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borrowers rely on collateral when pledgeability is high, not low. That is, collateral does not make up for a lack of pledgeable cash. In this case, the demand for collateral from the initial creditors can be so high that it encumbers the assets, creating a collateral overhang that may inefficiently constrain future borrowing and investments.

The paradox of pledgeability

Jason Roderick Donaldson, Denis Gromb, Giorgia Piacentino



Background

- Collateral matters.
 - ≡ In much of the finance literature, collateral matters because it **mitigates** enforcement frictions **between borrowers and creditors**; i.e., “collateral pledging makes up for a lack of pledgeable cash” .
 - ≡ Collateral also plays another role, emphasized in the law literature. Collateral matters because it **mitigates** enforcement frictions **among creditors**, i.e., “a secured transaction [is] the protection... against the claims of competing creditors”.
- These two roles of collateral correspond to the two components of property rights that accrue to secured creditors upon default: **the right of access** (a creditor’s right to seize collateral) and **the right of exclusion** (a creditor’s right to stop other creditors from seizing collateral).



Main work

- In this paper, we **present a finance model** based (solely) on the **latter role**.
- We **focus on the case** in which B is close enough to default that this new debt can significantly dilute existing debt.
- **Numerical example:** with higher pledgeability $\theta = 1/2$ contrast to $\theta = 2/5$ (**B's total repayment is at most a fraction θ of his total cash flow**), B can no longer borrow unsecured from C_0 .
 - ≡ **High pledgeability** makes taking on new debt easier, which **dilutes existing creditors**.
This leads existing creditors to require collateral for protection against possible dilution by collateralized debt. There is a **collateral rat race**.
- Model
- Results: analyze the model's **subgame perfect equilibrium outcomes**.
- empirical implications



	Date 0	Date 1	Date 2	
Project 0:	200	($\geq NPV$)	600	} 是否组合 流入 1000
Project 1:		500 ($\geq NPV$)	400	

若 $\theta = \frac{2}{3}$, B does the efficient thing.

$$\frac{2}{3} \times (600 + 400) < 500. \quad \therefore B \text{ does the efficient thing}$$

若 $\theta = \frac{1}{2}$, $\frac{1}{2} \times (600 + 400) = 500$, C_1 is willing to lend.



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Conclusion

- We develop a model in which collateral serves to **protect creditors from the claims** of other creditors. **We find** that, **paradoxically**, borrowers rely most on collateral when pledgeability is high. This is when taking on new debt is easy, which dilutes existing creditors. Creditors thus require collateral for protection against possible dilution by collateralized debt.
- There is a collateral rat race. But collateralized borrowing has a cost: it encumbers assets, constraining future borrowing and investment. There is a **collateral overhang**.
- **Our results suggest** that **policies aimed at** increasing the supply of collateral can **backfire**, triggering an inefficient collateral rat race. Likewise, upholding the absolute priority of secured debt can exacerbate the rat race.
- ✓ To our knowledge, our model **is the first to focus on** the role collateral can play in mitigating nonexclusivity, arguably its role legally.



increasing the share of cash flows
that a firm can pledge as collateral
can make it worse off?

Is there a paradox of pledgeability?

Dan Bernhardt, Kostas Koufopoulos, Giulio Trigilia



Background

- Do firms benefit from having access to a wider set of assets that can be pledged as collateral? The canonical view is that greater cash flow pledgeability should relax a firm's financing constraint, thereby benefiting firms, which is consistent with the empirical findings of Campello and Larrain (2016).
- However, Vig (2013) shows that greater pledgeability led to an inefficient liquidation bias in India, while Acharya et al. (2011) present cross-country evidence that pledgeability is associated with an excessive reduction in corporate risk taking.
- Therefore, in light of the tremendous expansion of collateralizable assets in the US and abroad in recent years, it has become important to identify and understand the theoretical conditions under which greater pledgeability can harm a firm.



- **Donaldson et al. (2019)** (henceforth **DGP**) develop a dynamic model, identify increasing the share of cash flows that a firm can pledge as collateral can make it worse off.



- To see the **logic**, consider the effect of an increase in a firm's pledgeable assets. Regardless of whether the firm was investing efficiently before, **absent informational asymmetries**, having access to more collateral has an **option value** that cannot hurt.
 - The firm can always increase the amount of secured debt issued at date zero to offset the increase in pledgeability, if this is needed to impede the financing of negative NPV projects.
 - If not needed, the firm might be able to exploit the greater pledgeability to free some collateral needed to take on future positive NPV projects.
 - Either way, pledgeability does not harm a firm.



Main work

- Assumptions: DGP impose five restrictions on model parameters:A1-A5
- DGP then observe that for a collateral rat race to result in a collateral overhang—i.e., an inefficient outcome—two further conditions need to be met:A6-A7

VS

- this restriction does not preclude the use of a secured debt contract indexed on investment that implements the first best for all parameter values.
- A7 and A2 do not simultaneously hold.
- Our findings suggest that future investigations of the conditions under which pledgeability might hurt a firm should explicitly consider informational asymmetries between the firm and its investors.



Conclusion

- We show that in the limited-commitment framework of Donaldson et al. (2019), firm value always increases in the fraction of cash flows that can be pledged as collateral. That is, pledgeability increases investment efficiency and relaxes a firm's financing constraint.
- We derive this conclusion using the same contracts considered by the authors and generalize the result to an arbitrary number of states.
- We also show that the first best can always be implemented by a nonstate-contingent secured debt contract, which differs from the ones they consider.



