Dead Hand Proxy Puts, Hedge Fund Activism, and the Cost of Capital

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Abstract

We investigate Dead Hand Proxy Puts, a contractual innovation in corporate debt agreements that has attracted attention as a deterrent to hedge fund activism. We show that the provision has proliferated as hedge fund activism has become more common and provide evidence linking adoption of the term to the risk of activist attack. In addition, we measure the effect of Dead Hand Proxy Puts on the cost of capital. Controlling for the endogeneity of the Dead Hand choice, we find that the provision significantly reduce the cost of debt. Although the provision is principally found in loan agreement, bondholders also benefit, and we find no evidence that shareholders are harmed.   Thus, by mitigating the debtor-shareholder conflict, Dead Hand Proxy Puts create an important firm-level benefit, which may serve to offset the costs of weakened hedge fund activism.

Keywords: debt contract design, shareholder-debtholder conflict, agency cost of debt, hedge fund activism.

JEL codes: G3, G32, G34, K22

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Abstract

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1.   Introduction

Dead Hand Proxy Puts are a contractual innovation in corporate debt agreements that change the nature of proxy fights. The term triggers default and immediate repayment of corporate indebtedness in the event that a dissident slate wins a majority of the seats on the target company's board. Moreover, the term provides that only the creditor, not the shareholders or incumbent management, can waive the provision or "approve" the election of the dissident slate.

Once in place, the provision effectively creates a strong disincentive for shareholders to vote in favor of an activist's nominees to the target board. For example, in the 2009 proxy fight for Amylin Pharmaceuticals, when Icahn Partners and Eastbourne Capital sought control of the board, Amylin responded by notifying its shareholders that its debt contained a Dead Hand Proxy Put. As a result, if the activists won the proxy fight, the company warned:

> "[O]ur business could be adversely affected because ... we may be required to repay $575 million under our 2007 Notes, $125 million under our Term Loan and any amounts that may be outstanding under our $15 million revolving credit facility, and if a cross-default is triggered, $200 million under our 2004 Notes.... We may not have the liquidity or financial resources to do so at the times required or at all."[1]

In the context of a proxy fight, the Dead Hand Proxy Put may thus incentivize shareholders to vote against the activist's nominees without regard to the activist's plan for the company in order to avoid defaulting on the corporation's debt.

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[1] Amylin Pharmaceuticals, Inc., Annual Report on Form 10-K for the year ended December 31, 2008, quoted in San Antonio Fire & Police Pension Fund v. Amylin Pharmaceuticals, Inc., 983 A.2d 304, 310 (Del. Ch., May 12, 2009).

Dead Hand Proxy Puts have risen to the attention of courts and commentators. The Delaware Court of Chancery recently threatened to impose limitations on the ability of borrowers to agree to the Dead Hand feature.[2] And the press reports that creditors have attracted scrutiny as a result of widespread use of the provision.[3] In both cases, the Dead Hand Proxy Put is controversial for its ability to inhibit hedge fund activism.

There is considerable evidence that hedge fund activism increases shareholder wealth, at least in the short term (e.g., Brav, Jiang, Partnoy, and Thomas, 2008; Klein and Zur, 2009; Gantchev, 2013; and Bebchuk, Brav, and Jiang, 2015). By inhibiting proxy fights and thus activism, Dead Hand Proxy Puts may destroy a pathway to shareholder wealth. However, it is also possible that hedge fund activism increases shareholder wealth principally by transferring it from creditors. Managers, who are accountable to shareholders, may act to increase equity value at the expense of debtholders by increasing leverage and dividend payouts or by engaging in asset substitution or other forms of financial restructuring (Smith and Warner, 1979; Maxwell and Stephens, 2003; Billet, King and Mauer, 2004). Hedge fund activism, by increasing shareholder pressure on managers, may increase the incentive to expropriate creditor wealth.

Consistent with this account, Brav, Jiang, and Kim (2010) find that hedge fund activists tend to target firms that are ripe for financial restructuring—firms with solid operating cash flows but low growth rates, leverage, and dividend payout ratios. Likewise, Clifford (2008) and Klein and Zur (2009) show that after an activist intervention, target companies disadvantage creditors by decreasing cash balances and increasing leverage and dividend payouts. Moreover,

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[2] *San Antonio Fire & Police Pension Fund v. Amylin Pharmaceuticals ("Amylin")*, 983 A.2d 304 (Del. Ch. 2009); *Kallick v. Sandridge*, 68 A.3d 242, 261 (Del. Ch. 2013); *Pontiac Gen. Employees Ret. Sys. v. Ballantine*, C.A. No. 9789-VCL, 2014 WL 6388645 (Del. Ch. Oct. 14, 2014) (transcript).

[3] Steven Davidoff Solomon, *A Defense Against Hostile Takeovers Develops a Downside*, NY TIMES (Nov. 25, 2014); Liz Hoffman, *Banks Feel the Heat From Lawsuits*, WALL ST. J. (Apr. 28, 2015); Maxwell Murphy, *Proxy Puts Invite Shareholders, Attorneys to Come Knocking*, WALL ST. J., (June 1, 2015).

Klein and Zur (2011) find significant negative bondholder returns associated with activist interventions, implying that bondholders are harmed by hedge fund activism. Similarly, Sunder, Sunder, and Wongsunwai (2014) find increasing interest rate spreads associated with activist interventions aimed at financial restructuring or forced acquisition, suggesting that bank lenders also suffer from certain activist strategies.

We hypothesize Dead Hand Proxy Puts as a contractual device for mitigating the conflicts between shareholders and creditors inherent in hedge fund activism. Through the provision, shareholders commit not to expropriate creditor wealth in connection with an activist intervention. The mechanism is an exit right for creditors—who have provided capital on the basis not only of a particular mix of assets and cash flows, but also on the basis of a particular business strategy—if the basis for the loan seems likely to change.

This hypothesis generates testable implications. If the provision is related to hedge fund activism, it should be found in the debt agreements of those companies most likely to be susceptible to an activist intervention. If the provision is valued by creditors, it should be reflected in the price of the debt. Finally, insofar as the provision weakens hedge fund activism, share prices may suffer.

