers were likely promoted from mid-management, senior-level managers' access to organizational power and legitimacy may provide insulation from organizational cultural pressures which are otherwise gendered.

The findings of these analyses highlight the nuances of sex composition and its effects on culture, and tell us that gender equity is far from a silver-bullet solution when it comes to risk outcomes. However, they also point to the important role that sex composition can have on risk outcomes, and point to potentially important role of autonomy and status when it comes to undoing gendered organizational culture.

3.8. Conclusion

Many people have speculated different reasons for the global financial crash. The Lehman Sisters' hypothesis seeks to shed light on the root causes of how and why risk is approached. Backed by an arsenal of evidence that suggests that on an an individual level, women make more responsible decisions around risk, use more information to make those decisions, and are generally more successful in their evaluations, the evidence seems to lend support to this hypothesis. However, rather than an aggregated effect of many individual women, the different occupational findings remind us that an organization is more complex than the sum of its parts. To undo gender in an organization, we must move beyond token diversity, but also strive to find avenues that give oxygen to autonomous professional expertise that overcomes the limitations of the gendered cultural status-quo, and to support women who occupy more precarious positions, such as middle management, on the occupational hierarchy.

Hiring more women into key positions in finance firms seems a prudent step towards achieving not just more stable economic markets, but greater gender equity as well. Future research should focus on the role of strategic and operational autonomy as a potential insulating factor for how individuals are affected by the gendered structures and culture they are embedded within in an organization. More work should also be done to understand the effect that women in senior-level management have on risk outcomes, the pressures that women in middle-management face with regard to carrying out risk behaviour. Qualitative work in both these veins would help shed light on how gendered organizational culture can be undone through professionalization, and what compositional factors are most effective at doing so.

CHAPTER 4 - RACE COMPOSITION, DECISION MAKING, AND RISK IN THE FINANCE SECTOR

Recent scholarship has focused on the effect that diversity has on risk outcomes in financial firms (Van Staveren 2014; Lenard et al 2014; Maxfield et al 2010; Erhardt et al 2003;). Although most of this work has focused on sex composition, empirical studies have suggested race composition is another important factor to consider. The effect of compositional diversity on decision-making processes in work organizations is unclear. We know that under some conditions, group diversity enhances the process of decision-making and improves outcomes; however, others have found that diverse groups can negatively influence group decision-making or have no effect whatsoever (Phillips and Loyd 2003; Galinsky et al 2015; van Knippenberg and Schippers 2007; Jackson Joshi and Erhardt 2003). The conflicting evidence is due, at least in part, to the fact that the effects of compositional diversity on decision-making are difficult to observe and measure, but also because cultural context plays an important mitigating role. To isolate the effect that compositional diversity might have on decision outcomes, we must also account for variation in cultural context. Racial diversity has been found to enhance the decision-making capacity of groups, but how racial diversity affects risk decisions in finance firms has not been fully explored.

In this chapter, I first review the divergent literature on the impact of diverse groups on the decision making process, then explore the challenges in evaluating the effect of compositional diversity on the outcomes of group decisions, and introduce the case of the Securities industry. I seek to answer the question of how racial diversity affects decision-making around financial risk, net of cultural or industry influence. The professional ranks of the

Securities sector is largely homogenous in its racial composition however, there is some variation across establishments. In the Securities sector, where professional and sales employees engage in active assessments of risk decisions, does racial diversity among the professional and managerial ranks affect risk outcomes?

In an effort to evaluate the relationship between compositional diversity and decision-making with respect to risk, while controlling for structural and cultural effects, I present a fixed-effects analysis of the impact of racial diversity on firms' financial wrongdoing. Ultimately, I find that firms with greater racial diversity in professional occupations have better decision-making outcomes around financial risk. This is true when controlling for organizational context and industry norms, suggesting that the racial diversity of professional occupations has a positive effect on decision-making, regardless of cultural context. Conversely, I find that firms with increased racial diversity in their management ranks have worse decision-making outcomes around financial risk. The implications of these findings are discussed.

4.1. Diversity, Decision-Making, and Measuring Outcomes

Defining Diversity in Organizations

How we understand, define, and measure diversity has important implications for making sense of the conflicting findings in the literature. Organizational researchers differentiate between surface and deep level diversity (Harrison Price and Bell 1998). Surface level diversity are the social categories or compositional data that many organizations rely on as indicators of diversity. They are generally agreed-upon and usually apparent and measurable characteristics which are assumed to be valid markers of diversity, including age, sex, race, and ethnicity (Jackson Stone Alvarez 1992). Most organizations use race and sex composition data to evaluate the diversity of their workforce (Kling et al 1999; Konrad et al 2000; Roberson and Block 2001). These categories can be useful because they may be associated with differences in task-relevant knowledge and experience (Tsui and O'Reilly 1989), such that groups with surface-level diversity may have unique "constellations" of different experiences and perspectives, and therefore can provide an expanded knowledge pool (Phillips et al. 2006). Research has tended to homogenize non-white populations into single categories for analysis, and composition data that offers more detailed population data is hard to come by (Richard 2000). Because of this, researchers who look at racial effects of composition on diversity at the firm or industry level have more often relied on these homogenized measures. Although there are drawbacks to homogenizing the impacts of specific populations on decision-making as individuals, research has found that diverse groups may perform better than homogenous groups, and that this may be due to the dynamics of diverse groups. Diverse groups have been found to deliberate more thoroughly than homogenous groups, indicating diversity improves team performance, and may not stem solely from individual contributions (Galinsky et al 2017; Sommers 2006). The diversity of task-relevant information that group members hold results in "group informational elaboration", where group members have the potential to exchange, discuss, and synthesize pooled knowledge resources (van Knippenberg et al 2004), and diverse groups can use this as an important resource to achieve better results (De Dreu et al 2008). Surface-level compositional diversity, then, serves as a marker for the potential for a deeper knowledge pool of task-relevant information and perspectives, which can result in more thorough decision making outcomes.

Deep level diversity refers to attributes that are less salient and measurable but can be related to surface level characteristics. Measurements include attitudes, opinions, information and values which may or may not be connected to an individuals' social category (Phillips and Loyd 2006).

Ascribed social categories can result in different personal experiences that affect how individuals from a given social group make decisions, innovate, and think, and therefore can be helpful in promoting deeper and more complex thinking and information processing (Galinsky et al, 2015). Although surface-level characteristics of diversity are most apparent, deep-level characteristics are not immediately obvious, and can take time to become apparent in groups. Researchers commonly assume and leverage the connection between surface-level diversity and deep-level characteristics to evaluate how group diversity affects group outcomes. Ascribed social categories influence experiences, and are therefore also likely to influence attitudes, values, and information. For example, individuals from different racial groups likely have different life experiences, rooted in different experiences with institutions, advantage, and privilege, which inform different deep level characteristics (Richard 2000). To be sure, there are drawbacks for using surface-level diversity measures as proxies for deep-level characteristics, but this trade-off has been widely made to study the effects of diversity on decision-making outcomes at the firm-level (Richard 2000). Although individual contributions that stem from deep-level characteristics is one way that diversity impacts decision-making, diverse group members also shift interpersonal dynamics, and can effect how all members of a group function and contribute.

Diversity as an Asset

There is evidence that suggests under the right conditions, decisions made by diverse groups result in better outcomes than those made by homogenous groups. This happens in two ways. Diversity can enhance the number of perspectives available that inform a decision-making process, facilitating the exchange of diverse information; and diversity has the potential to improve group functioning by encouraging more preparation, creativity, complex thinking and more thorough deliberation. I will discuss each in turn.

First, diversity can improve decision making by offering diverse perspectives, information, and exchange. Research on homogenous groups show they can lack a variety of experiences that could otherwise provide an array of perspectives and novel approaches towards problem-solving, and are susceptible to groupthink processes (Galinsky et al 2017). Groupthink is the process whereby homogenous groups engage in consensus seeking behaviour that detract from a groups' ability to include and evaluate alternative perspectives that might otherwise result in alternative and more well-informed decisions (Janis 1982). Groupthink is especially prominent in groups with homogenous composition, high levels of social cohesion, overly directive leadership, and a lack of methodical procedures towards decision making (Janis 1982). Research has shown individuals and homogenous groups can suffer from confirmation bias, with a preference towards information that supports rather than disconfirms an original perspective. Schulz-Hardt and his colleagues (2000) looked at confirmation bias in racially diverse and homogenous groups. They recruited 200 students to evaluate an economic case study and asked participants to recommend whether a company should make an investment or not. Individuals were asked to read the case study and make a decision individually, and were then asked to deliberate with either a racially homogenous or heterogeneous group and reach a decision. They found that homogenous groups showed a stronger preference for confirmatory evidence to make their decision compared to diverse groups with at least 2 minority members. Groups may seek out biased information when making decisions driven by a desire to maintain social cohesion (Janis 1982). Groups that are made up of individuals with similar initial opinions tend to be more confident about their decisions regardless of merit in this assessment, and underestimate the risk of their decisions when compared to heterogeneous groups (Frey Schulz-Hardt and Stahlberg 2013). Because of these shortcomings, many have advocated that there is a business case for increasing racial diversity in organizations. In his 2009 analysis of over 500 for-profit businesses in the United States, Herring (2009) found firms with higher levels of racial diversity had higher sales revenues, served more customers, and had a higher percentage of the market share, net of controls. Under the right conditions, the evidence suggests that enhanced diversity in organizations can improve decision-making processes and outcomes. This is an especially important concern in investment contexts, where rational evaluations around risk require a thorough and measured decision-making process (Bénabou 2012; see also Scharff 2005).

A diversity of perspectives can enhance problem-solving. Demographic diversity has been shown to increase creativity and innovation, expand network connections, and promote higher quality decisions (Bantel and Jackson 1989; Page 2007). McLeod and her colleagues (1996) asked both racially-diverse and racially-homogenous groups to brainstorm ideas for promoting tourism in the United States. Both the number and quality of ideas of racially-diverse groups were rated superior to those of racially homogenous groups by naïve coders. More recently, Phillips, Northcraft, and Neale (2006) found similar patterns in racially diverse teams. In their experiment with 216 business students, they had participants engage in a group decision-making exercise. Individuals were given information about a theoretical crime, and were then put in same-sex groups of three that were either all-white or racially diverse. They were asked to discuss relevant clues and information of the case, and come to a group conclusion. Researchers found that racially diverse groups triggered members' expectations of diverse opinions, and they included more unique information in their decision-making process. Similar benefits of racial diversity have been found in economic outcomes in field experiments. Levine and his colleagues (2014) proposed that price bubbles in the economy could be the related to a lack of diverse perspectives, and might be affected by racial homogeneity in the market. Price bubbles exist when brokers en-masse mismatch market prices with the true value of assets. Price bubbles can be seen as a failure of collective reasoning, because although traders work independently, they discuss, take cues, and act based on group-level information synthesis and coordination. When Levine and his colleagues (2014) compared fit between market prices and asset value in racially diverse and racially homogenous markets, they found that market prices fit true asset value 58% better in diverse markets. They conclude that price bubbles arise from the wider social context of decision making, and argue that in finance, diversity of groups disrupt conformity and encourage "friction" that triggers the consideration of more relevant factors.

Second, diversity can also improve group processes by encouraging *all* members to prepare more and engage in more complex thinking and deeper deliberation. Diverse groups engage in deeper information processing and more complex thinking than homogenous groups (Galinsky et al 2017). Sommers and his colleagues (2006) found that when deliberating, racially diverse groups discussed more information in more depth than in all-white groups. This was not only because black jury members brought up alternative perspectives, but because white members made fewer errors, indicating dominant group members' capacity for information processing and willingness to deliberate was enhanced in racially diverse groups. Other studies have similar findings that suggest white group members in racially diverse groups engage in more thorough preparation. In a later study, Sommers and his colleagues (2008) recruited 58 white college students to participate in discussions about race-relevant and race-neutral topics in either racially-diverse or all-white discussion groups. Participants were asked to read a short passage on either topic, and then perform a test for reading comprehension and factual retention. They found that when white participants expected to discuss a race-relevant topic in a racially diverse group, they performed better. The expectation of interacting with a racially diverse group when discussing race-relevant issues led white group members to engage in more thorough information processing. In another study, 112 business students were asked to compete a survey in which they were asked to imagine and reflect on being the dissenting member of either an interdisciplinary-diverse or disciplinary-homogenous group making a business decision. Although minority group members did not always feel included or able to voice a dissenting opinion, members from dominant groups that voiced disagreement in diverse group settings had more of an impact on coming to an alternative decision than when they were in homogenous groups (Phillips and Loyd 2006). This suggests that the benefits of diversity go beyond the insights of individual members alone, and instead provide an important context that sets the stage for more nuanced and informed decision-making by all group members.

Diversity as a Liability

Although the benefits of diversity have been widely noted, other work has found that diversity can have a detrimental effect or have no effect at all on group outcomes. As Milliken and Martins' early review (1996) of the literature suggests, diversity can be a "double-edged sword," providing opportunities for enhancing creativity but also increasing the likelihood for conflict, diminishing group cohesiveness (also see Skerry 2002;.Tsui et al 1992).