Emergency loans and collateral upgrades: How broker-dealers used Federal Reserve credit during the 2008 financial crisis

紧急贷款和抵押品升级：2008年金融危机期间经纪交易商如何使用美联储信贷

Mark Carlson, Marco Macchiavelli



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Background

- Broker-dealers (or dealers) were at the **epicenter** of the 2008 financial crisis and **involved in most of its critical events**, including the near-default of Bear Stearns and the bankruptcy of Lehman Brothers, just hours after Merrill Lynch was acquired. Amid questions about their viability, concerns were **heightened about the risk of runs on the dealers**, which could lead to firesales of their illiquid inventories and reductions in credit to their clients.
- some contraction in dealer balance sheets was expected amid an economic slowdown, stresses in financial markets raised the likelihood that such a contraction would **turn into a disorderly deleveraging** in the midst of falling asset prices. （通过抛售资产等方式降低负债，逐渐把借债还上。这个过程造成了大多数资产价格如股票、债券、房地产的下跌。）
- Confronted with this situation, the Federal Reserve acted as a lender of last resort to the dealers. **As dealers are not eligible for the Fed's traditional discount window (DW) lending facilities, it created new facilities for them.** These facilities were intended to help keep the dealers from having to liquidate their portfolios of assets into illiquid markets at fire-sale prices, to mitigate the extent to which illiquidity at dealers would spill over to their clients, and to support the ability of the dealers to continue to provide market making services.



Main work

- In this paper, we investigate how these new lending facilities affected the behavior of the dealers and whether the facilities were effective.
- the Fed created two lending facilities: the Primary Dealer Credit Facility (PDCF)一级交易商信贷工具和 the Term Securities Lending Facility (TSLF)定期证券借贷工具. The PDCF was structured similarly to the regular discount window for banks. The TSLF was an auction-based facility in which the dealers could borrow Treasury securities from the Fed' s System Open Market Account (SOMA) portfolio while pledging either other Treasury and agency securities or high-grade private securities as collateral即一般证券交易商可将证券商品当做抵押并与Fed交换美国政府公债，并透过销售美债获取现金。
- we take advantage of the auction cycle to identify how dealers' behavior changes in response to the ability to pledge a broader set of collateral at the Fed.



Conclusion

- During the 2008 financial crisis, the Federal Reserve established two emergency facilities for broker-dealers: one provided **collateralized loans**; the other, **collateral upgrades**.
- These facilities **alleviated dealers' funding pressures** when access to repos backed by illiquid collateral deteriorated. The ability to upgrade collateral allowed dealers to continue funding their own illiquid inventories (avoiding potential firesales) and to **provide better bond market liquidity**. It also **helped sustain dealers' credit** to hedge fund clients, which in turn posted relatively better returns.



Contribution

- **Previous studies** have examined the impact of these emergency lending facilities (PDCF and TSLF) on market conditions. These have tended to **focus on the impact on interest rate spreads or measures of market functioning**.
- Our analysis **complements these studies** by looking at how the use of these facilities affected dealers' behavior, **in terms of** substituting for the reduced supply of private repo funding and supporting dealers' credit to clients and their ability to finance illiquid inventories.



CEOs' outside opportunities and relative performance evaluation: evidence from a natural experiment

Ke Na



Background

- Agency theory suggests that the compensation of chief executive officers (CEOs) should be tied to their performance relative to a peer group **because** CEOs **cannot affect** general market conditions and need to be compensated for **bearing common risk**.
- Although recent empirical studies provide evidence consistent with this so-called relative performance evaluation(RPE), **many exogenous shocks beyond CEOs' control** are not completely filtered out of their compensation contracts.
- Oyer (2004) and Himmelberg and Hubbard (2000) suggest that the practice of **linking CEO pay to market returns is optimal if** the value of CEOs' outside opportunities (reservation utility) is correlated with general market conditions. A positive shock to the economy will increase the demand for managerial talent in the external labor market. To the extent that managerial talent is scarce, competition will drive up CEO compensation in equilibrium.



- Establishing a causal link between CEOs' outside opportunities and the use of relative performance evaluation empirically is difficult because firm- and executive-level proxies for CEOs' outside opportunities are usually endogenous to the contracting environments.
- In this paper, I tackle this question by exploiting an arguably exogenous increase in CEOs' outside opportunities due to the staggered rejection of the Inevitable Disclosure Doctrine (IDD) by US states.
- The IDD prohibits employees with valuable trade secrets from working for another firm if they would inevitably disclose the current employer's trade secrets.
- From 1999 through 2014, a total of 16 states in the US had rejected the IDD by ruling that the doctrine is not enforceable. In doing so, states remove an important mobility restriction for employees holding trade secrets, which should lead to an increase in CEOs' outside opportunities.



Main work

- The rejection of the IDD is an **appealing setting to test the outside opportunities-based hypothesis for linking CEO pay to general market conditions.**
- Using a panel of 33,574 US firms from 1992 to 2016 and a difference-in-differences approach, I provide evidence that CEOs' outside opportunities have a **significant impact** on the use of relative performance evaluation.
- I **first decompose** firm performance into an **unsystematic component** and a **systematic component** by regressing it on peer performance. Unsystematic (Systematic) performance is the residual (the expected value) of the regression. **Then** I implement a difference-in-differences estimation where I compare the sensitivity of CEO pay to systematic performance before and after the rejection of the IDD.
- Using this research design, I show that the rejection of the IDD in a given state markedly **increases the sensitivity of pay** to systematic performance.



$$\text{Firm performance}_{i,t} = \gamma + \delta \times \text{Peer performance}_{i,t} + \epsilon_{i,t}, \quad (1)$$

systematic component of firm performance equals the predicted value of the regression, $\hat{\gamma} + \hat{\delta} \times \text{Peer performance}_{i,t}$, and the unsystematic component of firm performance equals the residual of the regression, $\hat{\epsilon}_{i,t}$ ($\text{Firm performance}_{i,t} - \hat{\gamma} - \hat{\delta} \times \text{Peer performance}_{i,t}$).

$$\begin{aligned} \text{LogComp}_{i,t} = & \alpha_0 + \alpha_1 \text{Unsystematic performance}_{i,t} \\ & + \alpha_2 \text{Systematic performance}_{i,t} + \alpha_3 \text{IDD}_{j,t} \\ & + \alpha_4 \text{Unsystematic performance}_{i,t} \times \text{IDD}_{j,t} \\ & + \alpha_5 \text{Systematic performance}_{i,t} \times \text{IDD}_{j,t} \\ & + \text{Controls}_{i,t} + \text{Firm}_i + \text{Year}_t + \epsilon_{i,t}, \quad (2) \end{aligned}$$

$\text{IDD}_{j,t}$: is an indicator variable equal to one if state j rejected the IDD before year t , and zero otherwise;

where $\text{LogComp}_{i,t}$ is the natural logarithm of one plus total CEO compensation of firm i in year t ; *Unsystematic*



Conclusion

- This paper examines the effect of CEOs' outside opportunities on the use of relative performance evaluation (RPE) in CEO compensation.
- My tests exploit the staggered rejection of the Inevitable Disclosure Doctrine (IDD) by US state courts as an exogenous increase in CEOs' outside opportunities.
- I find that the rejection of the IDD leads to a significant increase in the **sensitivity of CEO pay to systematic performance** (less RPE). **This increase is more pronounced** for CEOs with greater labor market mobility and industries where proprietary information is more important.
- These results **suggest** that firms link CEO pay to **systematic performance** to **retain talent** and ensure participation.