In this paper we empirically test these implications, providing new evidence on the role and effect of Dead Hand Proxy Puts. After compiling statistics demonstrating the frequency with which Dead Hand Proxy Puts appear in loan agreements and documenting how the incidence of such provisions has changed over time, we analyze the characteristics of companies that include Dead Hand Proxy Puts in their loan agreements. Finally, we provide direct evidence on the effect of Dead Hand Proxy Puts on the cost of capital of firms agreeing to them.

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We demonstrate that the incidence of Dead Hand Proxy Puts has increased substantially from 1994 through 2014, most sharply in the middle 2000s, roughly at the advent of the era of hedge fund activism. We find that the provision is most common among companies that are ripe targets for financial restructuring—that is, smaller companies that pay lower dividends and have lower leverage ratios. Further testing the connection between Dead Hand Proxy Puts and hedge fund activism, we ask whether companies that actually experience activism are more likely to adopt the provision. On this point, we find that whether a company has had an activist event seems to have no impact on whether the company *subsequently* adopts a Dead Hand Proxy Put. However, we find statistically significant evidence that companies do modify their loan contracts in *anticipation* of experiencing hedge fund activism. Our evidence thus confirms the connection between Dead Had Proxy Puts and hedge activism.

Our tests also find evidence of an economically and statistically significant effect of Dead Hand Proxy Puts on the cost of debt. Controlling for the endogeneity of the Dead Hand choice, we find that inclusion of a Dead Hand Proxy Put reduces the cost of debt by approximately 45 basis points. Our findings on the reduction in the cost of debt are robust to a set of control variables, including company, loan and law firm characteristics. Additionally, we also find evidence that bondholders react positively to the presence of Dead Hand Proxy Puts in loan contracts, suggesting that bondholders free-ride on the protection that the provision offers to bank lenders. These findings suggest that the provision provides a significant firm-level benefit by reducing the cost of capital. Finally, our test of shareholder reactions to the introduction of the Dead Hand Proxy Put finds no evidence that shareholders are harmed by the provision.

These findings make several important contributions to the literature. Ours is the first examination of Dead Hand Proxy Puts and their wealth effects. Although there are earlier

studies focusing on the wealth effects of change-of-control provisions (Crabbe 1991; Cook & Easterwood 1994), these studies focused on share accumulations associated with leveraged buyouts and hostile takeovers, not proxy fights. Hedge fund activists do not engage in leveraged buyouts or seek control through share accumulation. Activists use proxy fights. The Dead Hand Proxy Put thus represents a further stage in the evolution of the change-of-control provision, protecting companies not only against takeovers and leverage buyouts but also against hedge fund activism. Furthermore, the prior work on change-of-control provisions in corporate debt focuses exclusively on bond contracts (e.g., Kahan & Klausner, 1993; Qi & Wald, 2008). There is an important difference between events of default in bonds versus loans. Bond defaults, due to coordination problems and the lack of an ongoing commercial relationship between bondholders and the debtor, invariably trigger repayment. Loan defaults, by contrast, present an opportunity to negotiate with the lenders, who may agree to waive or amend the loan agreement to avoid or cure the default (e.g, Chava & Roberts, 2008; Roberts & Sufi, 2008). Consistent with this account, we find the Dead Hand Proxy Put in loan agreements much more commonly than in bond indentures, suggesting that the provision is designed to allocate optionality to creditors rather than to penalize shareholders with automatic repayment of debt. We thus present a case study of contractual innovation with a more nuanced impact on firm value.

Second, our study contributes to the literature on hedge fund activism. A contested question in that literature is whether activism creates value or merely distributes it to shareholders from other constituencies, such as creditors. By demonstrating an association between Dead Hand Proxy Puts and hedge fund activism and showing that creditors value the provision, our findings suggest that creditors, at least, treat hedge fund activism as redistributive in nature and respond ex ante in the negotiations of loan contracts.

Third and more broadly, our study contributes to the literature on defensive strategies in general. In contrast to the conventional view that defensive provisions serve principally to entrench managers, a number of papers identify firm-level benefits created by takeover defenses. Knoeber (1986), Shleifer & Summers (1988), and Johnson, Karpoff & Yi (2015), for example, suggest takeover defenses decrease the probability that the firm will act opportunistically towards its large customers and other important business partners, encouraging them to invest in the business relationship. We identify a specific additional firm-level benefit of a defensive strategy – reduction of the debt – in the context of hedge fund activism.

Fourth, our study extends prior work on how financial contracting corrects and preserves incentives for investment by remediating the conflict between debt and equity. Theoretical literature suggests that covenants in financial contracts mitigate this conflict (Tirole, 2006). Debt covenants constrain managers from acting to increase equity value at the expense of debt (Smith & Warner, 1979; Rajan & Winton, 1995;). And debt covenants enable firms to raise capital by allocating state-contingent control rights—to debtholders after poor performance and to equity-holders after good performance (Aghion & Bolton, 1992; Dewatripont & Tirole, 1994). We provide new empirical evidence on how debt contracts are designed to mitigate the conflict of interest between debtholders and shareholders created by the advent of hedge fund activism. Rather than allocating control rights to creditors once financial deterioration has already occurred, the Dead Hand feature creates a consultation right for lenders in the event that an activist proposes changes to the business or financial plan on which the extension of credit was premised. The right does not necessarily trigger acceleration, provided that the lenders agree that the activist intervention does not imperil the loan. Instead, the right serves as a kind of early warning signal that credit quality may be in jeopardy.

Finally, our findings inform the current policy debt on the enforceability of Dead Hand Proxy Puts. In contrast to recent court cases warning that the provision may entrench managers and thus destroy shareholder value, we demonstrate that Dead Hand Proxy Puts reduce the cost of debt. A reduction in the cost of debt may provide shareholders with a benefit offsetting the cost of weakened hedge fund activism. Consistent with this account, we find no evidence of a negative shareholder reaction to the introduction of Dead Hand Proxy Puts.

The rest of the paper proceeds as follows. Section 2 defines Dead Hand Proxy Puts. Section 3 describes our data and provides descriptive statistics. Section 4 contains our analysis of companies adopting the Dead Hand Proxy Put. Section 5 provides our analysis of the Dead Hand Proxy Put on the price of loans. Section 6 examines bondholder and shareholder reactions to Dead Hand Proxy Puts. Finally, Section 7 summarizes our findings, discusses their implications, and offers a brief conclusion.