Other research on diversity and group outcomes have reached similar conclusions. In their meta-analysis of 35 peer-reviewed articles published on group-level diversity published between 1985 and 2006, Hortwitz and Horwitz (2007) found that while task-related diversity has a positive impact on team performance, they found no evidence of demographic diversity's effect on team performance. Williams and O'Reilly (1998) reviewed 83 empirical studies on diversity over a 40 year period and conclude that, although the body of literature is complex in how it defines both diversity and outcomes, without working to actively counteract the negative effect that diversity has on group functioning, it seems that it is more likely to impede rather than enhance group functioning. Another meta-analysis by Jackson and colleagues (2003) limited its review to composition diversity studies and naturalistic (rather than laboratory) studies between 1997 and 2002. They noted that of these studies, most use sex (34%), race (24%), or age (31%) as the diversity measure and that 43% of studies focused on a single surface-level demographic characteristic to characterize diversity. They acknowledge the complexity in making sense of an interdisciplinary literature that lacks unity in how diversity and outcomes are both defined and measured, and that often lacks the ability to control for contextual influences, such as culture and management strategy. They also note that diversity's effects on social processes are most often evaluated by self-reported measures, which may be influenced by affective reactions and possibly bias. van Dijk and his team (2012) performed a meta-analysis of 146 studies on the effect of demographic and task-related diversity on performance. Although initial findings show that demographic diversity appeared to lead to negative performance and outcomes, when they concentrated on studies that used objective outcome indicators, this finding disappeared. They suggest studies that rely on subjective ratings of performance or quality outcomes in diverse groups could suffer from implicit or explicit rater biases against diverse members, which could be another factor that has complicated the findings in the literature.

The results of these meta-analyses reinforce the complicated nature of both measuring diversity and possible outcomes. Most studies that have looked at team processes have focused on small groups, as this is where the effect is most readily observable (Horwitz and Horwitz 2007). Firm-level studies that look at the effects of diversity often rely on organizational performance, based on the assumption that social processes underly these outcomes (Jackson et al 2003; Herring 2009). The meta-analyses highlight the difficulty in reaching conclusions on the effect of diversity on performance. Among many difficulties noted, there is no uniform way that diversity is measured, and subjective outcomes may be unreliable indicators due to the potential of rater-bias.

The Importance of Mediating Factors

Evidence for how demographic diversity affects organizational outcomes is complicated, but most agree that the relationship between demographic diversity and group outcomes depends on the broader social context. Thus, to advance our understanding of how diversity affects decision making outcomes, we must account for the mediating role of cultural and structural factors (van Knippenberg, De Dreu and Homan 2004; van Dijk et al 2012; Ely and Thomas 2000; Richard 2000), and how these conditions may affect the behavior and interactions of diverse groups in work organizations.

As organizations are usually structured hierarchically, they award individuals from traditionally dominant groups' status and authority (Acker 1990; Elsass and Graves 1997). Without thoughtful interventions and deliberate attempts to alter the power relationships between dominant and minority groups, diverse group interactions are likely to be structured in the confines of these power dynamics (Pettigrew and Martin 1987; Elsass and Graves 1997). Input from women and people of colour are especially vulnerable to marginalization in organizations that have historically been structured and dominated by and for white men (Gutek 1985; Kanter 1977; Konrad et al. 1992; Tolbert et al 1995; Elsass and Graves 1997). Kanter's (1977) work on dynamics within corporate environments suggests that proportions of specific groups within a larger context disproportionately shape group dynamics. How an organization values diversity and how its values towards diversity are embedded in its culture and structure likely shape how diversity affects group processes around decision making and the resulting outcomes.

Organizational culture is a key mediative factor in whether diversity positively influences group outcomes. Chatman, Polzer, Barsade and Neale (1997) used a business simulation model with MBA students to evaluate how cultural context affected social interaction, conflict, productivity, and creativity in diverse groups. They found that the beneficial qualities of diverse groups are more likely to emerge in organizations that have collectivist rather than individualist cultures. Williams and O'Reilly (1998) also found that the negative effects of diversity can be reduced though reinforcing collective norms, emphasizing common goals, and increasing opportunities for individuals to increase familiarity with other group members.

In their 2001 study of three professional firms which frames three distinct firm orientations towards diversity, Ely and Thomas evaluated how these different orientations towards diversity affected work group functioning. The law firm they evaluated had what they called an “integration and learning” orientation and saw diversity as a resource central to better decision-making, which could be drawn on to enhance work processes and problem-solving capacity. The financial services firm they evaluated had an “access and legitimacy” orientation towards diversity, similar to the business case for diversity that is often championed in the business community (Cox 1993). This finance firm saw a diverse staff as capable of attracting and forging relationships with a diverse range of clients and networks. Finally, the consulting firm had a “discrimination and fairness” perspective, which viewed diversity as a worthy goal primarily for social justice and moral reasons.

Although all orientations motivated managers to diversify their staff, only the integration and learning perspective enhanced diverse work group functioning, and resulted in better group outcomes. Through interviews and observation, they identified how these three orientations affected quality of group relations, feelings of respect, and one’s perceived significance of their cultural identity. In the finance firm, which took a business-case rationale towards diversity, hierarchies within the company remained racially segregated and there were limited opportunities for cross-cultural exchange. The consulting firm which took a social-justice stance towards diversity had the least promising experience enhancing work group functioning through diversity. Somewhat paradoxically, the commitment to social justice meant race became a taboo topic, and issues that arose from this diversity could not be discussed openly. Not only did this mean racial diversity did not enhance work process, but it led to increased tension that impeded group functioning. In the integration and learning firm, cultural diversity was seen as a resource that was seen as core to its functioning. Underlying this philosophy is the assumption that one’s cultural identity results in different life experiences which in turn affect one's knowledge base and insights. These alternative perspectives can inform how to approach problems in potentially novel ways that a homogenous group could not likely have access to. In practice, groups members were encouraged to voice these differing points of view, and these were seen as crucial opportunities for cross-cultural learning for all group members, enhancing the problem-solving capacity of *all* group members. Although these relations sometimes meant there was more immediate friction, took more time, and sometimes more resources, it also meant team members worked and learned from one another, and ultimately led to outcomes that were enhanced by this. In contrast to the other firms, the composition of senior leadership was also intentionally changed to reflect the value the firm placed on diversity. The firm had made a concerted effort over a ten year period to ensure the hierarchal structure of the organization reflected the racial diversity they saw as central to their ability to succeed. Although the current debates around the benefits or drawbacks of diversity often focus on compositional measures, qualitative studies, such as Ely and Thomas', remind us that the potential benefits or liabilities of compositional diversity is undoubtedly affected by an organizations' cultural context.

Other cultural and structural factors are found to mediate the effect of diversity on outcomes. In an example specific to the finance sector, Richard (2000) examined the impact of firm- level racial diversity on firm performance. Using survey data on racial composition and firm-attitude towards diversity from 63 banks in the United States, he analyzed whether racial diversity affected firm performance, measured by asset growth over a 2-year period. Instead of finding a direct relationship between diversity and firm performance, he found that that business strategy moderated the relationship. In firms with no or negative growth, racial diversity had no effect on firm performance, but in firms with strong growth strategies, it had a positive effect. This indicates that it is not just the *presence* of diverse groups that matter to outcomes, but also a firms' approach and management of diverse groups that can lead to better outcomes. Although diversity can contribute to the quality of decisions and ideas, it can also require additional management costs (Milliken and Martins 1996; Williams and O'Reilly 1998). Firms that have negative to no growth likely strive for efficiency, and are less likely to invest in the possibly more costly management of diverse teams (Richard 2000).

Kanter's (1977) seminal work on diversity found that proportional composition mattered for a variety of reasons. Groups are "skewed", when there is a large number of one group of individuals versus another, which she defines as an approximate 85 percent and 15 percent respectively. In skewed proportions, numerically dominant groups control the dynamics, and numerical minorities or "tokens" are treated as symbolically representative of their category, rather than as individuals. Tokens and their actions are subjected to greater visibility and therefore greater performance pressures; their differences are exaggerated by dominant group members and therefore leads to social polarization; and they face pressure to assimilate, or face stereotypes based on preconceived notions about their social type. Following this, Roberson and Park (2007) performed a longitudinal analysis of 100 firms that were identified as the best companies for racial minorities to work at to evaluate how racial diversity of a firm's leadership affected financial outcomes. They found when racially diverse individuals occupied less than 25% of these positions, firms experienced decreased financial performance. Conversely, in more balanced racially diverse leadership teams, firms had better financial outcomes. They make sense of these findings by suggesting token-diversity creates "fault-lines", which increase group conflict and weakens individual unique members' ability to integrate their perspectives into decision making communication. As proportional representation of racial minorities increase, these fault lines may be less disruptive, and unique perspectives may be integrated in a meaningful way.

Organizational context matters when evaluating the impact that diversity has on a range of outcomes. Research suggests that an organization's approach to diversity, growth orientation, composition, and collectivist or individualist cultural orientation all mediate whether diversity has a positive or negative effect on a range of outcomes. Because culture and structural factors can be difficult to measure and hold constant in quantitative studies, this has limited our ability to isolate what effect compositional diversity alone has on a variety of outcomes (Zhang 2019). Similarly, measuring the quality of the decision-making process is a slippery concept. Studies that study the dynamics of diversity on observable decision-making processes in smaller groups may suffer from potentially biased measurements and rater biases which muddy the conclusions we can take form the literature (van Dijk et al 2012).

Measuring the Effect of Diversity on Decision Making Outcomes in the Finance Sector

In the Securities sector, at-fault risk-outcomes offer a unique and objective measure of the quality of a decision making process. The financial sector in the United States is regulated by federal laws and by the Financial Industry Regulatory Authority (FINRA). All regulated financial firms must abide by federal Securities laws and may be subjected to audits of their practices to ensure they comply with regulatory requirements. Most firms have internal compliance departments that organize and oversee compliance with these regulations. Although the industry has centralized oversight through FINRA, compliance depends on a high degree of selfmonitoring and self-reporting. Firms and their employees must ensure they comply with regulations regarding appropriate risk, customer communication, conflicts of interest, and rule-breaking and errors. As such, firm-level at-fault violations reflect a breakdown of internal processes of group decision-making around risk and compliance.

The presence of a firm's documented infraction reflects a process whereby a violation must first be detected, then reported, and finally brought through arbitration or legal hearing with sufficient evidence to be prosecuted and found guilty. The 'dark figure' of corporate crime are unreported or unnoticed infractions and therefore not included in official records (Young 2015; MacDonald 2001). Recent erosions to reporting requirements and issues with self-reporting and self- regulation have been noted (Verschoor 2012; Peck 2013). Although the dark figure of violations cannot be known, given the dependence on a firm's self-detection and reporting, as well as the erosion of reporting requirements, the regulatory violations likely represent only a fraction of violations that take place. This serves as a high bar for detection, and a stringent measurement for the breakdown in the decision-making process. Firm performance has often been used as a proxy for the quality of group-decision making of compositionally diverse workforces. Firm performance provides an objective measurement and compelling outcome to address the business case for diversity, but it is influenced by a variety of factors, and it is difficult to isolate the specific effect that diversity has on a firm's bottom line (Cox 1993). Other outcomes may allow us to elaborate on how racial diversity affects group decision-making processes. A firms' financial violations is arguably one outcome that could, at least obliquely, indicate a breakdown in group-level decision making, and can offer a fuller view of how compositional diversity affects firm-level outcomes.

Compliance departments are best described as a kind of internal police force, ensuring firms comply with applicable regulations and laws. Broker-dealers, regulated by the Securities and Exchange Commission, and by-proxy FINRA, are required to have effective compliance programs that are designed to ensure that activities that take place within the firm comply with applicable regulations and laws (Securities and Exchange Commission 2013). These programs should include "robust compliance monitoring systems, processes to escalate identified instances of noncompliance to business line personnel for remediation, and procedures that clearly designate responsibility to business line personnel for supervision of functions and persons" (Securities and Exchange Commission 2013). The SEC elaborates on how best to structure personnel, suggesting that firms should clearly define compliance and advisory roles, to distinguish these roles as distinct from business-line personnel, and to have compliance personnel work with business line employees and management to ensure compliance standards are met (Securities and Exchange Commission 2013). In sum, best practice for compliance is that firms establish a regulatory system with allocated responsibilities and coordination with other departments and personnel to comply with legal and regulatory requirements. FINRA regulatory violations are an indicator of risks taken in the context of compliance - or more accurately lack of compliance, and in concert with colleagues.