Contribution

- First, it contributes to the literature examining **the use of relative performance evaluation in CEO compensation**. Under the optimal contracting view, firms tie CEO pay to systematic performance when firms compete for strategic complements or because the value of CEOs' outside opportunities is related to general market conditions.
- Second, this paper adds to the literature that examines the role of CEO labor market in the understanding of **compensation policies**.
- Third, this paper also relates to the literature on **the benchmarking of CEO compensation**.
- Fourth, paper also relates to studies on **labor laws and corporate policies**.



Swap trading after Dodd-Frank: Evidence from index CDS

多德-弗兰克法案后的互换交易：来自指数CDS的证据

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- SEF（互换交易设施）是一个在掉期交易中匹配交易对手的电子平台。通过《多德-弗兰克华尔街改革和消费者保护法案》(Dodd-Frank Wall Street Reform and Consumer Protection Act)的授权，证券交易所改变了此前用于衍生品交易的方法。多德弗兰克法案定义交换执行设施)、“它是一种设施, 交易系统或平台，多个参与者通过接受其他参与者的报价，进行互换。”简而言之，在SEF的保护伞下，现在有几个批准的平台，允许多个买价和出价。
- 在多德-弗兰克法案之前，掉期交易只在场外交易市场进行，缺乏透明度和监管。因此，互换交易设施的作用是提供透明度（*order exposure*），并提供完整的交易记录和审计跟踪。证券交易委员会(SEC)和商品期货交易委员会(CFTC)监管SEFs。
- **winner’ s curse problem:** 拍卖过程中，由于特定土地的石油产量很难被准确估计，各家公司的专家给出的估值会有高有低。在拍卖中，估价较高公司的出价会比估价较低的公司高，这样赢得拍卖的公司就会是估价最高的公司。Capen等人发现，在这种情况下，赢得拍卖的公司很可能会亏损（形象说法就是“被诅咒了”）。如1969年阿拉斯加北湾原油拍卖中，赢者的出价是9亿美元，而第二高的价格只有3.7亿美元。在26%的案例中，中标价超过了次高价的4倍以上，在77%的案例中，中标价格超出了次高价至少两倍。
- **Request for quote (RFQ).** Customers select multiple dealers and request quotes from each, revealing their intended trade size, side, and identity. **The RFQ mechanism is thus similar to sealed-bid first-price auctions**封闭最高价式拍卖. Importantly, dealers observe how many other dealers a customer contacts in the RFQ.



Abstract

- The Dodd-Frank Act mandates that certain standard over-the-counter (OTC) derivatives must be traded on swap execution facilities (SEFs). 互换交易设施提案
- Using message-level data, we provide a granular **analysis of dealers' and customers' trading behavior** on the two largest dealer-to-customer SEFs for index credit default swaps (CDS).
- On average, a typical customer contacts few dealers when seeking liquidity. A theoretical model shows that **the benefit of competition** through wider order exposure **is mitigated** by a winner's curse problem and dealer-customer relationships.
- Consistent with the model, we find that order size, market conditions, and customer-dealer relationships are important empirical determinants of **customers' choice of trading mechanism and dealers' liquidity provision**.



- SEF trading mechanisms
- Data and summary statistics
- A model of SEF trading and implications
 - ≡ by building and solving a parsimonious model, two relevant economic forces : explain the customers' and dealers' behavior throughout the trade formation process
 - ≡ *What prevents customers from seeking quotes from as many dealers as possible?* We propose **two channels** that reduce the benefits of increasing the number of competitors
 - the winner' s curse
 - the customer dealer relationship
- Further empirical tests
 - ≡ Customers' choice of order exposure (RFQ or RFS?/what determines the number of dealers)
 - ≡ Dealers' response rates in RFQs
 - ≡ order size, market conditions, the number of competitors, and customer-dealer relationships are **all important determinants** of strategies and outcomes in this market.



Contribution

- Our main empirical **contribution** is the analysis of customers' and dealers' **strategic behavior** throughout the trade formation process, from the initial customer inquiry to dealers' responses to the final trade confirmation, all with time stamps. The granular data enable us to **separately analyze** the demand for liquidity (customers' inquiries) and the supply of liquidity (dealers' responses).
- Our study also contributes to the understanding of **new electronic trading mechanisms** in fixed-income markets, in particular the RFQ mechanism.
- another key contribution of our paper is **the model**.



The conditional expected market return

Fousseni Chabi-Yoa, Johnathan Loudis



Background

- The expected excess market return, commonly known as the market risk premium, is the compensation that investors require for holding the market portfolio. Over the years, researchers have developed many approaches to estimate the market risk premium. Early efforts focused on estimating the market risk premium through the lens of the capital asset pricing model (CAPM) with differing conclusions.
- More recently, researchers have looked to other techniques and models for estimating the market risk premium.
- Martin (2017) shows that the risk-neutral variance of the simple market return discounted by the risk-free return is a lower bound for the conditional expected excess return as long as his negative correlation condition (NCC) holds. Martin's work does not account for the effect of higher-order risk-neutral simple return moments. (i.e., skewness, kurtosis, and other higher moments)

$$\text{COV}_t(M_{t \rightarrow T} R_{M,t \rightarrow T}, R_{M,t \rightarrow T}) \leq 0$$



- In this paper, we exploit a no-arbitrage condition and a Taylor series expansion of the inverse of the marginal utility to **construct new lower and upper bounds** on the **conditional expected excess market return** that are functions of higher-order risk-neutral simple return moments. We also use our results to construct lower and upper bounds on **higher-order physical moments** of the market return.