2.　　The Dead Hand Innovation

Corporate debt agreements have included a "change-of-control" provision since the wave of leveraged buyouts in the 1980s. These event risk provisions are triggered by either the purchase of a control block of shares (the "control block trigger") or the changeover of a majority of board seats in a proxy fight (the "proxy fight trigger"). To provide for ordinary board turnover, the standard provision allows debtors to waive the proxy fight trigger by "approving" director nominees.[4] Although the standard provision provided adequate creditor protection against leveraged buyouts and hostile takeovers, the "approval" feature creates a

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[4] See Griffith and Reisel (2016) for detailed discussion of this issue.

significant weakness in the context of hedge fund activism, in which activists wage proxy fights without ever seeking a control block of shares. In this context, the debtor can effectively waive the provision, thereby eliminating creditor protection, by simply approving the activist's nominees. The Dead Hand Proxy Put responds to this gap in creditor protection by removing the authority of the incumbent board to "approve" dissident directors, thereby allocating waiver authority exclusively to creditors.[5]

Dead Hand Proxy Puts do not preclude activism in the same way that, for example, the combination of a poison pill and a staggered board can preclude takeover. Many activist interventions stop short of proxy contests, and even those that do escalate to proxy fights often involve "short slates"—contests for less than a majority of the seats on the board (Coffee & Palia, 2016). Such interventions would therefore not trigger the provision. Nevertheless, the ability to credibly threaten a proxy fight for control is in the background of every activist intervention: it is the ultimate threat upon which the activist's negotiating position is based (Gilson & Gordon, 2013). As a result, any provision that undermines the ability to wage a proxy fight for control also weakens the activist's ability to succeed at lesser interventions. Moreover, although lowering the Dead Hand Proxy Put's trigger to less than a majority of the seats of the board—for example, to a third or a quarter of the board—would seem to provide greater creditor protection, creditors may lack the bargaining power to lower the threshold when the loan is underwritten. Alternatively, in light of their relationship with the debtor's incumbent managers, creditors may feel adequately protected by majority control such that insisting upon a lower

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[5] The "Dead Hand" feature is typically created by adding the following language to the change-of-control provision:
"excluding… [from approval by continuing directors] any individual whose initial nomination for, or assumption of office as, a member of that board … occurs as a result of an actual or threatened solicitation of proxies or consents for the election or removal of one or more directors by any person or group other than a solicitation for the election of one or more directors by or on behalf of the board of directors."
San Antonio Fire & Police Pension Fund v. Amylin Pharmaceuticals, 983 A.2d 304, 315 (Del. Ch. May 12, 2009).

triggering threshold is unnecessary. Finally, even though the provision as written contemplates majority control, in practice it may also deter even short slate contests out of a concern that dissidents may win a majority, on a cumulative basis, in a subsequent election, thereby triggering default. As described by a court evaluating the provision: "because the proxy put exists, it necessarily has an effect on people's decision-making about whether to run a proxy contest and how to negotiate with respect to potential board representation."[6]

The core innovation of the Dead Hand Proxy Put is to reallocate waiver authority under the change of control provision in the context of a proxy fight. But this reallocation of waiver authority is essential for creditor protection in an era where activists rely on proxy fights. The Dead Hand Proxy Put thus brings the creditor back to the bargaining table in the context of hedge fund activism. Once the provision is in place, an activist that wants to proceed without replacing the company's outstanding debt will have to negotiate with the lender for a waiver.

3.   Data and Descriptive Statistics

In this section, we describe the data used in the analysis. We also provide characteristics of the loan contracts and borrowers in our data set, and show the incidence of Dead Hand Proxy Puts across time.

3.1   Sample selection

We start with the 2015 version of Dealscan, a database distributed by the Loan Pricing Corporation. Dealscan contains a large majority of sizable commercial loans in the U.S. and has been commonly used in academic research (e.g. Bradley & Roberts, 2015; Sunder, Sunder &

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[6] *Pontiac General v. Ballantine* ("Healthways"), 2014 WL 6388645 (Del. Ch. Oct. 14, 2014) (transcript).

Wongsunwai, 2014). We merge the Dealscan and Compustat databases using the linking table available through WRDS and originally created by Chava & Roberts (2008). We require that all borrowers in our sample have non-missing total assets in Compustat at the loan start date.

We use Intelligize to identify loan contracts that include Dead Hand Proxy Puts. The Intelligize platform is a web-based service that enables the efficient search of all SEC filings. We ran searches to uncover the two forms of the provision we had found in loan contracts.[7] After confirming the validity of the search results, we merged these data with the combined Dealscan-Compustat data using company CIK numbers. This procedure results in a sample of 53,132 loans covering 7,788 companies from 1994 until 2014. 1994 is the year when data coverage begins in the Intelligize database. 2014 is the date when loan coverage ends in the Dealscan database.

We also investigate whether bond contracts include Dead Hand Proxy Put and found only about 60 bond contracts with this provision. Thus, in our analysis, we focus on loan contracts.

Additionally, we use Factset SharkRepellent, a database that tracks activist actions, takeover defenses, and shareholder voting, for data on hedge fund activism.

We use Trade Reporting and Compliance Engine (TRACE) database to obtain bond prices starting in 2002. We follow Dick-Nielsen (2014) procedure in cleaning the database and use trade-weighted prices as in Bessembinder et al (2008).

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[7] We found the provision in two forms: (1) "(excluding… any individual whose initial nomination for, or assumption of office as, a member of that board or equivalent governing body occurs as a result of an actual or threatened solicitation of proxies or consents for the election or removal of one or more directors by any person or group other than a solicitation for the election of one or more directors by or on behalf of the board of directors)" and (2) "excluding any such individual originally proposed for election in opposition to the Board of Directors in office at the Agreement Effective Date in an actual or threatened election contest relating to the election of the directors (or comparable managers) of Parent and whose initial assumption of office resulted from such contest or the settlement thereof." Over the period 1994-2014 we found approximately 2000 incidents of the first form and 700 incidents of the second form.

3.2   *Sample characteristics*

Descriptive statistics for loans in our sample are presented in Table 1.

