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Two Essays on the Effects of Organization Capital on Firm Behavior

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ABSTRACT
TWO ESSAYS ON THE EFFECTS OF ORGANIZATION CAPITAL ON FIRM BEHAVIOR

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A growing stream of finance literature involves measuring the effects of organization capital ("OC") on investment decisions, financial policy, and firm value. Li, Qui & Shen (2018) use the exogenous event of a merger or acquisition to determine whether high OC acquirers perform better. We extend the OC literature by considering economic policy uncertainty ("PU")(Baker, Bloom & Davis, 2016), which is also exogenous to the firm, to determine the effect of OC on firms in the face of PU. Univariate tests show that high OC firms take more investment risk, have lower leverage, higher cash, lower total shareholder payouts, and higher future growth prospects. Multivariate panel regressions show that when controlling for PU, OC is significantly associated with investment activity. Higher OC firms also exhibit higher leverage, higher cash holdings and lower shareholder payouts (dividends + buybacks). OC is positively associated with firm value (Fama & French, 1998), and the coefficient of OC in the firm value regression is 15 times higher for periods of high PU versus low PU.

We assemble several streams of Finance literature in order to resolve conflicting theoretical predictions (Bolton & Scharfstein, 1990) and empirical results regarding long standing differences in the agency view of financial slack, and the product market view. Univariate tests show high OC firms operate in industries more likely to have product market strains, have higher exogenous cash ("EC"), take more risk, have lower leverage, lower total shareholder payouts and higher future growth prospects. Multivariate regressions show that OC is positively associated

with EC. However, when controlling for a product market strain and the interaction of the influences, OC association with EC becomes negative, and the overall positive association is due to the interaction of the product market strain and OC. This implies high OC firms maintain modestly higher EC overall to aid product market performance. Firm value regressions point in the same direction as the interaction term of OC and product market strain has a significant and positive association with firm value.

The essays add to the literature in three ways: 1) Expands the growing Finance stream studying organization capital, more properly using the Firm Efficiency measure of Demerjian et al (2010) for robustness tests. 2) Empirically demonstrates prior streams may not conflict, rather that OC has been a missing construct to understanding firm investment behavior and financial policy choices. 3) Increases the insight into the strategic value of cash holdings.

DEDICATION

This dissertation is dedicated first to my Lord and Savior Jesus, and to my family, who have been a powerful team committed to my academic success. It is my sincere hope that Jesus will get all the praise that may result from this dissertation. Tara, my wife and lifelong love inspires me every day to follow Jesus and attempt to change the world. For almost thirty years all Tara and I have done has been done together. My children Samuel and Audrey sacrificed greatly, uprooting from New York to relocate to Norfolk. My youngest children Timothy and Matthias arrived mid-program with a special interest in Dad's studies. My Mom and Dad offered unwavering support, constant prayer and encouragement. My mother-in-law Diane generously gave of her time and considerable energy to make space for me to study. The entire cadre of remarkable brothers and sisters (Andrea and Mark, Al and Karen, Kevin and Sherri) offered only support and prayer throughout the Old Dominion University program.

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NOMENCLATURE

Acronym	Term	Definition
OC	Organization Capital	Intangible fixed asset representing firmwide Investment in information technology spending, training, apprenticeship programs, senior management compensation not billed to line managers, consulting fees, human resources recruiting and retention, spending on environment, social and governance, and firm community service.
PU	Policy Uncertainty	Construct including news-based elements, temporary federal tax code provisions, and the degree of agreement of economic forecasts.
PM	Product Market	Relative firm industry specific market share.
SG&A	Selling, General and Administrative	Income statement expense item for firm spending on intangible items associated with organization capital.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

Figure Page

DISSERTATION INTRODUCTION

Kraft Heinz was formed by the investment activity of 3G Capital and Berkshire Hathaway. Following four years of ownership, $1.7bln of cost cutting and a large $15.4 billion write-down, Warren Buffet admitted several mistakes with the investment [1,2,3,4]. Finance literature theory and empirical results assert that organization capital ("OC") is important to firm decisions, performance and value. Economic theory indicates that fixed costs are a prerequisite for firms to show increasing returns to scale. We extend the literature on organization capital by considering its effects on firm decisions and firm value in the face of two distinct exogenous challenges; policy uncertainty and product market stress.

In chapter 1, we evaluate a growing stream of finance literature measuring the effects of organization capital ("OC") on investment decisions, financial policy, and firm value. Li, Qui & Shen (2018) use the exogenous event of a merger or acquisition to determine whether high OC acquirers perform better. We extend the OC literature by considering economic policy uncertainty ("PU")(Baker, Bloom & Davis, 2016), which is also exogenous to the firm, to determine the effect of OC on firms in the face of PU. Univariate tests show that high OC firms take more investment risk, have lower leverage, higher cash, lower total shareholder payouts, and higher future growth prospects. Multivariate panel regressions show that when controlling for PU, OC is significantly associated with investment activity. Higher OC firms also exhibit higher leverage, higher cash holdings and lower shareholder payouts (dividends + buybacks). OC is positively associated with firm value (Fama & French, 1998), and the coefficient of OC in the

1. https://dealbook.nytimes.com/2013/02/14/berkshire-and-3g-capital-to-buy-heinz-for-23-billion/

2. https://www.forbes.com/sites/greatspeculations/2015/03/30/analysis-of-the-kraft-heinz-merger/#31a07c9bc9a8

3. https://www.marketwatch.com/story/why-the-154-billion-kraft-heinz-brand-write-down-was-unusual-2019-02-22

4. https://www.reuters.com/article/us-berkshire-buffett-kraft-heinz/warren-buffett-says-berkshire-overpaid-for-kraft-heinz-idUSKCN1QE1F0

firm value regression is 15 times higher for periods of high PU versus low PU.