Main work

- Theoretical framework
 - ▮ presents the theory that we use to derive our bounds on expected excess returns and discusses the theoretical **differences between** our bounds and the lower bound derived in Martin (2017).
- Empirical results
 - ▮ we **provide empirical support** for the theoretical results .
 - ▮ we characterize empirical analogs to our theoretical bounds and show that we **cannot reject that the bounds are tight**.
- Further discussion
 - ▮ **presents empirical evidence regarding the difference** between our bounds and the lower bound from Martin (2017).
- Conclusion



Conclusion

- We derive lower and upper bounds on the conditional expected excess market return that are related to risk-neutral volatility, skewness, and kurtosis indexes.
- The bounds can be calculated in real time using a cross section of option prices. The bounds require a no arbitrage assumption, but they do not depend on distributional assumptions about market returns or past observations.
- The bounds are **highly volatile, positively skewed, and fattedailed**. They imply that the term structure of **expected excess** holding period returns is **decreasing during turbulent times and increasing during normal times** and that the expected excess market return is on average 5.2%.
- *the main difference is that our bounds include effects from higher-order risk neutral moments in addition to risk-neutral variance.*



At the table but can not break through the glass ceiling: Board leadership positions elude diverse directors

Laura Casares Field, Matthew E. Souther , Adam S. Yore



Background

- In recent years, institutional shareholders and regulators have been increasingly **focused on the diversity of corporate boards**. For example, the 2018 Global Policy Survey conducted by Institutional Shareholder Services (ISS) indicated that more than 80% of institutional investors view firms without female board representation as “problematic.” Similarly, in some European countries, such as Belgium, France, and Norway mandatory gender diversity of boards has become the norm.
- Although there is no federal regulation for gender or racial diversity of US boards, **the issue has recently received attention** from state legislatures.
- US firms seem to be responding to these calls for greater board diversity: the percentage of **female and minority directors** has substantially increased in the past 20 years.
- we examine **the extent to which women and minorities serve in leadership roles** on corporate boards, specifically as nonexecutive chairman of the board, lead director, or chair of a major board committee .



Main work

- In many of these prior studies, *it is unclear whether* observed *differences* in labor market outcomes are a result of varying opportunities *or* whether they are attributable to the wide range of endogenous factors such as differing levels of experience and education, varying career choices, or traditional gender roles.
- we observe the entire population of candidates for a given leadership position. Notably, while most prior studies *do not observe the pool of candidates not hired*, our setting *allows us to directly compare* the characteristics of appointed directors *to* those not appointed to leadership roles.
- **Findings:** *a substantial leadership gap for women and minority directors* over the entire sample period: once on the board, women and minorities have lower representation in board leadership roles *relative to white males*.



- possible explanation :
 - ≡ particularly for females, for whom prior literature has shown exhibit higher degrees of risk aversion?
 - ≡ diverse directors may live farther from the company and may avoid leadership roles due to the extra time commitment?
 - ≡ diverse directors may be overlooked in board leadership roles because they are less effective.
- Policy implications
 - ≡ what might firms do to mitigate this gap? In this section, we examine approaches that firms may take to address these issues.
 - ≡ explicit diversity policies seem to be an effective means to reducing the leadership gap.
 - ≡ they should implement policies that include diverse directors on the nominating committee.提名委员会



Conclusion

- We explore the labor market effects of gender and race by examining board leadership appointments.
- **Prior studies** are often limited by observing **only hired candidates**, whereas the boardroom provides a controlled setting where both hired and unhired candidates are observable.
- Although diverse (female and minority) board representation has increased, diverse directors are significantly **less likely** to serve in leadership positions **despite** possessing stronger qualifications than nondiverse directors.
- While specialized skills such as prior leadership or finance experience increase the likelihood of appointment, that likelihood is reduced for diverse directors. Additional tests provide no evidence that diverse directors are less effective.



Contribution

- Our study contributes to prior literature showing the **importance of demographics** in the labor market. Our results show that the gender and race related differences in our setting are not explained by life choices, qualifications, or the potential supply of candidates for the job.
- Our study also contributes to the literature exploring **the role of race and gender in board appointments** and **broader executive leadership**.
- our study contributes to the discussion of the internal dynamics at corporate boards and how board leadership is determined.
- **人口统计学**是研究人口现象的数量特征及其关系、人口再生产过程及其模式以及人口发展趋势的一门科学。一定地区一定时点条件下，人口的总量规模，人口性别结构，年龄结构，行业与职业结构，文化结构和民族结构等所显示的人口现象的数量特征，即谓之静态人口特征。人口统计学又不仅仅在于孤立地去描述这些人口现象的数量特征，而是尚要进一步去探明这些人口现象的各种内在联系，以揭示某一人口的性质与特点。



Active catering to dividend clienteles: Evidence from takeovers

Andrey Golubov, Meziane Lasfer , Valeriya Vitkova



Background

- Why do firms pay dividends and what could explain payout differences across firms? These questions have attracted significant academic attention following the publication of the seminal Miller and Modigliani (1961) “dividend irrelevance” proposition.
- According to their theory, in the absence of capital market imperfections, investors should be indifferent between a dollar in dividends and a dollar in capital gains. The key insight from their analysis is that capital market imperfections must hold the answers to the questions posed above.
- For example, if dividends are taxed at lower rates compared to capital gains, or not at all (as is the case for certain investor groups in many jurisdictions), then investors could have a preference for a particular dividend policy. Similarly, differences in the demand for dividends can arise due to investors’ behavioral traits, such as viewing dividend and capital gain income differently in their mental accounts.