Diversity in finance firms is an issue that has gained increasing attention after the 2008 financial crash. Some question whether enhancing diversity in these largely homogenous organizations could create enhanced decision-making and improve outcomes, especially around economic risk (van Staveren 2014; Roberson and Park 2007). Although many have focused on the role of gender diversity in male-dominated firms, the arguments for racial diversity are also important to consider. The value that diverse team members offer stems not from an innate difference in how individuals approach problem-solving, but differences in life experience which offer different perspectives and values that affect how individuals from traditionally underrepresented groups approach problems. A diverse task-relevant information pool can result in group information elaboration, which is the exchange, discussion, and synthesis of these pooled perspectives (van Knippenberg et al 2004). As discussed earlier, Levine and his colleagues (2014) argue that in finance, diversity disrupts conformity and increases “friction” that encourages the consideration of relevant factors more often. The benefits of enhanced social cohesion of a compositionally homogenous firm may come at the cost of groupthink (Janis 1982), contagion of overoptimism and “willful blindness” around realistic risk assessments (Bénabou 2013). This could lead to herd-like behaviour around risk. If increased diversity in decision-making teams result in more nuanced discussions of risk, with more opportunities for the exchange of relevant and diverse information when making decisions, it then follows that increasing racial diversity is one avenue for mitigating negative risk outcomes. If this indeed is the case, then we would expect to see a negative relationship between firms’ compositional diversity and negative risk outcomes, such that more diverse firms are less likely to experience negative risk outcomes.

Finance firms have historically lacked compositional diversity. People of colour and women represent a minority of those who work in occupations that involve decisions around risk, such as financial analysts, securities agents, and compliance officers. There has been a recent surge of interest in the effect of sex composition on risk outcomes, largely stemming from research suggesting that, on average, women may take more responsible risks than men (van

Staveren 2014). However less attention has been paid to the effect of racial diversity of teams on these outcomes. The Securities industry involves active risk assessment, consultancy, and advice, and those in sales and professional occupations are often the ones involved in day-to-day risk management activities and decisions. If group diversity enhances information processes and decision making around risk assessments by improving deliberations and encouraging all group members to better prepare and weigh information, we would expect to find a lower likelihood of financial violations at firms with more racial diversity in their professional ranks. In my quantitative analysis, I test the hypothesis that as racial diversity in these key occupations increases, the incidence rate of financial violations decreases.

4.2. Data and Methods

Data

I use two data sources to evaluate the effect of racial composition on decision-making risk outcomes. The race composition data come from the Equal Employment Opportunity Commission (EEOC) and finance violation data come from the Financial Industry Regulatory Authority (FINRA) database. Below I discuss each data source in turn.

Race Composition Data: EEO1 Reports

I used the population of finance establishments that filed EEO-1 reports in 2005 as a sampling frame. From the 2005 EEO-1 file, I included all unique establishments identified by the North American Industry Classification System code as involved in Securities, Commodity Contracts, and Other Financial Investments and Related Activities (NAICS 523). The NAICS 523 code designates firms that: (1) underwrite securities issues and/or make markets for securities and commodities; (2) act as agents (i.e., brokers) between buyers and sellers of securities and commodities; (3) provide securities and commodity exchange services; and (4) provide other services, such as managing portfolios of assets; provide investment advice; and trust, fiduciary, and custody services. This resulted in an initial analytic file of 1,684 finance establishments (357 firms). A prospective sample was chosen because the finance sector contracted substantially after the 2008 financial crash due to mergers, acquisitions, and bankruptcies. I assumed that firms with an increased exposure to risk had an increased chance of closure, and therefore a prospective sample helped capture firms at all levels of risk-exposure, rather than introducing the possible bias of capturing only firms that only had minimal risk-behaviour.

Using this 2005 sample of 1,684 establishments, I extracted and appended prospective annual EEO-1 reports for these establishments from 2006 to 2015. Merging all ten years of EEO-1 data produced a longitudinal file of 10,386 establishment-year observations. I then used this file to merge with FINRA financial violation data, as described below.

FINRA Data

My second source of data comes from regulatory violations as reported by FINRA. FINRA is a self-regulatory organization, with oversight from the federal Securities and Exchange Commission, to govern the securities brokerage industry in the United States to protect investors and the public interest. It was formed in 2007 in an effort to centralize resources and industry oversight and is responsible for the regulation of any firm or individual that engages in the business of securities for itself or on behalf of another party (Burge and Richards 2013; Cole 2007). All firms that participate as a broker or dealer in the transaction of securities is required to register with FINRA, which accounts for almost the entirety of securities firms in the United

States (Burge and Richards 2013). FINRA oversees and reports upwards of 90% of all arbitration and regulation discrepancies of securities disputes (Burge and Richards 2013; Robbins 2005). I gathered annual violation data for all reporting EEO-1 firms under the regulatory reporting jurisdiction of FINRA (N=245). Of the initial 357 finance firms included in my EEO-1 sample, 112 firms did not fall under FINRA jurisdiction. These firms and their establishments were then dropped from the sample, resulting in a total of 9,813 establishment-year observations. BrokerCheck is FINRA's online, searchable database of reports for all registered firms. Reports include details on a firm's history, operation details, and violation disclosures. All firms are required to report violations within 30 days of a ruling; including civil, regulatory, and arbitration decisions. A firm might have multiple securities branches registered with FINRA, which are each assigned a unique Central Registration Depository (CRD) number. Each CRD record has its own report, and I therefore needed to assign all CRDs to their appropriate parent company.

To assign violations to appropriate firms, I created a spreadsheet and listed all CRD numbers of each firm in the EEO-1 sample, using the CRD number as a unique identifier. If a company was acquired by or merged with another company, CRDs were matched to their respective parent company in the appropriate years. I searched and extracted regulatory reports for all CRDs listed for each firm from BrokerCheck. Extracted violation data included headquarter number (matched from EEO-1 data), CRD number, an assigned unique violation identifier, the parent company's name, the date the firm was founded, the initiating agency of the violation, the year the violation was reported, the docket number, the amount of the each fine if applicable, and whether the action was regulatory, civil, or arbitration. I used the date and docket number of individual violation records to identify and delete duplicate violations, which could occur if a company reported a unique violation on multiple CRD reports or if there was a merger or acquisition.

Because the initial population of firms was drawn from the EEO-1 data, firms that existed in the EEO-1 data were active during all reported years. I therefore assigned zero for violation values for years where composition data were present in EEO-1 data but did not have corresponding FINRA data. There were 203 FINRA violations that did not match back to composition data in the appropriate year. I sorted these unmatched observations by firm, and any firm that had four or more unmatched observations I investigated manually using FINRA records and news reports. Publicly documented firm acquisitions and mergers accounted for 112 of these unmatched cases. I reassigned (and added to the existing year's violation data if necessary) these observations to the appropriate firm in those years. The remaining 91 observations were dropped.

Because I anticipated a delay between the initial violation and the year of the violation decision, I pulled a random sample of 500 violations and assessed the average length of time between the year a violation was documented to have occurred (if information was available) and the year of the violation decision. I found an average delay of 19 months, which I rounded up for analysis purposes to 2 years. I then populated a database with each violation involving each firm in my EEO-1 sample from 2007 to 2017. This two-year lag was used to accommodate the appropriate matching of EEO-1 and FINRA data that reflected the sex composition of an establishment at the time a violation took place.

Because FINRA violations are reported at the firm level, I created a collapsed FINRA dataset at the firm-level, with variables for the total number of violations and total amount of fines for each firm, and then merged EEO-1 and FINRA data using headquarter number and year identifiers. Data were then were disaggregated back to the establishment-level to preserve the establishment-level race composition data. Analyzing composition at the establishment level enables a deeper analysis of how variance in race composition affects violations, as compositional dynamics occur at the establishment rather than firm level (Hirsh and Cha 2017).

Measures

Dependent Variable

I use firm-level at-fault violations as an indicator of a breakdown in the internal processes of day-to-day group decision-making around risk and compliance. The dependent variable is the number of reported violations a company was found to be at fault for by FINRA. There are 9,951 violations, with a mean of 15.23 and standard deviation of 21.53 at the establishment-year level. The dependent variable is measured annually, at an interval of two years after the independent variables. This was done to account for the average length of time it takes for a violation to be reported and decided upon.

Key Independent Variables

To test the hypothesis concerning whether racial diversity in key positions in finance firms affects risk decision-making outcomes I use the following compositional measures:

Racial Diversity in Professional and Sales

To measure racial diversity in professional occupations, I constructed a Blau Index of diversity for employees who work in professionals and sales occupations at an establishment.

Professionals in the Securities sector are involved in day-to-day risk management activities and decisions. Occupations that are designated under the sales and professional category include positions involved in on-the-ground decisions of adherence to regulation and policy and the day-to-day decision-making around risk. This occupational category includes securities agents and advisors, who connect buyers and sellers to financial markets and advise and sell securities to individuals and conduct trades on their behalf; financial analysts, who assesses financial conditions to determine market trends and sound investment practices, and compliance officers, who provide advice, oversight, and internal audits to ensure that daily practices align with federal and industry regulations. Although we cannot directly observe the decision-making process in this analysis, a firms' at-fault violations serve as an indicator of a breakdown of this decision making process, because these professionals work in concert on a day-to-day basis to inform and orchestrate decisions around risk in the Securities sector.

EEO-1 reports contain compositional data across 9 broad occupations and 8 racial categories[7]. These include American Indian, asian, black, hispanic, North Pacific islanders, white, and any employee who self-identifies as belonging to more than one racial category. The Blau diversity index is used to measure the differences among members of a group consisting of various compositional categories. For this study, it is constructed to measure the probability that any two employees, chosen at random, will be from two different racial groups (Blau 1977)[8]. A diversity index is appropriate in situations where the presumption is that the *overall* proportion of

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[7] In 2005 and 2006, EEO-1 reports only collected racial composition across five groups, American Indian, asian, black, hispanic, and white.

[8] $D = 1 - \sum_j p_j^2$
Where D is diversity and pj is the proportion of the total population from group j. If the entire population is from a single group, D will equal 0. A higher value of D means more diversity (Rushton 2008).

diversity of a group matters, rather than accounting for the proportion of specific sub-groups. In other words, it is not the proportion of members from any *specific* racial group that matters in decision-making, but the overall level of diversity. Previous research on decision-making in diverse groups supports this assumption, as it is the presence of diverse members in a team that matters to whether groupthink is negated, more relevant information is raised and considered, and whether members of a group prepare more thoroughly (Galinsky et al 2017; Sommers et al 2006; Sommers et al 2008; Phillips and Loyd 2006).

Racial Diversity in Management

To measure racial diversity in management, I constructed a Blau Index of diversity for employees who work as both mid and senior level managers at an establishment. The EEO-1 defines managers as those who set high-level policies, exercise overall responsibility for executing these policies, and direct individual departments of a firm's operations. Senior-level managers are those at the highest level of an organization, who plan, direct, and formulate policy and provide broad direction for organizational goals, under the guidance of the board of directors or other governing bodies. Executive officers and those within two reporting levels of the CEO are included in this designation[9]. Mid-level managers are those that take direction from those in senior management and support organizational goals and direction as set out at the senior-management level. This category includes regional, group, and divisional mangers, including vice presidents, group directors, and financial managers. Because companies were not required to designate senior and mid-level managers in reports prior to 2007, this combined management category ensure I can use all years in the analysis. However, in supplementary analysis, I also

[9] This includes chief executive officers, chief operating officers, chief financial officers, chief human resources officers, managing directors, and managing partners.

investigate the effects of racial diversity in management using disaggregated measures of senior and mid-level management for years that have such data.

Racial Diversity for Senior Management

Because minorities are concentrated in mid-level management and senior-level management is more homogenous (Yap and Konrad 2009; EEOC 2015), disaggregating management categories can offer insight into whether and where racial diversity influences risk outcomes. Where possible, I sought to analyze the effect that diversity at different levels of management had on risk outcomes. Using EEO-1 job categories available from 2007 onwards, I constructed a Blau Index of diversity for employees who work as senior managers at an establishment.

Racial Diversity for Mid-Management

Using EEO-1 job categories available from 2007 onwards, I constructed a Blau Index of diversity for employees who work as mid-level managers at an establishment.

Control Variables

I included a variety of control variables in the models. To control for the establishment-level variation in racial diversity, I included a measure of is the percentage of non-white employees in all other occupational categories at the establishment level. Percentage of non-white individuals in the local labour market is a variable that accounts for the annual and regional percentage of racial minorities employed in the North American Industry Classification System code for the securities sub- industry (NAICS 523) in each of the regional areas (North-Eastern, Southern, Mid-Western, and Western). This controls for the possibility of regional variation in race composition due to the race composition of local labour markets. Establishment size is the annual establishment size based on the number of employees at each subsidiary establishment divided by 100 as an organizational control, since workforce size inevitably affects composition. Firm size is the annual firm size based on the number of total employees of all subsidiaries of the same parent firm divided by 100, to control for the possibility that the number of violations a firm has may vary depending on its size. I also included a series of dummy variables for region (North-East, South, Mid-West, and West), and used the Mid-West as the excluded referent to control for regional differences in where finance firms are primarily located. Finally, I also included a series of dummy variables for year, omitting 2015 as the referent, to capture temporal changes that could affect number of violations, and are not specific to a particular establishment, such as changes in federal regulation (e.g.: The Dodd-Frank Wall Street Reform and Consumer Protection Act, which was implemented in 2010).