[INSERT TABLE 1 HERE]

As described in Table 1, the average loan maturity is approximately four years. The loan amount varies substantially with the mean being $340 million, while the median is $130 million. About half of the loans in our sample are secured by collateral. Dead Hand Proxy Puts are included in 4.7% of the loan contracts in our sample.

Table 1 also presents borrower characteristics. All variables are reported as of one year prior to the loan start date. The mean size of total assets is 10,669 million dollars while the median is 873 million dollars. The firms have a lot of tangible assets, 52.7% on average. The mean book leverage is 35% and the mean return-on-assets is 11.6%.

Figure 1 presents distribution of Dead Hand Proxy Puts over time.

[INSERT FIGURE 1 HERE]

Interestingly, we document a significant positive time trend in the incidence of this provision. Only 0.24% of the loan contracts in our sample include Dead Hand Proxy Put in 1994. Dead Hand Proxy Puts became more prevalent in the early 2000s but upticked sharply after 2008 reaching 16% by the end of our sample period. Hedge fund activism increased sharply over roughly the same period.[8]

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[8] *See, e.g.,* Frank Partnoy, *U.S. Hedge Fund Activism*, in RESEARCH HANDBOOK ON SHAREHOLDER POWER, Hill & Thomas, eds., at 2 ("securities filings suggest that hedge fund activism has been significant since the late 1990s, but not before")

4.   Company Analysis

In this section, we investigate what types of companies include Dead Hand Proxy Put in their loan contracts. We use univariate comparisons as well as regression analysis. Brav, Jiang & Kim (2010) summarize characteristics of companies that are subject to hedge fund activism. We use similar company characteristics in our analysis to investigate if a company that is likely to be subject to hedge fund activism is more likely to include a Dead Hand Proxy Put. We hypothesize that the incidence of Dead Hand Proxy Puts may be related to the susceptibility of firms to hedge fund activism.

4.1   *Univariate analysis*

Results of the means comparison of characteristics of companies that include Dead Hand and those that do not include Dead Hand are presented in Table 2.

[INSERT TABLE 2 HERE]

As Table 2 demonstrates, companies with Dead Hand Proxy Puts in their loan contracts are significantly smaller (approximately one quarter the size) than borrowers without Dead Hand Proxy Puts. This difference is economically significant and statistically significant at the 1% level. Borrowers who include Dead Hand Proxy Puts also pay substantially lower dividends per share, $0.54 per share versus $1.05 per share, and they have a lower leverage ratio than borrowers without Dead Hand Proxy Puts. The balance sheets of borrowers who include Dead Hand Proxy Puts also reflect more cash, 10.8% versus 8.5%, and less property, plant, and equipment. All of these differences are significant at the 1% level.

4.2   *Regression analysis*

To further test the significance of these borrower attributes, we ran probit regressions to estimate the probability of inclusion of Dead Hand Proxy Put on the basis of these attributes. Table 3 reports the results of these regressions.

[INSERT TABLE 3 HERE]

Similar to the univariate results, specification 1 in Table 3 demonstrates that large companies are less likely to include Dead Hand in their loan contracts. We also continue to find that companies with low dividend payouts are more likely to include Dead Hand. Hedge fund activists tend to target smaller companies with lower dividend payouts (Brav, Jiang & Kim, 2010). Additionally, we document that leverage is negatively related to the likelihood of inclusion of Dead Hand in loan contracts. One of the main objectives of hedge fund activism is capital structure adjustments to increase leverage (Brav, Jiang & Kim, 2010; Sunder, Sunder & Wongsunwai, 2014). Companies with low leverage are more likely to be subject to activist interventions to increase leverage and, thereby, credit risk. In specification 2, we additionally control for cash holdings. We continue to find that company size, dividend payout and leverage are important determinants of Dead Hand inclusion. Thus, consistent with the concern that activists target companies where they can shift risk to creditors by increasing leverage and paying capital out to shareholders, creditors appear to deploy Dead Hand Proxy Puts to defend against these risks where they seem particularly acute.

We also investigated other parties involved in the transaction. Law firms, for example, play an important role in contract design. In order to examine whether law firms with particular experience in dealing with hedge fund activism introduced the provision, we tested the impact of the top four law firms in activist defense from FactSet Sharkrepellant. Those firms are:

Wachtell, Skadden, Wilson Sonsini, and Latham. As reported in specification 3 of Table 3, we found no statistically significant association between these firms and the adoption of Dead Hand Proxy Puts. This suggests that the provision more likely originates from creditor concerns than from the experience of law firms in designing defenses against activists.

To further investigate whether Dead Hand Proxy Puts are deployed as defenses to hedge fund activism, we consider actual interventions by hedge fund activists, including proxy fights (22.66% of the sample), 13D filings (9.03%), exempt solicitations (0.68%), and other public activist campaigns (67.63%).[9] In order to maintain a sufficiently large sample for analysis, we include all of these forms of activism in Table 4, which reports results on the incidence of shareholder activism among firms in our sample with Dead Hand Proxy Puts.

 [INSERT TABLE 4 HERE]

Specification 1 in Table 4 examines whether hedge fund activism prior to the loan start date has an impact on the incidence of Dead Hand Proxy Puts in loan contracts. The coefficient on the *Activism before* dummy is insignificant suggesting that prior events of hedge fund activism has no impact on the likelihood of inclusion of Dead Hand in loan contracts.

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[9] These variables are defined and coded in the FactSet SharkRepellent database as follows: (1) Proxy Fight: "a campaign under which a stockholder or group of stockholders solicits the proxy or written consent of fellow stockholders in support of a resolution it is advancing. This usually involves the election of dissident nominees to the company's Board of Directors in opposition to the company's director nominees but may also involve campaigns to approve a stockholder proposal or to vote against a management proposal (including approving a merger)." (2) 13D Filer: a "[c]ampaign whereby a member of the SharkWatch50 has filed a Schedule 13D with the SEC but the filing does not include any publicly disclosed activism." (3) Exempt Solicitation: a campaign "pursuant to Rule 14a-2(b)(1) of the Securities Exchange Act of 1934 . . . under which a dissident can communicate its views to stockholders without having to comply with SEC proxy filing and disclosure rules. Unlike a contested solicitation (proxy fight), the dissident is not seeking the power to act as proxy for a stockholder and does not provide its own proxy card in its materials." And (4) Other Campaign: "corporate activism made public by activist investors, including hedge funds, and most commonly involve[s] a dissident agitating for changes with the goal of maximizing stockholder value or enhancing corporate governance practices. The value maximizing campaigns attempt to pressure a company to take action to enhance stockholder value, whether by increasing dividends and stock buybacks or by even calling for the break up or sale of the company itself. These campaigns usually take the form of making communications and letters sent to management at the targeted companies publicly via 13D filings and press releases, and they often also include the threat of a proxy fight for Board seats." See www.sharkrepellent.net.