- Whatever the source of any such preferences, a firm would pay dividends when its investors demand dividend income and refrain from paying dividends when its investors prefer capital gains. This argument is known as the dividend *clienteles effect*.
- however, limited evidence on the importance of such dividend clienteles; and if they do exist, it is not clear whether investors preferring dividends simply choose to invest in dividend-paying stocks or firms actually cater to their investors.
- In this paper, we use merger-induced changes to the shareholder structure of firms to test whether companies actively cater to dividend preferences of their investors.

the effect of dividend clienteles on the choice of payment method in takeovers



Main work

- If the pre-merger dividend policies of the two firms are different, the newly acquired dividend clientele could compel the acquirer to adjust its dividend payout toward that of the target. To the extent that differences in the dividend policy of the merging firms can affect the combined firm's payout more broadly, **cash-based acquisitions provide a control group** for our analysis, because cash deals do not entail a change in the shareholder base.
- We test these predictions using a **global sample** of mergers and acquisitions (M&A) of listed firms. In addition to increasing the size of our sample and the external validity of our findings, our global data set **offers cross-country variation in dividend tax regimes, investor protection rules, and investor age**, which are characteristics we exploit to further corroborate the clientele interpretation. Specifically, if taxation, private benefits extraction by managers, or age-based considerations alter investors' preference for dividends, these characteristics **should affect the extent of dividend policy adjustment toward preferences** of the newly acquired clienteles (if any).



- Related literature
- Sample and methodology
- (Δ DPS) is the change in the acquirer's dividends per share (DPS) around the merger event, scaled by the pre-merger book value of equity per share (BPS).

$$\Delta \text{DPS} (-1 \text{ to } +j) = \frac{\text{DPS}_{+j}^{\text{Acq.}} - \text{DPS}_{-1}^{\text{Acq.}}}{\text{BPS}_{-1}^{\text{Acq.}}}, \quad (1) \quad \text{Dividend Gap} = \text{Dividend Yield}_{\text{Tar.}} - \text{Dividend Yield}_{\text{Acq.}}$$

- the main results on the clientele effect

- Univariate analysis
- Multivariate analysis

	Dividend gap > 0 (1)	Dividend gap ≤ 0 (2)	Difference (t-statistic) (3)	Panel B: Pct. Stock > 0			
Panel A: All deals				Δ DPS (-1 to +1)	0.1577	0.0154	0.1423*** (8.904)
Δ DPS (-1 to +1)	0.1422	0.0576	0.0846*** (7.592)	Δ DPS (-1 to +2)	0.2048	0.0299	0.1748*** (8.838)
Δ DPS (-1 to +2)	0.1763	0.0757	0.1006*** (7.399)	Δ DPS (-1 to +3)	0.2594	0.0536	0.2058*** (8.240)
Δ DPS (-1 to +3)	0.2265	0.1057	0.1208*** (7.037)				
<hr/>							
	Δ DPS (-1 to +1) (1)	Δ DPS (-1 to +1) (2)	Δ DPS (-1 to +2) (3)	Δ DPS (-1 to +2) (4)	Δ DPS (-1 to +3) (5)	Δ DPS (-1 to +3) (6)	
Panel A: Full sample							
Dividend Gap	0.0060 (0.937)	0.0004 (0.087)	0.0076 (0.861)	0.0003 (0.052)	0.0101 (0.940)	0.0008 (0.111)	
Dividend Gap x Pct. Stock		0.2757*** (8.229)		0.3871*** (9.639)		0.4531*** (8.871)	

- explores cross-sectional differences in the **extent of adjustment**
 - Firm- and deal-level characteristics(the newly acquired shareholders are expected to be **more influential or vocal**)
 - Country-level characteristics(tax-based, agency-based, and age-based demand for dividends)



Conclusion

- We use merger-induced changes to shareholder structure to test for active catering to dividend clienteles.
- Following mergers, acquirers adjust their dividend payout toward that of the target, but **only when** they inherit target shareholders through **stock swaps**.
- This adjustment is stronger when **legacy shareholders are more influential** and reveal a greater preference for dividends through portfolio holdings and trading behavior.
- Country-level differences in **dividend taxes, governance quality, and population age** further **shape the extent of adjustment** in ways consistent with dividend preferences.
- **the adjustment** of the dividend policy of the merged firm toward that of the target in stock swaps is **stronger**
 - when dividends are more **tax advantaged**
 - when the bidder comes from a **weaker governance regime**
 - when the extent of adjustment is greater for targets domiciled in countries with **a higher proportion of senior citizens**
- Pre-closing, differences in dividend payout discourage the use of stock as a payment method. (To the extent that bidders cannot commit to adjust their dividend payout toward target firm levels,)



Contribution

- Our paper contributes to the literature on **dividend policy** as well as to the literature on **M&A**.
- We use takeovers as a setting that engenders large changes to the shareholder base and show that **firms actively cater to their investors' revealed preference for dividends**. In terms of the M&A literature, we show that **clienteles considerations** are a significant determinant of **deal structure**: acquirers avoid stock offers when target shareholders have a stronger preference for dividends.
- Our analysis of the **effect of dividend clienteles** on the choice of **payment method** in **takeovers** is also novel.
- 交易结构（Deal Structure）是买卖双方以合同条款的形式所确定的、协调与实现交易双方最终利益关系的一系列安排。



Business cycles and currency returns

Riccardo Colacito, Steven J. Riddiough, Lucio Sarno



山西大学
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Background

- A core issue in asset pricing is the need to understand the relationship between fundamental macroeconomic conditions and asset market returns . Nowhere is this more central, and yet consistently difficult to establish, than in the foreign exchange (FX) market, in which **currency returns** and **country-level fundamentals** are **highly correlated in theory**, and yet the **empirical relationship** is typically found to be **weak**.
- A recent literature in macro-finance has shown ,however, that the behavior of exchange rates **becomes easier to explain once** exchange rates are studied relative to one another in the cross-section rather than in isolation. This insight offers the tantalizing prospect that new empirical tests **focusing on relative macroeconomic conditions across countries** could reveal a stronger relationship between currency market returns and macroeconomic fundamentals.



Main work

- We focus on the broadest measure of aggregate macroeconomic conditions—the **business cycle**—which constitutes a key building block in theoretical models of exchange rates.
- We measure **macroeconomic conditions** using **the output gap**, defined as the difference between a country's actual and potential level of output, for a broad sample of 27 developed and emerging market economies. Since it is not directly observable, we **measure the output gap** using **industrial production data** and apply several commonly adopted methods in the literature.