Methods

I performed a series of negative binomial fixed-effects regression models to assess the impact of overall racial diversity of finance professionals and management, net of other organizational, sector, and regions factors, on the number of violations. The first model looks at the effects of compositional diversity of professionals on establishments' number of at-fault violations, the second looks at the effects of compositional diversity of the combined management category on establishments' number of at-fault violations, and the third looks at the effects of compositional diversity of both professionals and the combined management occupational category on establishments' number of at-fault violations. The fourth model looks at the effects of compositional diversity of professionals and the disaggregated management category on establishments' number of at-fault violations. Because the disaggregated management category is only reported from 2007 onwards, it does not use the same observations as the other models. I've included each model as a column in the same table to facilitate comparison and interpretation. In all models, I use fixed effects for establishments to account for unobservable and stable characteristics of establishment that cannot be effectively measured, such as organizational culture. This enables me to better isolate the effect of racial diversity on the variation in violations within-establishment over time.

Fixed effects require longitudinal unit-level data and variation over time within each unit. Because of this, establishments with no variation in number of violations and firms that had only one year of data available were dropped[10]. For the first, second and third models, 214 observations were dropped because there was only one year of data and 2,083 observations were dropped because there was no variation in violations over the 10 year period. This resulted in 7,029 observations over the 10 year period. For the fourth and fifth models that looks at diversity in disaggregated management categories, 140 observations were dropped because there was only one year of data, and 1,464 observations were dropped because there was no variation in violations over the 8 year period.

4.3. Results

Descriptive Results

The mean number of violations is 15.23, with a standard deviation of 21.53[11].

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[10] These models predict the number of violations among those establishments that experienced violations over this ten year period. While it is not ideal, I have had to exclude cases with no variation over the 10 year time period, because fixed effects requires variation.

[11] EEO-1 data protocol prohibits the reporting of range statistics.

Overall racial diversity is highest in the combined sales and professional occupational category. Non-white employees make up on average 20 percent of the professional and sales positions and 14 percent of management positions. For years where it is possible to measure the breakdown between mid-level and senior management composition (2007 onwards), non-white employees make up 16.1 percent of mid-level management positions, and 7.9 percent of senior management. The Blau index ranges from 0 to 1, where 0 represents complete homogeneity, and 1 represents each member belonging to a unique group. Substantively, the closer a value is to 1, the more heterogenous the composition. The mean Blau diversity score of the sales and professional occupational category is .29, with a range of 0 to .76. The mean Blau diversity score of the combined management category is .19, with a range of 0 to .78. The mean Blau diversity score of the mid-management category is .22, with a range of 0 to .82. The mean Blau diversity score of the senior-management category is 0.09, with a range of 0 to .72. Substantively, for the key occupations of interest for analysis, this means that, on average, professionals and sales occupations are more diverse than management, and mid-level management is more diverse than senior management. The average of non-white employees in all occupational groups other than management, professionals, and sales is 31.1 percent with a standard deviation of 21.8. The average of non-white persons in local labour markets is 21.87, with a standard deviation of 8.67, and a range of 0 to 74 percent. The average establishment size is 321 employees, with a range of 21,976, and a standard deviation of 805.94. The average firm size is 10,232 with a range of 0 to 35,221 employees.

Regression Analysis

Table 4.1. Racial Diversity Model - Fixed Effects Negative Binomial Regression Analysis

	Model 1	Model 2	Model 3
Professional Blau Index	-0.66***	-.60**	-.59**
Management Blau Index	0.46***	-	.48***
	Model 1	Model 2	Model 3
Mid-Level Management Blau Index	-	.37***	-
Senior-Level Management Blau Index	-	.25*	-
Firm Size	0.002***	.005***	.005***
Establishment Size	-0.002	-.017***	-.017***
% non-white in all other occupational categories	0.001┼	0	0
% non-white in local labour market	0.00	-.03***	-.03***
2006	0.63***	n/a	n/a
2007	1.09***	-	-
2008	0.07	-.43***	-.43***
2009	-0.16**	-.48***	-0.48***
2010	0.89***	.08	.08
2011	0.81***	-.31***	-.31***
2012	1.00***	.04	.04
2013	1.02***	.03	.03
2014	0.79***	-.18**	-.18**
2015	0.08	-1.00***	-1.00***
Region - North-East	0.07	0.06	0.06
Region – South	-0.35***	.43*	.43*
Region – West	0.12	.93***	.93***
	N = 7,029	N= 2,812	N= 2,812

*Note: ┼p<.10, *p<.05, **p<.01, ***p.001*

In this section, I provide an analysis of the impact of racial diversity on at-fault financial violations. For each regression model, I assess the impact of racial diversity in various occupations on the subsequent change in the number of violations, net of other organizational, sector, and regional factors.

Each column contains different negative binomial regression model results. I will first discuss model 1 in column one, which includes the Blau diversity indices for both professional and combined management occupational categories and then discuss the other models. I present the exponentiated coefficients for clearer interpretation. In the model 1, increased racial diversity in the professional occupational category shows a significant ($p < .01$) negative effect on the number of violations an establishment receives. Each one-unit change in the Blau Diversity index for professionals is associated with a decrease of .52 (exp $\beta(-.66)=.52$) in the expected number of establishments' violations, holding constant other variables in the model. Conversely, increased racial diversity in management shows a significant ($p < .01$) positive effect on the number of violations an establishment receives. Each one unit change in the Blau diversity index for management is associated with an expected increase of 1.58 (exp $\beta(.46)=1.58$) in the expected number of establishments' violations, holding constant other variables in the model. Several of the control variables also have significant effects. The size of a firm has a small but significant effect on violations, indicating that the larger a firm is, the more likely they will incur violations. This is not a surprising finding, since larger firms will likely have higher volumes of transactions and garner greater regulatory attention. Other than 2008 and 2015, all other years are significant and positive, indicating that when compared to the 2005 referent, there are significantly more violations in all years but 2008 and 2015. Only 2009 has a significant and negative effect, indicating that when compared to the 2005 referent, there are significantly fewer violations in that year. The regional dummy variables also indicate finance establishments in the South have significantly fewer violations when compared to the Mid-West referent. Neither the percentage of non-white employees in all other occupational categories nor the percentage of non-white employees in the local labour market have any significant effect on the number of violations an establishment receives.

In Model 2, I use disaggregated management categories to parse out the effect of racial diversity in mid and senior level management categories as well as the racial diversity of the professional occupational category. Here, I could only analyze cases from 2007 to 2015, as the EEO-1 data do not contain disaggregated data in 2005 and 2006. In this model, increased racial diversity in the professional occupational category still shows a significant ($p < .01$) negative effect on the number of violations an establishment receives. Each unit increase in the Blau Diversity index for professionals is associated with a 45% decrease ($\exp \beta(-.60)=.55$) in the expected number of establishments' violations ($p < .01$), holding constant other variables in the model. Increased racial diversity in the mid-management occupational category shows a significant ($p < .01$) positive effect on the number of violations an establishment receives. Each unit increase in the Blau diversity index for mid-level management is associated with a 45% increase ($\exp \beta(.37)=1.45$) in the expected number of establishments' violations ($p < .01$), holding constant other variables in the model. Increased racial diversity in the senior management occupational category also shows a significant ($p < .05$) positive effect on the number of violations an establishment receives. Each unit increase in the Blau diversity index for senior-level management is associated with an increase of 29% ($\exp \beta(.25)=1.29$) of the expected number of establishments' violations ($p < .05$), holding constant other variables in the model. Substantively, racial diversity in professional occupations is still associated with a decrease in the expected number of violations an establishment will receive. When we look at the disaggregated management categories, it appears that racial diversity in mid-level management has a larger effect on the increase in the expected number of an establishment's violations than the effect of racial diversity in senior management. Several control variables are also significant in this model. The size of a firm has a small significant positive effect on violations, indicating that the larger a firm is, the more likely they will incur more violations. This is not a surprising finding, since larger firms will likely have higher volumes of transactions and garner greater regulatory attention. Establishment size has a small significant negative effect on number of violations. Percentage of non-white individuals in the local labour market has a significant negative effect on the number of violations. Because disaggregated management composition data are only available for 8 of the 10 years of data, I omitted 2005 and 2006 data, and use 2007 as the reference year. For years 2009, 2011, and 2015 there is a significant negative effect, indicating that when compared to the 2008 referent, there are significantly fewer violations in these years. For 2012 and 2013, there is a significant positive effect indicating that when compared to the 2008 referent, there are significantly more violations in these years. The regional dummy variables also indicate finance establishments in the South and West have significantly more violations when compared to the Mid-West referent.

For Model 3, I restricted the cases to the same observations that were included in Model 2 to allow for a direct comparison between the observations analyzed in the disaggregated race model to the same cases using the collapsed management category. Increased racial diversity in the professional occupational category still shows a significant ($p < .01$) negative effect on the number of violations an establishment receives. Each one unit increase in the Blau Diversity index for professionals is associated with a 55% (exp $\beta(-.64)=.53$) decrease in the expected number of establishments' violations ($p < .01$), holding constant other variables in the model. Increased racial diversity in the combined management occupational category shows a significant ($p < .01$) positive effect on the number of violations an establishment receives. Each one unit increase in the Blau diversity index for the aggregated management category is associated with a 61% (exp $\beta(.48)=1.62$) increase in the expected number of establishments' violations ($p < .01$), holding constant other variables in the model. The control variables effect and significance are the same as in Model 2[12].

4.4. Postestimation and Robustness Analysis

To facilitate interpretation of the estimates given by the regression equations, I calculated the predicted number of annual violations, by percentage of women in professional and management positions, given by the models. All other covariates are held at their means.

[12] I ran the same three models in this chapter with a diversity index that included both race and sex to examine the effect of increased intersectional diversity on risk outcomes. I constructed Blau indices for professionals, management, mid-management, and senior management that encompassed the composition of both men and women in all reported EEOC racial categories. These results followed similar patterns as were reported in this chapter, with more pronounced effects.

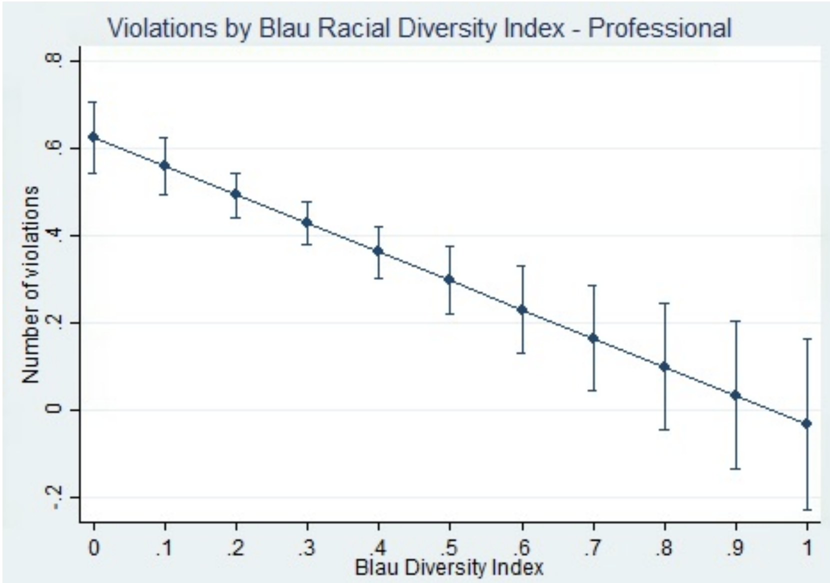

Figure 4.1. Predicted number of annual violations, by Blau Racial Diversity Index - Professionals

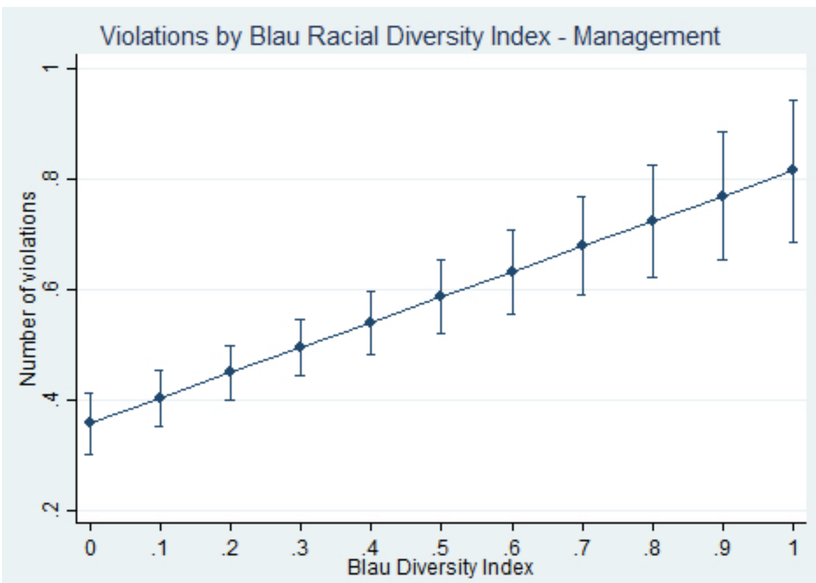

Figure 4.2. Predicted number of annual violations, by Blau Racial Diversity Index - Managers

Note: The number of violations in both figures 4.1 and 4.2 are predicted based on estimates of Model 1 in Table 4.1, with all of the controls set at their means.