In chapter 2, we assemble several streams of Finance literature in order to resolve conflicting theoretical predictions (Bolton & Scharfstein, 1990) and empirical results regarding long standing differences in the agency view of financial slack, and the product market view. Four prior theoretical and empirical streams of research motivate our study: 1) Agency theory holds that the separation of ownership and control incents firms to maintain excess cash, reducing firm returns (Jensen & Meckling, 1976). 2) Differentially, a product market view notes the benefits of excess slack. Excess cash may enable firms to maintain investment plans and optimal financial policies during periods of elevated competitive stress (Fresard, 2010) and to deter or prevent new competitive entry altogether (Benoit 1984)(Bolton & Scharfstein, 1990). 3) Economic theory fairly well establishes that fixed costs internal to a firm result in positive economies of scale (Krugman, 1979). 4) Recent finance studies employing several measures of organization capital ("OC") show an association with higher risk taking and firm value (Li, Qui & Shen, 2018). Our empirical objective becomes answering the research question 'Do high OC firms facing product market strains hold more cash and does it enhance firm value?'

Univariate tests show high OC firms operate in industries more likely to have product market strains, have higher exogenous cash ("EC"), take more risk, have lower leverage, lower total shareholder payouts and higher future growth prospects. Multivariate regressions show that OC is positively associated with EC. However, when controlling for a product market strain and the interaction of the influences, OC association with EC becomes negative, and the overall positive

association is due to the interaction of the product market strain and OC. This implies high OC firms maintain modestly higher EC overall to aid product market performance. Firm value regressions point in the same direction as the interaction term of OC and product market strain has a significant and positive association with firm value.

The dissertation add to the literature in three ways: 1) Expands the growing Finance stream studying organization capital, more properly using the Firm Efficiency measure of Demerjian et al (2010) for robustness tests. 2) Empirically demonstrates prior streams may not conflict, rather that OC has been a missing construct to understanding firm investment behavior and financial policy choices. 3) Increases the insight into the strategic value of cash holdings.

CHAPTER 1

EFFECTS OF ORGANIZATION CAPITAL ON FIRM DECISIONS UNDER POLICY UNCERTAINTY

Abstract

A growing stream of finance literature measures the effects of organization capital ("OC") on investment decisions, financial policy, and firm value. We extend the literature by considering an exogenous factor, economic policy uncertainty ("PU")(Baker, Bloom & Davis, 2016), to determine the effects of organization capital on firms in the face of policy uncertainty. Multivariate regressions show that when controlling for PU, organization capital is significantly associated with investment activity. Higher OC firms also exhibit higher leverage and lower total shareholder payouts. We find a robust, positive association with organization capital and firm value. The interaction of organization capital and policy uncertainty is also positively associated with firm value, particularly for fourth quartile (high) OC firms.

1.1. Introduction

In February 2013 private equity firm 3G capital, with the help of Berkshire Hathaway and Warren Buffet, took over H.J. Heinz in a transaction valued at $23bln. In March 2015 Buffett and 3G Capital acquired Kraft Foods and merged it with Heinz to form Kraft Heinz (Ticker "KHC"). As may be the case with takeovers by financial acquirers, 3G imposed steep cost cuts on the newly acquired firm. 3G had operational control over the investments and the combined entity targeted $1.5bln in cost cuts, on combined estimated sales of $29.1bln[1], ultimately raising

the cut number to $1.7bln. In 2019, 3G Capital disclosed a ‘mega-impairment’, writing down $15.4 bln of KHC book value. The shares of Kraft Heinz have declined from a February 2017 peak of $98 per share in December 2017, to $34 per share on the day Buffett said he overpaid and was wrong about the Kraft Heinz investment. The issue of fairly pricing Kraft is left to M&A literature. This paper is focused on a different question. Did KHC’s acquirers fail to understand the importance of Organization Capital and the damage to competitiveness and firm value aggressive S,G&A cost cutting would do?

Firms make investments in tangible and intangible assets for the purpose of increasing firm value. Both types of assets are prerequisites for the firm to fulfill its purpose of efficient accumulation, processing and use of information (Prescott & Visscher, 1980). Each discipline in academic literature measures key intangible constructs. Management literature uses firm specific advantages (‘FSAs’) to explain the theory of internationalization of triad multinational enterprises (“MNEs”)(Dunning, 1977). More recently strategy academics have been motivated to examine what FSAs emerging economy MNEs possess to explain violations of previously hypothesized internationalization processes (Guillen & Garcia-Canal, 2009). Marketing literature has additional challenges when evaluating intangibles. Marketing literature evaluates intangible assets expressed in brand value and instrumented with advertising investment and third-party ratings (Aeker & Biel, 2013)(Cobb-Walgren, Ruble & Donthu, 2013). Marketing literature also has to evaluate firm intangibles that lead to differentiation where an intangible service is the product (Bharwadwaj & Varadarjan, 1993).