- Data and currency portfolios
- Business cycles and currency returns
 - based on a cross-sectional portfolio sort in which currencies are sorted into five bins (P1, P2, P3, P4, P5) **based on** quintiles of the cross-sectional distribution of relative **output gaps** from the weakest to the strongest economy currencies.
- Asset pricing and implications
 - investigating if a range of alternative **pricing models** can explain the returns generated by output-gap-sorted portfolios. The **purpose of this analysis** is to evaluate whether the relationship between currency returns and business cycles can be understood **from a risk-return perspective**.
 - The asset pricing results suggest that **standard risk factors** used in the literature **cannot explain the returns** from currency portfolios that sort on output gaps.
- A model for the **GAP premium**
 - we present a simple model that can generate a risk premium associated with relative output gaps across countries, the GAP premium.



Conclusion

- We find a **strong link** between currency excess returns and the relative strength of the business cycle.
- Buying currencies of strong economies and selling currencies of weak economies generates high returns both in the cross-section and time series of countries.
- **These returns stem primarily from** spot exchange rate predictability, are **uncorrelated with** common currency investment strategies, and **cannot be understood using traditional currency risk factors** in either unconditional or conditional asset pricing tests.
- We also show that a **business cycle factor** implied by our results **is priced** in a broad currency cross section.



The US Treasury floating rate note puzzle: Is there a premium for mark-to-market stability? 浮息国债

Matthias Fleckenstein, Francis A. Longstaff



Background

- An extensive literature shows that markets incorporate a substantial **liquidity premium into the prices of Treasury securities** because of **their near-money characteristics**. The liquidity of many Treasury securities allows them to serve in a medium-of-exchange role because they can be rapidly converted into cash even during flights-to-security in financial markets. As a result, Treasury securities include a large premium in their prices relative to those of less liquid securities that are likewise guaranteed by the full faith and credit of the United States.
- **Motivated by recent theory** on the demand for **safe assets** because of their store-of-value or capital-preservation role, we begin by examining the nature of the demand for Treasury FRNs.
- We provide evidence that the market incorporates a significant additional near-money premium into the prices of what **could be the nearest-to-money of all Treasury securities: Treasury floating rate notes (FRNs)**. FRNs are among the most important recent innovations in fixed income markets. By nature of their security design, **FRN prices fluctuate far less** than those of other Treasury securities and are among the **most stable** collateral options available.



Main work

- **explore** the relative valuation of FRNs and other types of Treasury debt.
 - we use a no-arbitrage approach in which we **compare** the prices of FRNs **with** the value of a **replicating portfolio** of Treasury bills or notes. This allows us to identify directly whether the market embeds an additional premium or convenience yield into the prices of FRNs.
 - The empirical results are striking. we find that the cross-section of premia is **significantly and positively related** to the **difference** in the price volatilities of FRNs **and** the matched-maturity Treasury bills and notes used in the replicating portfolios. Thus, the premia appear directly related to mark-to-market stability of FRN prices.es.
 - What is the source of the large premia in FRN prices?



- **examine** the causal relation between the premia and the demand for mark-to-market stability
 - we make use of an important **exogenous regulatory shock** to the ability of many MMFs to continue reporting fixed NAVs. cross-sectional variation in the flows into the various types of MMFs allows us to identify the causal effects of changes in the exogenous demand for stable NAV values on the FRN premia.
 - We find that money market funds (MMFs), mutual funds, exchange-traded funds (ETFs), and other net asset value (NAV) sensitive institutional investors are the **primary holders of FRNs**.
 - The results provide strong support for the hypothesis that **the FRN premia** reflect the **demand for the price stability** that these securities provide.
- Finally, we consider and **rule out a number of other possible explanations** for the FRN premia.



Conclusion

- We find that Treasury floating rate notes (FRNs) trade at a significant premium relative to the prices of Treasury bills and notes. This premium is directly related to the near-constant nature of FRN prices and is correlated with measures reflecting investor demand for safe assets.
- Money market funds are often the primary investors in FRNs, and the FRN premium is related to flows into funds with fixed net asset values, but not to flows into funds with variable net asset values.
- These results provide strong evidence that the FRN premium represents a convenience yield for the mark-to-market stability feature of FRNs. frn市值稳定特征的便利收益率
- 便利收益是指当现货对期货产生风险溢价时，投资者持有现货的可能收益。在期货合约有效期间，商品短缺的可能性越大，则便利收益就越高。若商品使用者拥有大量的库存，则在不久将来出现商品短缺的可能性很小，从而便利收益率会比较低。另一方面，较低的库存导致较高的便利收益。
- mark-to-market: 这一制度规定以一个交易日为最长的结算周期，在一个交易日中，要求所有交易的盈亏都得到及时的结算，保证会员保证金账户上的负债现象不超过一天，因而能够将市场风险控制在交易全过程的一个相对最小的时间单位之内。



- These results have **important implications**.
 - They suggest that economic agents **place a high value on** the capital-preservation or store-of-value function of FRNs. 保值 价值储存
 - Our findings also have implications for the **management of sovereign debt**. The results suggest that the US Treasury could **reduce its debt financing costs** by issuing floating rate debt with near-constant market values that are largely unaffected by either public or private information. 主权债务管理



CEO-board dynamics

John R. Graham, Hyunseob Kim, Mark Leary



Background

- In recent years, regulators and investors have shown **increasing interest in the composition of corporate boards of directors**. Academic research suggests there is no universally optimal board composition. While **prior empirical research** has focused largely on **how board structure varies** in the cross-section with characteristics of the firm or CEO, theory suggests that boards may also optimally change dynamically within the tenure of a CEO.
- It is important that **some theories make dynamic predictions** about board structure, which by nature occur within the tenure of a CEO at a given firm. Yet **due to data limitations**, prior empirical tests have largely been conducted using repeated cross-sections. **Adams et al. emphasize the need** for studies that “shed more direct empirical light on the **dynamic nature of the CEO-board relationship within-firms**” .



- In this paper, we use a **unique longitudinal data** set to **study** within-firm dynamics of corporate boards and how they relate to the tenure, turnover, and performance of the CEO.
 - one needs a long time series of data that includes multiple CEOs per firm. To achieve this, we construct a new officer and director database with about 87,000 firm-year observations from 1920 to 2011, allowing us to study board dynamics over many regulatory and economic environments and within the careers of over 15,000 CEOs.
- **our objective** is **not to test** predictions of specific models per se **but rather to show** the within-firm (and often within-CEO) dynamics of board structures **and discuss** the extent to which these are consistent (or not) with different classes of models.