Although the effect of racial diversity on violations may seem relatively small, when considering the high bar for the level of violation detection and the cumulative effect over time, the findings are more compelling. In Figure 4.1, we can see the predicted numbers of violations at various levels of racial diversity of professionals, reported in deciles on the Blau racial heterogeneity index. Establishments with relatively low levels of racial diversity in their professional ranks (the 20th percentile) have .56 expected annual violations. This can be compared with establishments with relatively high levels of racial diversity in their professional ranks (the 80th percentile). These firms have .16 expected annual at-fault violations. Using these criteria, over a 10 year period, establishments with higher-levels of racial diversity in their professional ranks will have 4 fewer expected at-fault violations compared to establishments with lower levels of racial diversity. We see the reverse relationship between racial diversity in management and the expected number of violations. In Figure 4.2, we can see that establishments with relatively low levels of racial diversity in their management ranks (20th percentile) have .40 expected annual at-fault violations. This can be compared to establishments with relatively high levels of racial diversity in their managerial ranks. Establishments with managerial racial diversity measuring in the 80th percentile of the Blau diversity index have .68 expected annual at-fault violations. Using these criteria, over a period of 10 years, establishments with high-levels of diversity in their managerial ranks will have 2.8 more expected at-fault violations compared to establishments with low levels of diversity in their managerial ranks.

Due to erosion of reporting requirements and the nature of a self-regulating industry that largely depends on internal policing and whistleblowers, regulatory violations likely represent only a fraction of violations that actually take place. These expected values therefore likely underestimate this type of risk behaviour.

I conducted additional analyses and robustness checks to assess the validity and robustness of the models. Given the association among racial diversity compositional measures, multicollinearity is a concern. However, all of the variance inflation factors indicate low collinearity.

Although both Poisson and negative binomial models are appropriate for count data, and show similar results, I opted for the latter over the former. Count data is often over dispersed, where the variance of the dependent variable exceeds the mean (Ismail and Remain 2007). This was the case with these data, where the conditional mean is 15.27 and the conditional variance is 21.53. I also compared the quality and fit of each model and both BIC and AIC favoured the negative binomial model. Negative binomial distribution has the same mean structure as Poisson, but with an extra parameter that models this overdispersion, and allows the variance to exceed the mean.

I also tried alternative specifications of the racial composition controls. I ran models using occupational racial diversity controls calculated both as a percentage of all non-white employees in all other occupations and as a Blau diversity index for all other combined occupational categories, as there is not a consistent usage of either in the existing literature. Including either calculation of racial diversity of other occupations as a control results in almost identical results. I also ran models with disaggregated race occupation categories (such as percent black, percent hispanic, etc), to evaluate whether any specific racial group membership affected the outcomes, but found no significant findings to suggest this was the case. I opted for a single index measure to capture racial diversity across all racial-ethnic groups.

In an effort to parse out the effect of racial diversity in different levels of management on the outcome, I ran a negative binomial regression model with Blau indices for disaggregated management categories (Model 2). Because these data were only collected from 2007 onwards, fewer cases are included in this model (N=2,812). Given the differences in Ns across models, I re-ran these observations in Model 3 with the Blau index for the aggregated management category, including only the observations of the disaggregated management model 2 to facilitate a more direct comparison of estimates. Results for the professional occupational category and aggregated management category in this model were similar to model 1 and model 2. This indicates that racial diversity in management has an overall positive effect on expected number of violations, and that racial diversity in mid-level management has a larger effect than racial diversity in senior level management. This could possibly be due to the fact that senior management is more racially homogenous than mid-level management (Yap and Konrad 2015; EEOC 2015), and therefore there are few non-white senior managers.

4.5. Discussion

Prior research suggests that under the right cultural conditions, racial diversity in groups can lead to enhanced decision-making and improved outcomes. When compositional diversity is supported by a complementary organizational culture, where it is valued and treated as a resource for knowledge enrichment, instead of a moral imperative or instrumental way of accessing diverse markets, it helps lead to enhanced knowledge elaboration and information processing (Galinsky et al 2015; Phillips et al 2006; Ely and Thomas 2001). When we look at this body of literature, it is clear that the benefits of diversity may be realized or enhanced by a supportive organizational culture. What is less clear, however, is whether compositional diversity has any effect on decision-making outcomes, net of organizational cultural context. In my analysis, I find support for the assertion that racial diversity is associated with enhanced decision-making capacity, net of cultural influence, insofar as I can control for organizational culture using establishment fixed effects. However, I also find that occupation matters. Whereas increased racial diversity in the professional ranks of an establishment is associated with a decrease in the expected number of their at-fault violations, this relationship reverses when we look at the effect of racial diversity in management. I will discuss each of these findings in turn.

Previous studies have not looked at the effect of compositional diversity on decision-making outcomes in a widespread, systemic way for two main reasons. First, reliable and valid data on wide-scale or industry-wide composition and decision-making outcomes are hard to come by and difficult to measure (Richard 2000; van Dijk et al. 2012). Second, while organizational culture mitigates the effect of diversity and outcomes, it is difficult to control for. This study benefits from a dataset that address the former and a design that attends to the latter.

Using EEO-1 reports allows me to analyze the effect of establishment-level racial diversity on decision making outcomes for a 2005 prospective sample of finance firms over a ten-year span. The number of at-fault FINRA violations serve as a unique and objective measurement of a breakdown in decision-making processes at an organization. Although my data do not allow me to directly observe the process of decision-making that take place in diverse teams, because of the self-regulatory nature of the securities industry, where organizations make on-the-ground decisions on a daily basis about which risks are reasonable to take and which are not, I use at-fault outcomes as an indicator of a breakdown in the decision-making process. By using a longitudinal prospective sample of finance firms and fixed effects, I am able to control for any industry and organizational cultural contexts that would otherwise influence my ability to interpret the findings. This study has overcome the limitations many other studies have faced, which have struggled to reliably measure composition (Richard 2000), objectively measure decision making outcomes (van Dijk et al 2012), and control for cultural effects on the dynamics of diverse groups (Jackson et al 2013).

Increased racial diversity in an establishment's professional ranks is associated with fewer at-fault violations, net of organizational and cultural influence. These results show that demographic diversity, as measured by the degree of racial diversity in establishments' professional-ranks, does have an absolute positive effect on group decision-making outcomes around risk.

We know from other research that homogenous groups can negatively affect decision-making by having a propensity towards groupthink and confirmation bias (Janis 1982; Frey Schulz and Stahlberg 2013). The presence of just two minority members has been found enhance group functioning and sidestep the downfalls of groupthink (Schulz-Hardt et al 2000). It appears it is not any specific group membership that matters, but rather, the likelihood that members of a group will be members from different groups. The Blau index by design encapsulates the heterogeneity of the population under consideration and is therefore appropriate to capture the effect of a groups' overall racial diversity, rather than specific make-up (Rushton 2008). When I ran alternative models with disaggregated race groups, no effect was found to suggest members from any specific racial group were driving the results. Diverse groups don't just benefit from novel contributions of minority members but are likely to motivate *all* members to prepare more throughly and consider more information before making decisions (Phillips et al. 2006; Phillips and Loyd 2005).

The benefits of diversity on risk-decisions is especially compelling in the context of the finance industry. Homogenous groups underestimate financial risk and make more mistakes in information processing than heterogeneous groups and populations (Bénabou 2012; Sharif 2005; Levine et al 2014). The significant effect that racial diversity in professional ranks of securities firms have on decision-making outcome around risk is promising in that it suggests increasing racial diversity in these occupations, even without cultural interventions, can improve group decision making outcomes around risk. This is consequential, because not all organizations have the impetus or resources to invest in the cultural supports that enhance diversity's effects on group functioning (Richard 2000). Since 2005 the average representation of non-white professionals in the Securities sector has remained around 20 percent. For organizations less swayed by social justice arguments for diversifying their workforce, outcome-based research plays an important role. If racially diverse professional teams in the Securities industry leads to more savvy decision-making around risk, findings like this may motivate finance firms to increase racial diversity, and this in turn may decrease a firm's at-fault violations. The role of organizational culture on the dynamics of diverse groups, however, should not be ignored. When diversity is viewed and treated by an organization as a resource, rather than a social justice cause or solely a business advantage, it has the most potential for improving group dynamics and outcomes (Ely & Thomas 2001; Richard 2000).

What, however, can we make of the findings that increased racial diversity in management is associated with an increase of at-fault violations, net of organizational and cultural influences? We can make sense of this finding by considering management's relationship with risk, and the pressure that individuals with token-status face within a largely homogenous population. Both senior and mid-level managers in the Securities sector participate in a high-level deliberation of risk that, when compared to professionals, is arguably more autonomous and directive than collaborative. Management is also more racially homogenous when compared to professionals; non-white managers account for just 14 percent of managers on average[13]. I argue that a different mechanism is at work when we look at the relationship between the racial diversity of management and risk-outcomes.

Managers' relationship to risk differs from that of professionals in a finance organization. Mangers relationship to risk in Securities firms is not as likely to be carried out in the on-the-ground daily decision-making process, as it is with professionals. Instead, the relationship is likely less direct. Management has the main administrative function of directing and controlling a firm (Braverman 1998). As per the EEO-1 designations, the senior management category is reserved for individuals in the organization that plan, direct, and formulate policy and provide organizational goals. Mid-level managers support these goals by providing direction to professionals and other employees. The most fundamental goal of a finance organization in a capitalist system is to maximize profits and minimize losses (Bhaskar & McNamee 1983). While this must take place within the bounds of regulation, finance firms are relied on to self-govern, and the organizational structure of the majority of these firms leave this function to professionals and sales employees that carry out the daily activities, and a compliance department and

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[13] When I looked at the management categories separately, non-white mid-level managers make up 16 percent of this category, and for senior-level management, non-white managers make up 8 percent of this category.

compliance officers (all of whom are designated as professionals). As such, it is not the bureaucratic function of management to *actively* assess risk within the bounds of regulation during on-the-ground decision-making, but instead to set policy to maximize growth, presumably within these bounds. This is coupled with the bureaucratic expectation in this structure that regulatory risk is to be managed by professionals, through compliance departments. Here we can see the potential for tension embedded within the bureaucratic organizational structure (Weber 1933). Whereas professionals are delegated and largely responsible for the day-to-day management of risk (as defined as operating within the bounds of regulation), arguably, management's main preoccupation and function is financial growth. In effect, financial targets and investment strategy are decided by senior-management, mid-level management and generally supports, communicates, and directs these objectives, and professionals are charged with carrying them out within daily operations *and* to do so within the bounds of regulations. As such, when we consider the racial diversity of management and its effect on regulatory violations, their relationship to risk is qualitatively different from that that of professionals.

Non-white managers in Securities firms, on average, exist in token numbers (Kanter 1977), making up less than 15 percent of the combined management occupational group. In Roberson and Park's (2007) longitudinal analysis of racial diversity in leadership and firm performance, they found that racial diversity lead to better financial outcomes only when racially diverse individuals exceeded 25 percent of the management population. Roberson and Park argue diversity in management expands informational resources and perspectives, through knowledge elaboration and cognitive diversity, which leads to better organizational strategy. However, they theorize that when racial minorities exist in proportions lower than 25 percent, coalitions can form which hinder the potential for enhanced strategizing through knowledge elaboration and cognitive diversity. These coalitions create “fault lines”, that weaken unique members’ ability to carry out actions according to individual perspectives. As the proportional representation of racial minorities increase, the barriers of “coalitions” decrease, leading to better potential for enhanced organizational strategy (Roberson and Park 2007; Murnighan and Brass 1991).

We can also draw on Kanter’s (1977) work to expand this theory. When minority members exist in token numbers of 15 percent or less, as non-white managers in Securities establishments’ on average do, presumed differences are highlighted and dominant unique group members can magnify the relevance of a salient identifier (such as race) of presumed difference. This in turn leads to increased scrutiny of non-white minorities, and increased pressure to assimilate to dominant institutions (Kanter 1977; Izraeli 1983). In effect, when racial minorities exist in token numbers, the increased scrutiny and pressure to assimilate to the dominant institutions can damper the potential for enhanced strategizing through knowledge elaboration and cognitive diversity. Although not a direct comparison to management’s relationship to *risk*, the nuances in the relationship between racial diversity in management and financial performance does suggest that when racial minorities exist in token numbers, token-individuals within management are less free to offer up strategies that don’t fit within the dominant organizational norms. Moreover, organizations are structured in ways where dominant members are granted more status and authority (Acker 1990; Elsass and Graves 1997). In finance, where the majority of managers are white and men (EEO1 2015), it is likely they often hold the balance of status and authority. Input from minority members, most notably women and people of colour, are especially vulnerable to marginalization in organizations that have historically been structured and dominated by and for white men (Gutek 1985; Kanter 1977; Konrad et al. 1992; Tolbert et al 1995; Elsass and Graves 1997). Not only might this damper innovation, but it may lead to minority individuals to double-down on dominant institutional strategies and approaches towards growth as they not only attempt to assimilate but to also prove competency. As minority members face greater scrutiny, it could be that they are more likely to try and demonstrate ability by directing growth strategies in less risk-averse ways. Other explanations for why increased racial diversity in management is associated with an increase in a firm's number of violations are also of course possible. For instance, in the same way that token individuals face greater scrutiny (van Dijk et al. 2012), organizations with more diverse racial make-up of management than is typical of the industry, could garner increased scrutiny and regulatory oversight due to bias, and consequently this greater scrutiny could lead to greater likelihood of finding regulatory violations.