Specification 2 in Table 4 examines whether the adoption of Dead Hand Proxy Puts in debt contracts is associated with *subsequent* hedge fund activism events. The coefficient on the *Activism after* dummy is positive and highly statistically significant, suggesting that loan contacts are indeed modified in anticipation of hedge fund activism.

In sum, our company analysis demonstrates that several of the characteristics of companies adopting Dead Hand Proxy Puts are the same as those of companies that are subject to hedge fund activism. Furthermore, the analysis in Table 4 shows that companies are significantly likely to adopt Dead Hand Proxy Puts prior to becoming subject to an activist intervention. These findings suggest that Dead Hand Proxy Puts function, at least in part, as a defensive strategy against hedge fund activism.

5. Loan Pricing Analysis

In this section, we investigate the impact of Dead Hand Proxy Put on loan pricing. We employ means comparison, OLS regression, propensity score matching and a treatment-effects model.

5.1 Means comparison and OLS regression

We start our analysis of the price impact of Dead Hand Proxy Puts with means comparison. The results of this analysis are presented in Table 5, Panel A. The results suggest that including Dead Hand Proxy Put reduces the cost of debt. The mean loan spread with Dead Hand is 222.86 basis points and it is 231.96 basis points without Dead Hand. The difference is statistically significant at the 1% level.

[INSERT TABLE 5 HERE]

Next, in Table 5, Panel B, we employ regression analysis and investigate the impact of Dead Hand on loan spreads after controlling for borrower and loan characteristics. The borrower characteristics include firm size, profitability, market-to-book, leverage, cash flow volatility, and asset tangibility. These variables are related to firm credit risk and severity of shareholder-bondholder conflicts and thus should have an impact on loan spreads (see for example, Reisel, 2014). We include Altman's Z-score as an additional control for the credit risk. Our core finding—that inclusion of the Dead Hand Proxy Put reduces loan spreads—remains strongly statistically significant (at the 1% level) across this set of controls.

Further, we consider specifications that also include company credit ratings and loan covenants. We should note that these data items are often missing. To avoid significant reduction in the sample size, we include dummy variables for missing company ratings and covenants.

We obtain company credit ratings from Compustat. Company credit ratings may contain information about firm performance beyond those provided by publicly available financial ratios (e.g. Dichev & Piotroski (2001)). They measure the issuer's overall creditworthiness and confirm to an expected default framework. Again, the coefficient of Deadhand remains negative and strongly statistically significant (at the 1% level).

Finally, in Table 5, Panel B, Specification 5, we control for other loan covenants. Our control is a covenant index that is a sum of restrictions on asset sales, equity issuance, debt issuances, dividend payments, and financial covenants. Our core finding remains strongly statistically significant (at the 5% level) with the addition of this control. Nevertheless, it is

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worth noting that although some covenants such as coverage ratios and restrictions on dividend payouts may also be triggered by financial restructuring in the wake of successful shareholder activism, Dead Hand Proxy Puts are unique in providing a *leading* rather than *lagging* indicator of this potential change. Furthermore, without regard to the typical suite of restrictive and financial covenants, Dead Hand Proxy Puts may add value by enabling creditors to mitigate shifts toward higher risk projects which are otherwise difficult to observe or monitor (Smith & Warner, 1979).

5.2   *Propensity score matching and treatment effects model*

In this sub-section, we consider an alternative estimation technique to investigate robustness of our loan pricing results. In Panel A of Table 6, we present results of propensity score matching. For each loans with Dead Hand Proxy Put, we create a matched control using propensity scores. Propensity scores are calculated using Specification 2 of Table 3. The result of the matching procedure is a sub-sample where loans with Dead Hand Proxy Put and loans without Dead Hand Proxy Put are statistically indistinguishable across a number of characteristics. The price effect of Dead Hand remains negative and highly statistically significant.

One concern with the loan pricing analysis presented above is that it doesn't incorporate endogeneity of the provision choice. To overcome this problem, we employ a treatment effects model. Our selection equation includes a set of variables presented in Table 3, specification 2 including year and industry dummies. Additionally, we include a dummy variable that takes the value of zero prior to May 12, 2009, the date of the *Amylin* case and zero otherwise. On this date,

the Delaware Court of Chancery for the first time subjected this provision to significant scrutiny although it did *not* find Dead Hand Proxy Puts to be a breach of fiduciary duty.[10] This court ruling presents a plausible exogenous shock on a firm's decision to include Dead Hand and should have no direct effect on the loan pricing. We find that this court decision has a significantly positive impact on the likelihood of Dead Hand inclusion (even after controlling for time trends) confirming that it is a valid instrument (untabulated). In Table 6, we report results of the loan pricing equation, which we estimate using OLS after incorporating appropriate Mills ratios (selectivity variable).

[INSERT TABLE 6 HERE]

Importantly, we continue to find that Dead Hand reduces the cost of debt. The coefficients of *Deadhand* are negative and highly statistically significant in all specifications. The economic magnitude of the effect is also substantial. For example, results in Specification 3 suggest that Dead Hand reduces the cost of debt by about 45 basis points. The OLS results appear to underestimate the price effect of Dead Hand, thus it might be important to rely on the treatment effects model while estimating the price effect of Dead Hand.

In sum, our analysis consistently finds evidence showing that Dead Hand Proxy Puts reduce the cost of debt. This is an important finding and a necessary precondition for the provision of net firm-level benefits. It is also strong evidence that creditors consider the Dead Hand feature sufficiently important to significantly discount loans that include the term. The provision thus represents a means of mitigating the shareholder-creditor conflict for which shareholders, as the residual claimants of the firm, are compensated.