CEO-board dynamics



board independence ← CEO turnover /tenure/board chair



Main work

$$\begin{aligned} Independence_{it} = & \alpha_t + \beta_1 Independence_{i0} \\ & + \beta_2 CEO\ tenure_{it} + X_{it}'\gamma + \varepsilon_{it}, \end{aligned} \quad (1)$$

- $Independence_{it}$ is defined as the ratio of the number of independent directors to total directors;
- $Independence_{i0}$ is the first observed board independence ratio for firm i ;
- $CEO\ tenure_{it}$ is the number of years for which the CEO has been chief executive in firm i as of year t ;

$$\begin{aligned} Board\ outcome_{it} = & \alpha_i + \alpha_t + \beta_1 CEO\ tenure_{it} + X_{it}'\gamma + \varepsilon_{it}, \end{aligned} \quad (2)$$

- $Board\ outcome_{it}$ is either board independence, CEO-chair duality, or compensation ;
- α_i and α_t represent firm and year fixed effects;

$$\begin{aligned} \Delta Independence_{it} = & \alpha_{i \times c} + \alpha_t + \beta_1 Performance_{it} \\ & + \Delta X_{it}'\gamma + \varepsilon_{it}, \end{aligned} \quad (4)$$

$$\begin{aligned} CEO\ turnover_{it} = & \alpha_i + \alpha_t + \beta_1 Performance_{it} \\ & + \beta_2 Performance_{it} \times Power_{it} \\ & + \beta_3 Performance_{it-1} \\ & + \beta_4 Performance_{it-1} \times Power_{it} \\ & + \beta_5 Power_{it} + X_{it}'\delta + \varepsilon_{it}, \end{aligned} \quad (5)$$



Conclusion

- We examine CEO-board dynamics using a **new panel dataset** that spans 1920 to 2011. The long sample allows us to perform within-firm and within-CEO tests over a long horizon, many for the first time in the governance literature.
- Consistent with theories of bargaining or dynamic contracting, we find **board independence increases at CEO turnover and falls with CEO tenure, with the decline stronger following superior performance**. CEOs are also more likely to be appointed board chair as tenure increases, and we find evidence consistent with a substitution between board independence and chair duality.
- Other results suggest that these classes of models **fail to capture important elements** of board dynamics. **First**, the magnitude of the CEO tenure effect is economically small, much smaller, for example, than the strong persistence in board structure that we show. **Second**, when external CEOs are hired, board independence falls and subsequently increases. **Third**, event studies show a positive market reaction when powerful CEOs die in office, consistent with powerful CEOs becoming entrenched.



Contribution

- While earlier studies have explored elements of board dynamics and the interaction between CEOs and board structure, ours is the first to study these dynamics strictly within-firm and within-CEO, using a comprehensive panel of data covering thousands of firms and over 90 years. This has several important advantages.
 - our long panel covering multiple CEOs per firm provides sufficient power to estimate within-firm and within-CEO dynamics.
 - reliably detecting the degree of persistence in board structure requires studying a long database like the one we use.
 - our long time series enables us to show long-term trends in board structure and CEO turnover.
 - We also examine how these relations have changed over time.



Why do discount rates vary?

Serhiy Kozak, Shrihari Santosh



Background

- Discount rates (expected excess returns) unquestionably vary significantly over time, yet little agreement exists as to why. Is technology highly volatile? Are preferences sensitive to economic conditions? Or are markets prone to fads and panics?
- In this paper, we **focus on** an important, but overlooked, moment to help discipline theory: the sign of the price of discount rate risk, the risk of variation of expected returns on the aggregate equity market index, controlling for returns on the index. **We propose a new estimator** that recovers an unambiguously negative average price of this risk in the data.



Main work

- The typical approach to solve this problem is to specify a predictive VAR for market excess returns and use implied shocks as factor innovations. Though commonly used, this approach has some known issues.
- our paper **focuses on a key quantity**, i.e., the price of discount rate risk, δ_t^λ (reveals the impact of λ_t on the marginal utility of wealth), to help discipline theories of discount rate variation.
- we propose an alternative estimator of the sign of $E(\delta_t^\lambda)$.

The key insight of our methodology is that realized returns can proxy for expected returns because they equal expected returns plus noise, $R_{m,t+1} = \lambda_t + u_{t+1}$. Hence, we can consistently estimate $\text{cov}(R_{i,t}, \lambda_t)$ by substituting $R_{m,t+1}$ for λ_t . Moreover, using a weighted average of many future market returns can improve the precision of the proxy. Given certain conditions, we can use this proxy variable to learn about the sign of the average risk price, $E(\delta_t^\lambda)$,

The key parameter is δ_λ , and positive δ_λ indicates that rational agents view increases in discount rates as good news (and vice versa).



$$M_{t+1} \approx -\rho_t - \delta'_t(\mathbf{F}_{t+1} - E_t \mathbf{F}_{t+1}),$$

$$E_t[R_{i,t+1}] = \delta_t^m C_t^{i,m} + \delta_t^\lambda C_t^{i,\lambda} + \delta_t^g C_t^{i,g},$$

where $C_t^{i,\cdot}$ are conditional covariances of $R_{i,t+1}$ with $R_{m,t+1}$, λ_{t+1} , and \mathbf{g}_{t+1} , respectively. (1) provides an economic interpretation of the prices of risk, δ_t . The risk price $-\delta_t^\lambda$ reveals the impact of λ_t on the marginal utility of wealth, as $\delta_t^\lambda \approx -\frac{V_{W\lambda}}{V_W}$. The δ_t can be thought of as coefficients in a conditional regression of the SDF, M_{t+1} , on the factors $R_{m,t+1}$, λ_{t+1} , and \mathbf{g}_{t+1} . Therefore, $-\delta_t^\lambda$ also reveals the partial covariance of discount rate shocks with growth in the marginal utility of wealth, $\frac{V_W(W_{t+1}, \lambda_{t+1}, \mathbf{g}_{t+1})}{V_W(W_t, \lambda_t, \mathbf{g}_t)}$, after controlling for changes in wealth and the supplementary factors. The δ are not risk premia; they are risk prices. Because the factor innovations can be correlated, the total compensation for exposure to discount rate risk depends on all risk prices and the covariance of discount rate shocks with the other shocks.