4.6. Conclusion

This study provides important insights which support the theory that racial diversity can have an absolute effect on decision making outcomes, regardless of cultural supports. Increased racial diversity in the professional ranks of Securities firms is associated with a decrease in at-fault regulatory violations, which suggests there may be a more rigorous decision-making process around risk decisions in racially diverse groups. Although my data do not allow me to directly observe the process of decision-making that take place in diverse teams, I use at-fault outcomes as an indicator of a breakdown in the decision-making process. Because of the self-regulatory nature of the securities industry, organizations make on-the-ground decisions on a daily basis about which risks are reasonable to take and which are not and at-fault violations should indicate a breakdown in this process. By using a longitudinal prospective sample of finance firms and the use of fixed effects, I am able to control for any industry and organizational cultural contexts that would otherwise influence my ability to interpret the findings. Although this finding is important, the conclusions we must take from it must be nuanced, since increased racial diversity in management is associated with an increase of a firm's at-fault violations.

In both cases, however, I find racial diversity does have a significant effect on risk outcomes in Securities firms, even when netting out the unobserved effects of culture on diversity. While it is tempting to conclude that increasing racial diversity in a firm overall is a promising avenue to better decision-making around risk, the disparate occupational findings remind us that compositional diversity alone is not a silver bullet solution to enhancing outcomes, and we must strive to better understand these mechanisms.

Although this study offers greater clarity for the absolute potential that increased racial diversity in group-decision making has, there are some limitations. Because of the disparate occupational findings, it is likely that organizational patterns that shape occupational relationships mediate the relationship between diversity and risk outcomes. However, what the mechanisms are that lead to these different effects can only be theorized obliquely. Because we cannot directly observe what is driving the relationship, it is impossible to conclusively determine what factors underlie it. Future research should explore whether minority members who occupy management positions approach risk and growth in any qualitatively different way from dominant members, and whether more balanced diversity of management leads to more nuanced approaches to financial risk taking. Qualitative studies on the dynamics between racially diverse professionals in the Securities sector in relation to decision-making would also be helpful to more directly understand differences between how racially diverse versus racially homogenous groups make decisions.

Hiring racially diverse professionals into the traditionally homogenous setting of the Securities sector can lead to better risk decision outcomes. This has important implications for the industry, however, it should not be forgotten that these outcomes might be improved by also addressing culture. The reinforcement of collective norms, emphasis of common goals, and the tenets outlined in the integration and learning perspectives towards diversity are all important factors to build a supportive culture which values contributions of all members (Williams and O'Reilly 1998; Ely and Thomas 2001). While increasing racial diversity is not a complete remedy to enhancing risk decision outcomes, it is an important start.

CHAPTER 5 - CONCLUSION

This study adds to the literature which calls for gendered organizational change to take place at the cultural - as well as structural - level, and suggests that organizations must be cautious in their attempts to reach gender equity goals through structural means alone. So long as structural strategies are used as a unilateral approach to remedy gender inequities, policy solutions embedded in a gendered culture rely on individuals to take up practices which are antithetical to what and who an ideal worker looks and acts like. If the cultural climate of these firms still incentivize all workers to do gender 'like men', and doing gender 'like men' involves the disuse of gender policy, the solution is not more policy. The solution lies in a more direct interrogation of the cultural underpinnings which provide a gendered context from which to interpret all behaviour.

The work in this dissertation lends support to the theory that diversity in finance firms, at least in the professional ranks, can lead to better risk outcomes. Other studies that have assessed the effect of diversity on a number of different outcomes have either focused on case studies, which make it impossible to generalize findings, or employed quantitative designs which make it difficult to control for the confounding effect of culture on these outcomes. The quantitative chapters in this dissertation benefit from data and research designs that overcome these challenges. By using a longitudinal prospective sample of finance firms and the use of fixed effects, I am able to control for any industry and organizational cultural contexts that would otherwise influence my ability to interpret the findings. In effect, not only do these findings support the Lehman Sisters' hypothesis, but they further our understanding of the benefits that other kinds of diversity can have. Whether the mechanism stems from a shift in organizational culture brought about through increased gender diversity in professional occupations, or the result of more sound decision making towards risk in diverse professional groups, this research lends support to the argument that diversity can have a positive influence on financial risk outcomes. Although these findings bring more clarity to the benefits of compositional diversity on risk outcomes, the more nuanced quantitative findings and qualitative chapter underline the importance of considering the interaction between culture, structure, and occupational norms in the analysis and the conclusions we can reach.

Previous research that fuels the Lehman Sisters' hypothesis suggests that women on average make better risk decisions than men (van Staveren, 2012; Apicella et al., 2008; Dwyer et al., 2002; Eckel & Grossman, 2002). If women in finance do not differ from women in the general population, we would expect to see that establishments with more women employed within them have fewer negative risk outcomes. While I do find that increasing women's representation in the professional ranks of an establishment is associated with a decrease in violations, the different occupational findings and compositional effects suggest the mechanism of influence is not just the aggregated actions of individual women. In gendered work cultures, such as those found in finance, risk-taking behaviour are tied to gender displays of masculinity (Paap 2006; Ely & Meyerson 2010; Eagly & Carli 2007; Martin 2001). Because I find a more pronounced decrease in violations when women are represented in more balanced composition in both professional and senior-management, this suggests that composition may undo gendered culture. When gendered culture shifts on account of a more balanced workforce, it could be that occupational logic and expertise can be relied on to assess and navigate risk in a more relevant way. Conversely, I find that an increase of women in mid-level management is associated with an increase in the expected number of violations. Given the prevalence of internal labour markets in the finance sector (Eriksson and Werwatz 2004), it seems likely that it is the pressures of occupational precarity, rather than any endemic difference, that drives the inverse relationship between sex composition and risk outcomes in these occupations. In essence, a more gender-balanced compositional structure is greater than the sum of its parts. It is not individual women that change the risk outcomes, but the effect of a diverse composition on culture which does. This finding is only further reinforced when we consider the effects that racial diversity has on risk outcomes.

Occupational differences between women in professional and senior management and women in mid-level management also point to the role of how professional identity and status influence how composition can change or be impeded by culture. Why don't professional women assimilate to the gendered culture with respect to risk-taking? While professional women are still subjected to the same gendered organizational pressure as other women in these organizations, I argue that their professional identity may insulate them to some degree from normalization of reckless risk-taking behaviour. Professionals' higher levels of strategic and operational autonomy might be used to rebuff gendered cultural pressures found in many finance firms. The training, skillset, and specialization that professionals bring with them into an organization are acquired externally (Davis 1996; Witz 1992; de Bruijn 2012). External associations, such as professional and certifying bodies have codes and expectations which professionals must abide by to keep their certification (de Bruijn 2012). Although all employees are socialized within an organization to a certain extent, professional identities are informed by factors external to an organization which are influential in how they carry out their identity and work. Strategic autonomy (the ability to choose one's work objectives) and operational autonomy (the freedom to carry out work objectives in an autonomous fashion) are both important incentives for how professionals operate within organizations (Tremlay and Genin 2010; Bailyn 1985). In organizations that remain hostile towards women in many ways, it is understandable that women may embrace their professional identity and the freedom their role as experts afford them in these organizations, to carry out their role in ways that are more true to their individual risk tolerance and assessment. For women in senior management, their relative status to mid-level management may offer a similar cultural-insulating quality. Mid-level managers are subjected to more pressure to culturally conform because their position is more tenuous and power is less accessible to them than to senior managers. Mid-level managers are still subjected to gendered conflations and assumptions around assessments of competency, which may create over-conformity to gendered cultural norms (Kanter 1977; Ely and Meyerson 2010). Senior managers' status in an organization may insulate them from these cultural norms because they possess the institutional power to challenge these norms.

The culture of finance firms described in early accounts of the industry immediately after sweeping changes policy changes in the industry in the early 2000s, did not paint a picture of an industry that had rehabilitated its culture (Roth 2007; Antilla 2002). However, these accounts were based on data generated at the beginning of this era of policy reform; 20 years on from this industry's #MeToo moment, has anything changed?

The short answer appears to be that for the most part, no. While more women have been hired into traditionally male-dominated occupations in the finance sector, these occupations remain skewed. Professionals and managers I interviewed described organizational cultures which continue to be gendered. While the "boom-boom room" days of open drug use and parties in Vegas with sex workers in attendance that Ben described may not be as explicit as they once were, the experiences described by participants still paint a very familiar picture. These organizations continue to have entrenched ideal worker norms, disincentivize use of gender equity policy, and still seem to have rampant sexual harassment and gender discrimination.

These interviews also exemplify the pressures that women may face to over-conform to existing gendered norms, even when it is to their detriment. Women in finance organizations continue to face alienation, discrimination and harassment, but are reluctant to use the policy that it is in place for fear this will harm their careers. Ideal worker norms - including expectations of near-constant availability, after-hours socializing with clients and coworkers, and intensive work schedules - mean workers continue to face pressure to conform to these norms in order to be recognized as valued and competent. Moreover, while many firms have gender diversity and equity and inclusion programs in place, women's accounts with discrimination and harassment in firms with extensive policy do not seem to differ much from those in moderate or minimal policy environments. Gender scholars have long called for organizations to remedy gender inequities through structural initiatives (Acker 1990; Kanter 1977). While more balanced diverse composition does seem to have an effect on risk outcomes, structural efforts to undo gender in organizations alone do not necessarily realize gender equity goals (Kelly et al. 2010; Blair-Loy 2009). How women interact with policy in the shifting structural landscape of finance firms can offer insight into why this might be the case. Many women I interviewed described strategies they used to fit in. They dressed, talked, and interacted with others in ways they recognized and described as being "like men" and some women voiced a reluctance to use policy. In environments that are hostile to women, doing gender in ways that allow them to fit in and get by becomes an important strategy. As one participant explained, when "bad stuff" like sexual harassment and discrimination happens she takes her cue for what to do by pondering "what would men do"? Doing gender appropriately for some women means doing gender in ways that are conflated with hegemonic masculinity in these organizations. Doing policy, or more accurately the strategic *disuse* of policy, may just be one more way that women do gender "like men" in these contexts. In effect, although the policy landscape of many finance organizations might be optically progressive, how these policies are implemented and taken-up exposes the lack of cultural supports that must be remedied to realize substantive change.

These findings illustrate two important points: finance firms continue to have gendered cultures which marginalize women; and women employ different strategies to cope with these pressures. Whereas women may cope with more interpersonal gender discrimination and harassment through assimilation strategies, and doing gender "like men", they may employ another strategy to cope with gendered cultural norms around risk. Women may find ways to assert their autonomy in situations that allow them more room to do so, such as carrying out their job and approach to risk in their professional capacity. This certainly seems to be supported through the compositional findings in the sex composition chapter, which finds that while an organizations' expected number of violations decreases with any increase in women's representation. This is especially the case when women make up 30 percent or more of professional and senior-management positions. This is not to say that policy doesn't matter. It is a necessary step on the path towards equity, but to have meaningful change, organizational strategies to shift the gendered culture must be employed alongside them.

The findings from the chapter on racial diversity speak to the role that other kinds of diversity can have on risk outcomes, underlining that it isn't necessarily gender that matters, but the presence of many perspectives informed from a diversity of backgrounds. We see similar patterns, where racial diversity in the professional ranks is associated with a decrease in negative risk outcomes, whereas increased racial diversity in management is associated with an increase in negative risk outcomes. I will discuss each in turn.

We know from previous research that homogenous groups have a propensity towards groupthink and confirmation bias (Janis 1982; Frey Schulz and Stahlberg 2013). Even a minimal number of minority members present in a group can improve group functioning and sidestep groupthink and confirmation bias (Schulz-Hardt et al 2000). It is not any specific group member that matters, but rather, the likelihood that members of a group will be members from different groups. The Blau index captures the degree of heterogeneity of the population and is an appropriate measurement to capture the effect of a groups' overall racial diversity, rather than its specific make-up (Rushton 2008). While we cannot directly observe the mechanisms that result in enhanced risk outcomes with diverse professionals, the literature suggests that diverse groups improve group processing, increase knowledge-elaboration, and enhance the deliberation of relevant information. More specific to the finance sector, we know that homogenous groups underestimate financial risk and make more mistakes in information processing than heterogeneous groups and populations (Bénabou 2012; Sharif 2005; Levine et al 2014). The absolute effect that racial diversity in the professional ranks of securities firms has on decision-making outcomes around risk is promising in that it suggests increasing racial diversity in these occupations, even without cultural interventions, can improve group decision-making outcomes around risk.

This is consequential because not all organizations have the impetus or resources to invest in the cultural supports that enhance diversity's effects on group functioning (Richard 2000). For organizations that aren't interested in social justice arguments for diversifying their workforce, outcome-based research plays an important role in showing the benefits of diversity. If racially-diverse professional teams in the Securities industry leads to more savvy decision-making around risk, findings like this may motivate finance firms to increase racial diversity, and this in turn may decrease a firm's at-fault violations.