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[10] Delaware is the dominant U.S. state of incorporation, and its corporate law rulings are often followed in other jurisdictions.

6.   Bondholder and Shareholder Reaction

We also examine bondholder reaction upon public disclosure of the terms of the underlying loan. As noted above, Dead Hand Proxy Puts are much more common in loan agreements than they are in bond indentures. Bondholders are thus not the intended beneficiaries of the provision. However, because the acceleration of other indebtedness typically triggers the cross-default provision in bonds as well, bondholders may also benefit from the inclusion of a Dead Hand Proxy Put in corporate loan facilities, at least insofar as the provision deters hedge fund activists from looting creditors. We thus hypothesize a positive bondholder reaction to the adoption of Dead Hand Proxy Puts in loan agreements.

Our empirical strategy for investigating the impact of Dead Hand Proxy Puts on bond value is built on an event study methodology. Here we examine bondholder returns around the public announcement (the SEC filing) of the loan contract. We obtain the SEC filling dates from Intelligize when available. Our sample includes multiple bonds issued by the same company. Since the assumption of independence of the observations may be violated in this case, we use cluster adjusting or bootstrapping to calculate the appropriate statistics. Further, we winzorize bond returns at the one percent level to avoid the effect of outliers. Results of this analysis are presented in Panel A of Table 7.

[INSERT TABLE 7]

We find some evidence that bondholders view positively the Dead Hand feature included in loan contracts. The mean bondholder returns at the filling date of loan contracts with Dead Hand is positive and statistically significant at the 5% level. In contrast, the mean bondholder

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returns without Dead Hand are insignificant. While the difference in means between the two cases is insignificant, the difference in medians is significant at the 10% level suggesting that Dead Hand Proxy Put included in loan contracts may also mitigate conflict of interests between bondholders and shareholders.

Finally, we test shareholder reactions to the introduction of Dead Hand Proxy Puts by examining equity pricing upon the public announcement of loan agreements with and without the term. Finally, given the concerns of courts and commentators that Dead Hand Proxy Puts may harm shareholders, we test shareholder reactions to the introduction of the provision by examining equity pricing upon the public announcement of loan agreements with and without the term.

Table 7 Panel B presents mean and median equity returns for companies in our sample around the filing date of loan contracts, comparing raw and excess returns for companies. As shown in the table, shareholders react *positively* to the filing of loan contracts with Dead Hand Proxy Puts. This reaction is statistically significant at the 5% level and, in the case of median raw equity returns, at the 1% level. However, there is no statistically significant difference in equity returns from loans with or without the provision. In both cases, shareholders reacted positively to the public filing of the loan contract. And in both cases, the finding is highly statistically significant. This suggests that shareholders may be reacting more to the extension of credit than to presence or absence of a Dead Hand Proxy Put provision. Thus, we find no evidence that Dead Hand Proxy Puts harm shareholders.

7.   Summary and Conclusions

In this article, we have sought to empirically investigate the role and effect of the Dead Hand Proxy Put on corporate debt. Having constructed a large dataset of loans from 1994-2014, we find the incidence of Dead Hand Proxy Puts in loan contracts has increased sharply since 2000. Hedge fund activism increased during the same period. In further support of this association, we found that companies with characteristics making them likely targets of hedge fund activists are significantly more likely to adopt Dead Hand Proxy Puts. Moreover, we found that companies are likely to adopt Dead Hand Proxy Puts in anticipation of activist interventions.

On the question of the effect of the provision on companies adopting them, we found economically and statistically significant evidence suggesting that inclusion of the Dead Hand feature provides firm-level benefits by decreasing the cost of debt. Companies may save up to 45 basis points when they include the Dead Hand Proxy Put in their loan agreements. Although the precise amount of savings varies with each specification, we consistently find that Dead Hand Proxy Puts provide a benefit to corporations by reducing the cost of debt. Furthermore, we find evidence that bondholders benefit from the inclusion of the provision in loan agreements, and we find no evidence that shareholders are harmed by the provision. Our findings thus provide support for the view that Dead Hand Proxy Puts are important instruments for mitigating shareholder-debtholder conflicts created by hedge fund activism.

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Table 1. Descriptive statistics

The table presents summary statistics for company and loan characteristics for loan contracts in our sample. The sample covers time period from 1994 to 2014. *ROA* is earnings before interest, taxes, depreciation and amortization divided by total assets. *MB* is total assets minus book equity plus market equity divided by total assets. *Book leverage* is long-term debt plus short-term debt divided by total assets. *Cash* is cash plus short-term investments divided by total assets. *PPE* is property, plant and equipment divided by total assets. The firm-level variables are calculated one year prior to the loan start date. *Collateral* equals one for collateralized loans and zero otherwise. *Deadhand* equals one for loans that include deadhand proxy put and zero otherwise.

	Obs.	Mean	Median	Std. Dev.
Firm Characteristics				
Total assets ($mill.)	50,804	10,669.213	873.217	42,832.934
Log (Total assets)	50,797	6.825	6.772	2.246
ROA	45,063	0.116	0.120	0.116
MB	38,988	1.732	1.416	1.002
Dividend per share	44,137	1.022	0.000	6.103
Book leverage	50,034	0.350	0.323	0.252
Cash	46,190	0.086	0.037	0.124
PPE	48,903	0.527	0.447	0.404
Loan Characteristics				
Maturity (month)	49,279	47.358	48.000	29.384
Loan Amount ($mill.)	53,130	340.534	120.000	844.812
Collateral	53,132	0.486		
Deadhand	53,132	0.047		

Table 2. Deadhand Proxy Put and company characteristics: Means comparison

The table compares company characteristics of loan contacts with and without Dead Hand Proxy Put. The sample covers time period from 1994 to 2014. The variables are described in Table 1. Asterisks ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

	Deadhand = 0		Deadhand = 1		
	Obs.	Mean	Obs.	Mean	*Diff*
Total assets	48,316	11,054.899	2,488	3,179.332	*7,875.567****
Log (Total assets)	48,309	6.823	2,488	6.875	*-0.052*
ROA	42,892	0.116	2,171	0.116	*-0.000*
MB	36,994	1.732	1,994	1.734	*-0.002*
Dividend per share	42,006	1.047	2,131	0.541	*0.506****
Book leverage	47,586	0.352	2,448	0.309	*0.043****
Cash	43,996	0.085	2,194	0.108	*-0.023****
PPE	46,440	0.530	2,463	0.474	*0.056****