Conclusion

- The price of discount rate risk reveals whether increases in equity risk premia represent good or bad news to rational investors.
- Employing a new empirical methodology, **we find** that the price is negative, which suggests that discount rates are high during times of high marginal utility of wealth.
- Our approach relies on using future realized market returns to consistently estimate covariances of asset returns with the market risk premium. Covariances drive observed patterns in a broad cross section of stock and bond expected returns.



Contribution

- Our main contribution is based on the insight that future realized market returns can be used as a proxy for expected market returns to consistently estimate the covariance of test asset returns with the market risk premium.
- Most previous papers use predictive regressions, in the form of a vector autoregression (VAR) to estimate shocks to discount rates. the **VAR method can produce noisy estimates of the price of discount rate risk**. our estimator has substantially **lower variance than the VAR method, but at the cost of increased bias**. Whereas the VAR method exhibits a small upward bias (away from zero) in the estimate of the price of discount rate risk, our estimator exhibits moderate downward bias (toward zero).
- **In conclusion**, we view our proposed methodology as **complementary** to the standard VAR method. The two methods have very different strengths and weaknesses.



Does the Ross recovery theorem work empirically?

Jens Carsten Jackwertha, Marco Menner



Background

- Much of financial economics revolves around the triangular relation among physical return probabilities p , which are state prices π divided by the stochastic discount factor (SDF) m :

$$\text{physical probability } p = \frac{\text{state price } \pi}{\text{SDF } m}.$$

- Researchers typically pick any two variables to find the third. Yet Ross (2015), based on earlier work by Hansen and Scheinkman (2009), presents a recovery theorem that allows a researcher to back out both the SDF and physical probabilities by using state prices only. To achieve this, he needs to make strong assumptions.
- We investigate this claim and test whether the recovered physical probabilities are compatible with future S&P 500 returns. We further analyze whether the shape of the recovered SDF is consistent with utility theory. To understand our results, we discuss in detail why the recovery theorem does not perform well empirically.



Main work

- Ross (2015) **makes three explicit assumptions**.the three assumptions allow Ross (2015) to formulate an eigenvalue problem based on transition state prices. Its unique solution **yields the physical transition probabilities $p_{i,j}$** , (量子力学名词, 在适当的条件下, 原子、分子和原子核等体系可能从这个状态过渡到任何一个其他可能的状态, 这种状态的过渡称为跃迁。单位时间中这种跃迁的比率, 叫做跃迁几率, 也称跃迁概率。常见于金融等行业, 描述状况的急速变化。比如风险跃迁概率研究。) which represent physical probabilities of moving from state i to state j , and the SDF.
- We **reject this hypothesis** strongly using **four different density tests**: the Berkowitz (2001) test, two versions of the uniformity test introduced by Knüppel (2015), and the Kolmogorov Smirnov test.
- **Further**, we show that the means and variances of the recovered physical distributions **cannot predict future returns and realized variances**.



Conclusion

- Starting with the fundamental relation that state prices are the product of physical probabilities and the stochastic discount factor, Ross (2015) shows that, **given strong assumptions, knowing state prices suffices to back out physical probabilities and the stochastic discount factor at the same time.**
- **We find** that such recovered physical distributions based on the S&P 500 index are **incompatible** with future returns and fail to predict future returns and realized variances.
- These **negative results are even stronger when** we add economically reasonable constraints. . Simple benchmark methods based on a power utility agent or the historical return distribution cannot be rejected.
- Ross (2015) 从状态价格是物理概率和随机折现因子的乘积这一基本关系出发，表明在强假设下，知道状态价格就足以同时反推出物理概率和随机折现因子。我们发现，这种基于标普500指数的物理分布与未来收益不相容，不能预测未来收益和已实现方差。当我们加上经济上合理的约束时，这些负面结果会更加强烈。基于效用代理或历史回报分布的简单基准方法无法被拒绝。



Contribution

- We **add to the empirical literature** concerning Ross recovery by **pinpointing exactly where Ross recovery goes awry**. Moreover, we answer the intriguing question as to where Ross recovery, despite its theoretical shortcomings, might **still be useful empirically** as a rough approximation of reality.
- Next, we **apply machine learning to Ross recovery**. We use a cross-validated elastic net regularization, which forces transition state prices to zero.
- To our knowledge, we are **the first** to provide a rigorous **empirical investigation** of Ross recovery **using S&P 500 index option data**.



the scarcity of individual
bonds affects their specific repo rates
of individual

The scarcity effect of QE on repo rates: Evidence from the euro area

William Arrata, Benoît Nguyen, Imène Rahmouni-Rousseau, Miklos Vari



Background

- The market for **repurchase agreements** (“repo”) allows financial market participants to borrow and lend cash against collateral. It is by far the largest segment of the euro area money market, and plays a critical role in the transmission of monetary policy.
- Repo rates have **gained substantial attention** in recent years **after they began moving out of sync** with the European Central Bank policy rates. Following the start of the **Public Sector Purchase Programme (PSPP)** in March 2015—the European version of quantitative easing—**repo rates** not only dropped in negative territory but declined markedly below the ECB deposit facility rate (DFR).
- **the main subject of this paper**
 - Explaining the evolution of repo rates
 - why they were able to decline below the DFR
 - how this development could be linked to the Eurosystem’ s bond purchases
- Answers to these questions have important implications for monetary policy implementation.



Conclusion

- Most short-term interest rates in the euro area are below the European Central Bank deposit facility rate. This coincided with the start of the Public Sector Purchase Program (PSPP) launched in March 2015.
- In this paper, we explore empirically the **interactions between the PSPP and repo rates**. Using proprietary data from PSPP purchases and repo transactions for specific (“special”) securities, we **assess the scarcity channel of PSPP and its impact on repo rates**.
- We estimate that purchasing 1% of a bond outstanding is associated with a decline of its repo rate of 0.78 basis points.



THE END.

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