However, diversity is far from a silver bullet solution to organizational woes. The finding that both racial and gender diversity in management is associated with more negative risk outcomes points to nuances we need to consider when we think of how, why, and when diversity works in organizations, and when it might not. Management's relationship with risk outcomes in finance firms differs from that of professionals. According to the EEO-1 designations, management are the individuals in the organization who plan, direct, and formulate policy and provide organizational goals. Managers also support these goals by providing direction to professionals and other employees. Managers set and implement growth strategies and depend on professionals to actively assess risk within the bounds of regulation in the day-to-day operations. The relationship between diversity in management and negative risk outcomes is different from professionals. I argue that the positive effect of racial diversity in management on negative risk outcomes is due in part to two intersecting factors: structural issues and the preferred traits of leadership.

When minorities exist in token numbers, they are more likely to face greater attention and scrutiny. This may affect how managers approach risk strategies. When minorities occupy roughly 15 percent of a group, they have only token status in an organization (Kanter 1977). When women exist in token numbers, presumed gendered differences are highlighted and dominant group members may magnify the relevance of gender in risk-decisions, leading to women facing greater scrutiny around their decisions towards risk (Kanter 1977; Izraeli 1983). This is more the case in management as compared to finance professionals, as the sex and race composition of professional occupations is on average is more balanced than management. On average, people of colour represent under 20 percent of professionals, and 16 and 8 percent of mid-level and senior managers, respectively. We can see the importance of overcoming token status when we look at the effect of women in senior management in risk outcomes. On average, women make up just 18 percent of senior management in Securities firms. Whereas women's token representation in senior management has no effect on a firms' expected number of violations, when women are represented in 30 percent and above of these positions, this is associated with a significant decrease in a firms' expected number of violations.

Counter to the token women who are represented in senior-management of finance firms, women professionals in Securities firms make up over 30 percent of the workforce. As women move towards more balanced representation, their presence and behaviour is more likely to be viewed by the dominant culture as less tied to their gendered category (Kanter 1977; Izraeli 1983). Further, organizational culture may influence professionals and managers differently.

Professionals are more likely to identify both with their profession's ethos outside an organization as well as their role within it. Managers are socialized more idiosyncratically within a firm's organizational culture and tasked with articulating and carrying out its goals and vision (de Bruijn 2012; Raelin 1989). Thus, managers are more subject to the culture of an organization while professionals are more likely to identify with the profession's ethos and culture. This may explain why female representation in the professional ranks reduces negative risk outcomes while female representation in management does not.

Similarly, non-white managers account for under 14 percent of this occupational group (EEOC 2015). Other studies have found that racial diversity leads to better organizational outcomes when racially diverse individuals exceed 25 percent of them management population (Roberson and Park 2007). Similar to gender, when non-white managers exist in token numbers, presumed differences may be highlighted and dominant unique group members are more likely to magnify the relevance of a salient identifier (such as race) of presumed difference. This, in turn, leads to increased scrutiny of non-white minorities, and increased pressure to assimilate to dominant institutions (Kanter 1977; Izraeli 1983). In effect, when minorities exist in token numbers, the increased scrutiny and pressure to assimilate to the dominant institution can dampen the potential for enhanced strategizing through knowledge elaboration and cognitive diversity.

Token representation can also mean diverse individuals within management are less free to offer up strategies that don't fit within the dominant organizational norms and may be more intensely scrutinized than members of dominant groups. Organizations are structured in ways where dominant members are granted more status, legitimacy, and authority (Acker 1990; Elsass and Graves 1997). In finance, where the majority of managers are white and men (EEO1 2015), it is likely that these groups hold the most status and authority. Input from minority members, most notably women and people of colour, are especially vulnerable to marginalization in organizations that have historically been structured and dominated by and for white men (Gutek 1985; Kanter 1977; Konrad et al. 1992; Tolbert et al 1995; Elsass and Graves 1997). Not only might this damper innovation, but it may lead to minority individuals doubling-down on dominant institutional strategies and approaches towards growth as they not only attempt to assimilate but to also prove competency. We can see this is supported in the categorical sex compositional findings, where women's more balanced representation leads to further decreases in violations. Because minority members face greater scrutiny, it could be that they are more likely to try to demonstrate ability by directing growth strategies in less risk-averse ways. Surface-level compositional diversity does not necessarily reflect diversity of these deeper level characteristics. Minority members who are hired into management positions might have the same tendencies towards risk as those who are already in leadership possess and value. It is also possible that minorities who self-select into pursuing management roles face increased pressure to assimilate into the status-quo norms of these roles, rather than innovate, dampening any effect that diverse perspectives they might bring to their role may have.

While these findings are conflicting, diversity can affect risk-outcomes in positive ways. Given the importance of cultural context in harnessing the potential for innovation that can come with diversity, culture still has an important role to play. Specifically, we know that in supportive and inclusive organizations, the positive effects of a diverse workforce are more readily harnessed (Ely and Meyerson 2002). Although finance firms are infamous for organizational cultures that are less than welcoming to diversity (Antilla 2002; Roth 2007), we see that compositional diversity can have a positive effect on risk outcomes. The cultural context of finance firms may stifle innovation from diverse employees, so it is in spite of this context, not because of it, that diversity improves risk-taking outcomes within professional occupations. Given what we know about the amplifying effect that a supportive organizational culture can have on outcomes of diverse groups (Ely and Meyerson 2002; Richard 2000), it is in an organizations' best interest to rehabilitate cultural issues that hinder this potential. When diversity is viewed and treated by an organization as a resource, rather than a social justice cause or solely a business advantage, it has the most potential for improving group dynamics and outcomes (Ely & Thomas 2001; Richard 2000). Hiring and promoting minorities into these positions in finance firms is just one step in a long process that organizations must put in place in order to realize these benefits to their full effect.

5.1. Policy Recommendations

My findings have direct policy implications that can provide important direction for diversity initiatives in finance firms. As part of my PhD program I worked with 2 organizations[14] to develop empirically informed policy recommendations that could be used in finance industry settings. These recommendations are intended for a non-specialist industry audience to help implement cultural strategies that can better support and harness the potential that gender diversity offers.

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The challenge of effective gender equity policy in male-dominated industries:

The #MeToo movement has shone a bright light on what many who work in male-dominated industries have known for a long time: women continue to face discrimination and sexual harassment at work, even when formal policies and resources are in place. What is clear is that while conventional gender equity policies are necessary, they aren't sufficient. I argue, based on my research, that gender equity initiatives must interrogate and change the cultural elements of many male-dominated organizations that disadvantage women and create laissez-faire attitudes towards reckless risk.

Twenty years ago, the finance industry experienced its own "#MeToo" moment. Hundreds of women from dozens of firms won some of the largest discrimination settlements in U.S. history. In response, courts often mandated policy and management initiatives to ensure gender equity goals could be met. Two decades later how much has changed? The short answer is not much. Many of these firms are infamous for sexist antics and deeply entrenched gendered cultures, where women continue to face high levels of discrimination and sexual harassment. The lack of lawsuits and front-page news should not be taken as evidence of rehabilitation. Along with the mandated and voluntary gender equity policies that were ushered in, countervailing practices included the requirement of new hires that discrimination and harassment complaints would be subject to mandatory internal arbitration rather than the courts (see Antilla 2016).

Despite the efforts of many finance firms over the past two decades to increase women's representation in professionals, sales, and management positions, men still occupy most of these roles. Seventy percent of key risk-assessment roles and 82 percent of management positions are still held by men (EEOC 2015). The barriers women face in finance aren't unique. Women in all kinds of male-dominated firms experience high levels of discrimination and sexual harassment, which makes them more likely to opt-out (Roth 2007).

How might these longstanding inequalities be better addressed? First, firms should enhance their efforts to hire and retain more women. Research tells us that in inclusive and respectful environments, a diverse workforce is associated with advances in innovation, better risk management and economic outcomes. Research has found that women, for various reasons, tend to manage risk in ways that create much better long- economic returns than men (van Staveren, 2012; Apicella et al., 2008; Dwyer et al., 2002; Eckel & Grossman, 2002). My own research empirically tests the Lehman Sisters' Hypothesis, which posits if more women are employed in occupations that make on-the-ground decisions around risk, there will be fewer irresponsible risks taken overall. In my analysis of financial violation data of securities firms in the United States from 2005 to 2015, I find support for this hypothesis. Firms that employ more women and minorities in key risk-management positions enjoy lower rates of criminal financial violations. Given there are economic incentives for employing more women in these firms, how can finance firms build more effective gender equity policy and cultures that *retain* these women in key positions?

Building Policy from the Ground up: Cultural Change Initiatives

An effective way to proceed is to avoid a "top down" organizational policy strategy that often serves as a blunt, or short-lived, initiative. Instead, I argue that a much better approach is to envision building an organizational culture, which can be metaphorically viewed as the scaffolding with which to provide structure and meaning to actions that take place within it. Culture is the context in which we are all embedded and is largely invisible to those who easily conform. It is made up of the norms, values, and ways of doing that circulate, and are accepted and rewarded.

Research in other male-dominated firms and occupations find that they often have what we call "gendered cultures": in which so-called "masculine" traits such as overconfidence, decisiveness, bravado, conforming to norms of overwork and long hours, and taking *reckless risks* become markers of competency (Paap 2006; Ely & Meyerson 2010; Eagly & Carli 2007; Martin 1998). Gendered cultures reinforce these approaches by rewarding those with such traits socially and monetarily. The norms and values that circulate in these organizations incentivizes individuals to conform to these expectations and marginalizes those who do not. This is particularly problematic in industries such finance that require nuanced, cooperative, and thoughtful behaviour for the best outcomes. My results show that as women's representation increases to meaningful proportions (over 30%) this can shift the organizational culture away from gendered valuations of competence and towards professional logic and expertise.

The finance industry is ripe for cultural change initiatives to enhance gender equity policy *and* that build cultures that value more responsible approaches to risk overall. To date, an emphasis on top down policies has led to gender equity policies in the vast majority of finance firms, which range from maternity leave, flex-time to better accommodate work-life tensions, mentorship opportunities and company-sponsored women leadership conferences. In practice, however, these policies are often seen as a workaround and an affront to a culture which devalues the very accommodations they are trying to make. I find that women who work in finance face increased tension and marginalization for using them. Cultural change initiatives grapple with repairing the scaffolding to bring about better support for equity goals and encourage workers to make use of policy options that are intended to improve equity outcomes.

A Three-Pronged Approach to implementing cultural change in finance:

1) Equity policies should catalyze and *normalize change to the existing gendered culture*, rather than accommodate those who are presumed different. Organizations should examine how norms of overwork and work-first mentalities reinforce a gendered culture, and instead work to build policy in ways that dismantle this mindset. This might include a maximum number of hours per week, removing expectations of constant availability, and the availability of parental (rather than solely maternity) leave. Organizations should also have a zero-tolerance for discrimination and harassing behaviour. If a manager or an employee discriminates or harasses a colleague, behaviour should be formally documented and these behaviour should be considered appropriate grounds for dismissal. Organizations should also formalize personnel procedures to minimize the impact of implicit bias on hiring and promotion decisions. These changes focus on reliance on public posting of positions (rather than relying on internal networks), objective and consistent evaluation criteria that is anonymized when possible, and hard targets with respect to occupational-level diversity.

Another way organizations can catalyze necessary change to an existing *gendered culture*, is to employ women in key positions in meaningful proportions, beyond token numbers. My research has found that women have an especially impactful effect on minimizing risk outcomes when they represent 30 percent and over of risk-facing positions. It appears that when women are represented in more balanced proportions, there is a shift towards a more gender-neutral culture, which prioritizes and normalizes the reliance on professional expertise and occupational logic when assessing risk over gendered displays of risk-taking.

2) The conventional approach to achieving gender equity that holds the most promise for achieving greater diversity is establishing organizational responsibility for concrete composition goals (Kalev Dobbin Kelly 2006; Hirsh and Cha 2017, 2018). Centralized and decentralized figures who are responsible <u>and</u> held accountable for workforce composition goals tend to be the most effective structural strategy to achieve these goals. Specifically, this can be accomplished by installing a diversity and inclusion office, interdepartmental task force, and a Chief Diversity Officer.

3) Finally, finance firms should follow the lead of the Tech industry and remove mandatory arbitration clauses from new-hire contracts. While this strategy provides protection from lawsuits, they are against the spirit of diversity objectives.

Cultural change strategies work to change the scaffolding - the structure - of an organization, rather than building policies on a shaky foundation. Cultural initiatives grapple with how to build inclusive and respectful contexts that better harness the power of diversity. They are the best shot we have to achieve meaningful gender equity goals in male-dominated industries. Increasing women's representation in meaningful proportions is another important structural change, and can be an important first or concurrent step an organization can take to create better equity and risk outcomes.

Limitations

While this research provides important insights into the role of compositional diversity on risk outcomes and women's experience of equity policies in finance firms, there are limitations to the research design and data that should be addressed in future research.