Table 3. Deadhand Proxy Put and company characteristics: Probit regression

The table presents results of the probit regression. Probability of inclusion of Dead Hand Proxy Put in loan contracts is estimated. The sample covers time period from 1994 to 2014. The variables are described in Table 1. *Defense Law* is dummy variable that equals one for a top defense law firm and zero otherwise. Average marginal effects are reported. Robust standard errors are in parentheses. Standard errors are adjusted for clustering at the firm level. Asterisks ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)
Log (Total assets)	-0.0057***	-0.0057***	-0.0059***
	(0.001)	(0.001)	(0.001)
ROA	-0.0015	-0.0013	-0.0042
	(0.017)	(0.017)	(0.017)
MB	0.0008	-0.0008	-0.0007
	(0.002)	(0.002)	(0.002)
Dividend per share	-0.0123***	-0.0123***	-0.0112***
	(0.004)	(0.004)	(0.004)
Book leverage	-0.0225**	-0.0224*	-0.0253**
	(0.011)	(0.012)	(0.012)
PPE	-0.0100	-0.0100	-0.0102
	(0.007)	(0.007)	(0.007)
Cash		0.0008	-0.0006
		(0.019)	(0.019)
Defense Law			0.0108
			(0.009)
Year dummies	Yes	Yes	Yes
Industry dummies	Yes	Yes	Yes
Observations	37,368	37,361	37,361
Log pseudolikelihood	-6,556	-6,556	-6,542

Table 4. Deadhand Proxy Put and hedge fund activism

The table presents results of the probit regression. Probability of inclusion of Dead Hand Proxy Put in loan contracts is estimated. The sample covers time period from 1994 to 2014. *Activism before* is a dummy variable that equals one if the company was subject to hedge fund activism prior to the loan start date and zero otherwise. *Activism after* is a dummy variable that equals one if the company was subject to hedge fund activism within five years after the loan start date and zero otherwise. Other variables are described in Table 1. Average marginal effects are reported. Robust standard errors are in parentheses. Standard errors are adjusted for clustering at the firm level. Asterisks ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)
Log (Total assets)	-0.0057***	-0.0052***
	(0.001)	(0.001)
ROA	-0.0013	-0.0000
	(0.017)	(0.016)
MB	-0.0006	0.0002
	(0.002)	(0.002)
Dividend per share	-0.0120***	-0.0092**
	(0.004)	(0.004)
Book leverage	-0.0229**	-0.0199*
	(0.011)	(0.011)
PPE	-0.0104	-0.0073
	(0.007)	(0.006)
Activism before	0.0115	
	(0.009)	
Activism after		0.1371***
		(0.009)
Year dummies	Yes	Yes
Industry dummies	Yes	Yes
Observations	37,368	37,368
Log pseudolikelihood	-6,552	-6,134

Table 5. Loan pricing analysis: Means comparison and OLS regressions

The table presents results of analysis of loan-pricing impact of Dead Hand Proxy Put. The sample covers time period from 1994 to 2014. Panel A presents means comparison of loan spreads with and without Deadhand Proxy Put. Panel B presents results of the OLS regression. The dependent variable is the loan spread. *Z-score* is Altman's z-score. *Cash flow volatility* is standard deviation of cash flow over five years prior to the loan start date. Other independent variables are described in Table 1. Specification 4 and 5 also include a dummy variable for missing credit ratings, and specification 5 includes a dummy variable for missing covenants. Robust standard errors are in parentheses. Standard errors are adjusted for clustering at the firm level. Asterisks ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

Panel A. Means Comparison

	Deadhand = 0		*Deadhand = 1*		
	Obs.	Mean	Obs.	Mean	Diff
Loan Spread	29,901	231.958	1,851	222.855	9.103***

Panel B. OLS regressions

	(1)	(2)	(3)	(4)	(5)
Deadhand	-7.8873***	-7.3898***	-6.3912***	-6.1063***	-4.6904**
	(2.522)	(2.595)	(2.466)	(2.446)	(2.392)
Log (Total Assets)	-16.6219***	-14.3895***	-7.7919***	-8.4279***	-9.3434***
	(0.663)	(0.698)	(0.893)	(0.997)	(0.994)
ROA	-125.7600***	-102.5417***	-83.7853***	-84.4018***	-68.9315***
	(10.489)	(12.997)	(12.971)	(12.976)	(13.015)
MB	5.0689***	1.4770	2.1826	2.1359	1.6131
	(1.278)	(1.460)	(1.456)	(1.470)	(1.437)
Book leverage	-15.7841***	-13.7481***	-10.8852**	-9.4969*	-4.2070
	(4.917)	(5.007)	(5.071)	(5.367)	(5.238)
Z-score	-0.2489	0.1051	0.2318	0.3246	0.1757
	(0.479)	(0.525)	(0.509)	(0.509)	(0.500)
PPE		6.7385**	5.4881**	5.4378*	2.5246
		(2.809)	(2.778)	(2.787)	(2.700)
Cash flow volatility		124.6067***	108.6445***	107.8223***	95.6366***
		(28.417)	(28.277)	(28.242)	(28.255)
Log Maturity (month)			-9.9693***	-9.7919***	-7.425***
			(1.530)	(1.522)	(1.534)
Log Loan Amount ($mill)			-8.3278***	-8.5810***	-7.226***
			(0.864)	(0.870)	(0.842)
Collateral			4.8051***	6.7016***	12.966***
			(1.747)	(1.873)	(2.014)

Credit rating A				14.7915	13.988
				(9.527)	(10.409)
Credit rating BBB				18.2001*	20.296*
				(9.822)	(10.645)
Credit rating BB				13.0779	21.836**
				(9.828)	(10.644)
Credit rating below BB				6.5190	15.394
				(10.066)	(10.851)
Covenants					-4.0495***
					(0.618)
Year dummies	Yes	Yes	Yes	Yes	Yes
Industry dummies	Yes	Yes	Yes	Yes	Yes
Observations	21,839	19,623	19,387	19,387	19,387
Adjusted R-squared	0.199	0.194	0.212	0.213	0.229