The trade-off in testing the Lehman Sisters' hypothesis quantitatively is that I cannot directly observe the behaviour behind the findings. The racial diversity chapter faces similar challenges. The exact mechanisms that influence these results, especially regarding the different occupational effects can only be theorized obliquely.

The interviews also have some limitations that must be addressed. Although this study provides an important understanding of how structural solutions to gender equity can be undermined by culture and individual gender practices, there are some considerations for generalizability and future research. Because I used a semi-structured format, participants were free to raise issues they felt were most relevant. My own identity as a white, cisgendered woman arguably influenced both the rapport with interviewees and content of interviews. Women often raised gender without prompting, but this was not the case with men. It is possible women felt more comfortable raising gender in a way men did not (Pini 2005). Also, the findings may also be endemic to the finance sector. The gendered nature of finance organizations is especially entrenched, and may not be representative of organizations in other industries. Finally, because my interview participants are racially and ethnically homogenous, I have not been able to consider issues of intersectionalities, which no doubt create more complexities in how one manages to assimilate or not into the dominant culture of these organizations, and which strategies, if any, other minorities employ.

5.2. Future Directions

Hiring more women and people of colour into key positions in finance firms seems a prudent step towards achieving not just more stable economic markets, but greater equity as well. Future research should focus on the role of strategic and operational autonomy as a potential insulating factor for how individuals are affected by the gendered structures and culture they are embedded within in an organization. More work should also be done to understand the effect that diversity in senior-level management has on risk outcomes. Mid-level managers do not have the same resources, status, or prestige as they would in a senior management positions, and likely are in a more tenuous position within the organization. Because of this, they may be under increased scrutiny and greater pressure to assimilate to conventional norms within the organization. Senior managers may have more power and autonomy than in mid-level managers to effect organizational culture. Future research should attempt to parse out the effect of different levels of management on risk outcomes to help bring clarity to this question. Qualitative work in both these veins would help shed light on how gendered organizational culture can be undone through professionalization, and what compositional factors are most effective at doing so.

Future research should also explore whether minority members who occupy management positions approach risk and growth in any qualitatively different way from dominant members, and whether more balanced diversity of management leads to more nuanced approaches to financial risk taking. Qualitative studies on the dynamics between racial diverse professionals in the Securities sector in relation to decision-making would also be helpful to more directly understand differences between how racially diverse versus racially homogenous groups make decisions.

Finally, opportunities and hierarchies in work organizations are gendered but they are also cisgendered, raced, and classed (Yavorsky 2016; Acker 2006). Diversity initiatives focus on all kinds of diversity, and qualitative studies should be undertaken to better understand how and if policies are taken up by members of other marginalized populations. The qualitative portion of this dissertation has focused on women's experiences in these organizations, but future studies should look at the experiences of minority men in these organizations (e.g.: racialized or non-heteronormative,) and people of colour, and whether they rely on similar cultural assimilation practices.

5.3. Conclusion

Finance has remained stubbornly sex and race segregated despite widespread policy reform in the industry over the past two decades. It is unlikely that all organizations will be swayed by social justice arguments alone for incorporating more women or racial minorities into its professional ranks. Empirical studies such as this, which show definitive benefits for hiring more diverse professionals, may prove to be a more compelling motivating factor for making a "business case" for diversity. Although there are caveats to the benefits of hiring minorities based on business-motivations (Ely and Thomas 2002), this research suggests more women and minorities in professional positions at Securities firms result in fewer violations, regardless of cultural context.

This study adds to the literature which calls for gendered organizational change to take place at the cultural - as well as structural - level and suggests that organizations must be cautious in their attempts to reach gender equity goals through structural means alone. So long as structural strategies are used as a unilateral approach to remedy gender inequities, policy solutions embedded in a gendered culture rely on individuals to take up practices which are antithetical to what and who an ideal worker looks and acts like. If the cultural climate of these firms still incentivize all workers to do gender 'like men', and doing gender 'like men' involves the disuse of gender policy, the solution is not just more policy. The solution lies in a more direct interrogation of the cultural underpinnings which provide a gendered context from which to interpret all behaviour.

Increasing diversity is not a complete remedy to enhancing risk decision outcomes, but it is an important start. Similarly, equity policies aren't sufficient for changing an organization's culture, but they are a necessary first step. In both quantitative analyses, I find evidence that diversity does have an absolute effect on risk outcomes in Securities firms, even when controlling for the effects of culture on diversity. Hiring diverse professionals into the traditionally homogenous setting of the Securities sector can lead to better risk decision outcomes. This has important implications for the industry, however, it is important to recognize that these outcomes might be improved by also addressing culture. The reinforcement of collective norms, emphasis of common goals, and the tenets outlines in the integration and learning perspectives towards diversity are all important factors to build a supportive culture which values contributions of all members (Williams and O'Reilly 1998; Ely and Thomas 2001). While it is tempting to conclude that increasing diversity in a firm overall is a promising avenue to better decision-making around risk, the disparate occupational findings and women's continued challenges with sexism in these firms remind us that the solution is more nuanced, and we must strive to better understand these mechanisms and their solutions to move forward on the path towards meaningful equity.

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APPENDIX A - INTERVIEW SCHEDULE

1) Demographic Information

So I have it on record, I'd like to start by asking you some basic questions about yourself and your job.

a) What is your title at work and how long have you done this work (what year did you enter the profession?). How long have you worked at your current company?
b) Have you worked at other financial firms?
c) Can you tell me about what drew you to this line of work?
d) Can you tell me a little bit about what it is you do, in general terms?
Prompt: can you walk me through what you would say is a typical day?
e) How many hours do you work in a typical week?
f) Can you tell me about your relationship with your boss or who and how you are supervised in your job? (autonomous versus more guidance, etc.)

2) IMPRESSIONS OF CULTURAL IMPRESSIONS/STEREOTYPING
I'd now like to turn to your impressions and opinions of how the broader public sees your line of work and whether or not you feel there is an accurate understanding of the nature of the work that you do.

a) What sort of stereotypes do you think people hold about people that work in your line of work?
b) In your experience, would you say these stereotypes are accurate? How or how not?
Prompt: Can you give me a specific example of an experience that you've had or witnessed that either conforms to or challenges these stereotypes?
c) Do you think in general people think men and women are equally capable of keeping up with the pressures of your job?
Prompt: Can you give me a specific example of an experience that you've had or witnessed that either conforms to or challenges these impressions?
d) There has been a lot of press recently around lawsuits against financial companies and depictions in pop-culture that paint a picture of the financial sector in a certain light. Drawing on these sorts of depictions, can you tell me if you see these accounts as accurate or typical with your experiences at work?
Prompt: Offer popular cultural representations, e.g.:*Wolf On Wall Street*, *Wall Street*; *Media coverage on discrimination lawsuits)*

3) ASSESSMENTS OF RECOGNIZED COMPETENCIES (organizational and personal norms)
I'm interested in what sort of people you feel are best-suited to your line of work, and what your company's expectations are of their employees.

a) Do you think there are certain attribute or traits that make a person particularly suited for your line of work? Why? On the other side of that, who wouldn't or doesn't succeed in your line of work? Why?

b) Turning now to your employer, and the company's expectations of their employees, what is their 'ideal employee'? Who is that and what do do?
c) Thinking now about your own experiences, what would you say an ideal employee looks like to you.
Prompt: for example, what do they do, how do they behave, what sort of attributes do they have? Does this differ from from what your companies 'ideal worker' looks like? Do the company expectations actually translate on the ground to what needs to be done in order to be successful? How not?
d) What does it take to get ahead and advance in your company? Is this typical of the field?
e) How does your company evaluate your performance? What criteria is that based on (both officially and unofficially)? Have you ever felt you have been unfairly assessed?
Prompt: If yes - prompt for circumstance.
f) Would you say your employer expects you to attend social or after-hour events or meetings or gatherings? Does this factor into your employer's assessment of their workers? How or how not? Is that typical of the industry?
g) Have you ever felt you were singled out and treated unfairly at work?
Prompt: around promotions/evaluations/etc.; ask for a specific example
If you make a complaint/took action against unfair treatment, What would your recourses for this be? Who would you go to? Would you face any repercussions for pursuing this?

4) EFFECTS OF WORK ON PERSONAL LIFE/SELF-IMAGE
I'd like to turn now to about the role your job plays in the your life.

a) Has your job has effected your personal life, and if so, in what ways?
Prompt: Ask for specific example.
b) Has your job ever effected your personal or family life outside of work?
c) Do you find it hard to be 'off the job' , and leaving work behind when you leave? Can you give me a specific example of this? Would you say this is pretty typical for your peers?

5) CONCEPTUALIZATION/DEFINITIONS OF RISK
I'd like to ask you a little bit about what taking risks looks like in your industry and I'd like to understand how you assess risk-taking in your line of work.

a) Can you give me a definition of what risk-taking is in your line of work?
b) Would you say taking risks is a necessary part of your job? Can you give me a specific example?
c) Can you think back to a specific example of you or someone you've work with that has taken an irresponsible risk? (i.e.: a risk that has gone 'too far', regardless of the outcome)
d) What would your employer describe as an acceptable level of taking risks?

e) Is there official policy around acceptable levels of risk-taking? (If so: Does the 'official' policy differ from 'on the ground' expectations of your employer? In other words, do they say one thing via policy but expect another in your practice?)
f) How much do federal securities regulations (i.e.: SEC or CFTC) affect how you or your colleagues do your jobs and assess risk?
g) Some might say that federal regulations that govern the finance industries aren't realistic - would you agree with this? Do you ever find yourself or see others in your industry at odds with these expectations?

6) POLICY SPECIFIC QUESTIONS

I'd like to turn now to policies that exist in your company, and I'm interested both in what the official policies are, whether those policies are followed and/or realistic, and your opinions of them.

a) Can you tell me about some of what some of the more important and/or influential policies are at your company?
Prompt: What are your overall thoughts, impressions, experiences with these?)
Prompt: If participant has worked in other financial firms, ask to compare to other experiences
b) Are there mentorship opportunities at your company? Are they official policies around this? Does everyone take part in these opportunities? Who does/who doesn't? Are they helpful? In what way?
c) Does your company have a diversity office? What is it that they do? Do you think they're useful? Effective? How or how not? Can you give me a specific example of how diversity policies have affected either you or a colleague?

APPENDIX B - CONSENT FORM

The University of British Columbia
Department of Sociology
6303 NW Marine Drive
Vancouver, BC V6T 1Z1

CONSENT FORM

Project Title: Financial Organizational Culture and its Effect on Individual Behaviour

Principal Investigator: Dr. Beth Hirsh, Department of Sociology, (###) ### ####

Co-Investigator: Hazel Hollingdale, PhD Candidate, Department of Sociology, (###) ### ####

Purpose: This research project aims to understand the effect of organizational influences, such as policy, organizational culture, norms, and expectations on individual behaviour and self-image. More specifically this study is interested in how these expectations affect decision making and one's self-concept of those who work within the financial services sector. This research is being conducted for a PhD thesis.

Study Procedures: Your participation in this study will take approximately 60 to 75 minutes. You will be interviewed and asked about your experience with and impressions of workplace policies, expectations, and norms. You are free to stop participating at any time during the process. The study is funded by a grant from the Canadian Social Science and Humanities Research Council.

Confidentiality:
The data that is generated from the interview will never be disclosed in any way that will identify you individually, or any organizations that are discussed in the process of the interview. The results will draw on major themes that develop through the interviews, and the results of all participants, and any possible identifying information will not be reported. Because this research is being undertaken as part of a PhD thesis, aggregated, non-identifiable results of the study will be made available for public viewing through submission of the dissertation and subsequent publications in academic forums. At no time will identifying information ever be disclosed. The interviews will take place within a private office that is located in an area outside of your workplace, or at a private location of your choice.

Your identity and any the identity of any organizations discussed will be kept confidential, and an identification number will be assigned to your interview in order to keep all data as anonymous as possible. Any digital files pertaining to the interview will be password protected and encrypted, and will be stored on a password-protected computer within a locked office at the university campus.

Potential Benefits:
By participating in this research, your impressions and recommendations can help researchers understand the organizational influences on employee's behaviour in the financial sector, especially around risk-taking. Part of this research aims to make policy recommendations about best-practices which are specific to the financial services sector.

Renumeration/Compensation:
All participants will be reimbursed for any travelling expenses accrued.

Contact for information about the study:
If you have any questions or concerns about this study, please contact Dr. Beth Hirsh, who is the academic advisor for this project, at (###) ### #### or by e-mail at name@mail.ubc.ca A report of the results will be provided to all interested participants at the end of the study.

Contact for concerns about the rights of research subjects:
If you have any concerns, or complaints about your rights as a research participant and/ or your experiences while participating in this study, contact the Research Participant Complaint Line in the UBC Office of Research Ethics at (###) ### #### or if long distance email name@ors.ubc.ca or call toll free #-###-###-####.

Your participation in this study is entirely voluntary and you may refuse to participate or withdraw from the study at any time. You will still receive reimbursement for travelling expenses.

Your signature below indicates that you consent to participate in this study.

Participant Signature   Date

______________________________   ____________________

Printed name of the Participant

____