Table 6. Loan pricing analysis: Propensity score matching and Treatment effects model

The table presents results of analysis of loan-pricing impact of Dead Hand Proxy Put. Panel A presents results of the propensity score matching. Panel B reports results of the second stage of the treatment effects model. The dependent variable is the loan spread. The independent variables are described in Table 1. Specification 2 also includes a dummy variable for missing credit ratings The first stage equation includes a set of variables included in specification 1 of Table 3, and an indicator variable for the Delaware court decision described in the text, which serves as an instrumental variable. Specification 2 and 3 also include dummy variables for missing credit ratings, and specification 3 includes a dummy variable for missing covenants. Robust standard errors are in parentheses. Standard errors are adjusted for clustering at the firm level. Asterisks ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

Panel A. Propensity score matching

	Estimated average effect on loan spread	z-statistics	p-value	N
Deadhand	-9.2191	-2.77	0.006	23,206[a]

[a] number of observation used to create the matched sample

Panel B. Treatment effects model

	(1)	(2)	(3)
Deadhand	-58.9883***	-56.2981***	-44.5895***
	(11.892)	(11.932)	(11.958)
Log (Total assets)	-7.6581***	-7.9948***	-8.715***
	(0.493)	(0.540)	(0.536)
ROA	-84.4773***	-84.8004***	-71.0705***
	(5.192)	(5.189)	(5.161)
MB	2.6992***	2.7288***	2.257***
	(0.645)	(0.652)	(0.643)
Book leverage	-14.5837***	-13.0690***	-7.8546***
	(2.641)	(2.742)	(2.717)
Z-score	0.1208	0.1871	0.0493
	(0.237)	(0.238)	(0.236)
PPE	4.7284***	4.7877***	2.4749*
	(1.431)	(1.429)	(1.412)
Cash flow volatility	92.0168***	91.3462***	80.5575***
	(8.747)	(8.745)	(8.680)
Log Maturity (month)	-8.4080***	-8.2639***	-6.195***
	(0.701)	(0.709)	(0.710)
Log Loan amount($mill)	-7.8863***	-8.1004***	-6.882***
	(0.485)	(0.486)	(0.485)
Collateral	5.0137***	6.7346***	12.3200***
	(1.095)	(1.193)	(1.213)
Credit rating A		14.8650***	14.221***
		(5.456)	(5.388)
Credit rating BBB		19.1237***	20.9943***
		(5.293)	(5.228)
Credit rating BB		14.3187***	22.1300***
		(5.355)	(5.304)
Credit rating below BB		8.5778	16.5120***
		(5.442)	(5.389)
Covenants			-3.4824***
			(0.331)
Year dummies	Yes	Yes	Yes
Industry dummies	Yes	Yes	Yes
Selectivity variable	27.6119***	26.3513***	20.9519***
Observations	19,349	19,349	19,349

Table 7. Bondholder and shareholder responses to introduction of Dead Hand Proxy Put

The table presents bondholder and shareholder returns around the filing date of loan contracts. Panel A. presents bondholder returns. Monthly bond returns are reported. Panel B presents shareholder returns. Cumulative daily equity returns over three days before and three days after the filling date are reported. Excess equity return is calculated as the stock's monthly return minus the CRSP equally-weighted market return. Standard errors are adjusted for clustering at the firm level. Asterisks ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

Panel A. Bondholder returns

	Deadhand = 0		*Deadhand = 1*		
	Obs.	Mean	Obs.	Mean	*Diff.*
Bond return	16,993	-0.0006	1,076	0.0045**	*-0.0051*
	Obs.	Median	Obs.	Median	*Diff*
Bond return	16,993	0.0008***	1,076	0.0012***	*-0.0004*

Panel B. Shareholder returns

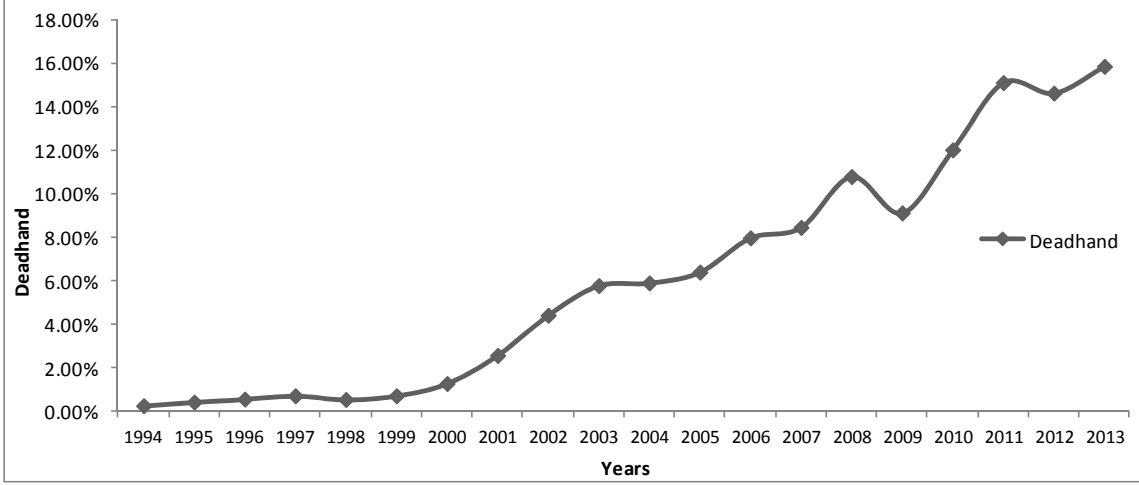|	*Deadhand = 0*		*Deadhand = 1*		
	Obs.	Mean	Obs.	Mean	*Diff.*
Raw equity return	25,056	0.011***	2,210	0.009**	*0.002*
Excess equity return	25,056	0.007***	2,210	0.008**	*-0.001*
	Obs.	Median	Obs.	Median	*Diff.*
Raw equity return	25,056	0.008***	2,210	0.005***	*0.002*
Excess equity return	25,056	0.003***	2,210	0.002**	*0.001*

Figure 1. Deadhand proxy put across time, 1994-2014