Finance and economics literature is intensively concerned with management, firm, industry and nation intangibles. Intangibles are, by nature, not directly measurable. Estimating the influence of intangibles on firm decisions and firm value is fraught with endogeneity issues. Information for processing is produced jointly with firm output. Specifically, for organization capital in particular production, selling, experience accumulation such as on-the-job training and, learning may all be joint products (Prescott & Visscher, 1980).

Measuring payments to intangible assets has been demonstrated in the literature. A Cobb-Douglas model in discrete time and a continuum of households has been shown to directly measure nation-level payments to a specified stock of organization capital (Atkeson & Kehoe, 2005). At a firm-level unit of analysis R&D spending is a widely available income statement proxy for the firm intangible of innovation. R&D does not have a corresponding balance sheet account. Finance studies have adjusted valuation models account for R&D spending and innovativeness to show the effects of innovativeness and areas of market mispricing (Chan, Lakonishok & Sougiannis, 2001). At a firm-level unit of analysis not all intangible assets, or the corresponding income item, are proxied in such a straight forward manner as innovation. Indirect measurement of organization capital can be achieved with a total factor productivity model. Lev & Radhakrishnan (2005) indicate that OC may be obtained indirectly from the residuals of a total factor productivity model estimating sales as the product of physical capital (P,P&E), labor (number of employees) and innovation (R&D).

An undesirable element of an indirect approach, noted by Lev & Radhakrishnan, to measuring OC is it may achieve precise quantification of what is not known about a firm. As such they use

the widely reported S,G&A income statement line item as a proxy for the firm specific advantage OC. The noise that may be present in S,G&A can be partly controlled by using industry median measures, and also tends to hinder finding significant associations rather than incorrectly rejecting a null hypothesis (Li, Qui & Shen, 2018). As such we adopt the capitalization of S,G&A spending as the explanatory variable of interest to address the effects of organization capital. We define organization capital as firm investment in formal and informal processes and systems to enhance productivity and value creation. As with prior studies OC is most directly linked to accounting data through S,G&A. OC is relevant to firm investment decisions and financial policy, and to firm value. Li, Qui & Shen (2018) establish a causal link between the OC of acquiring firms and post-deal performance. The study specifically notes that firms cutting cost of good sold rather than selling, general and administrative expenses, outperform. Financial policy, in terms of seasoned equity offerings, has been shown to link management quality to the level of firm investment (Chemmanur, Paeglis & Simonyan, 2009).

In order to extend the literature on OC, given the endogenous elements of measuring this particular firm intangible, we relate it to an exogenous factor. Policy Uncertainty ("PU") is exogenous to firms and it is important to real investment decisions of the firm (Bernanke, 1983)(Nguyen & Phan, 2017), to firm financial policy (Huang, Wu, Yu & Zhang, 2015)(Yung & Root, 2019) and firm value. Systematic measurement of United States policy uncertainty according to the methodology Baker, Bloom & Davis (2012) enables us to link a firm's investment in OC to an exogenous risk factor affecting all U.S. firms at the same time. The PU construct includes a news-based element, temporary federal tax code provisions, and the degree

of agreement of economic forecasts. The measure of U.S. policy uncertainty is available to cover the entire sample period of this study.

The research question of this study is what is the effect of Organization Capital on firm risk taking, financial policy and firm value in the face of Policy Uncertainty? The results of the study will extend the literature in two ways. This will be the first study to relate OC to PU as an exogenous factor. The study shows how organization capital influences firm risk taking and financial policy due to external variation in policy uncertainty. Second, we link the study of OC to the stream of exogenous factors that influence all firms at the same time. Examples of this stream of research include studies of financial crises (Kuppuswamy & Villalonga, 2016)(Yung, Li & Jian, 2015) and product market strain (Fresard, 2010)(Huang, Jain & Kini, 2018).

Univariate tests show that high OC firms take more investment risk, have higher cash, lower total shareholder payouts, and higher future growth prospects. Multivariate regressions include continuous and quartile specifications of an explanatory interaction term of interest OC*PU. OC*PU is relevant for capex/TA, but not for all other measures of firm risk taking. Quartiles of PU and OC*PU are significant across most model specifications. We find that OC is relevant to firm value in full sample measures, as well as for subsamples of PU and OC quartiles. OC is positively associated with firm value, and the coefficient of OC with firm value is 15 times higher for periods of high PU versus low PU. The results are broadly consistent across multiple measures of OC, an instrumental variable instance of OC, and with Chemmanur et al (2009). The instrument for OC is state inevitable disclosure laws and unemployment insurance benefits (Holland, 2017)(Li, Qui & Shen 2018).

The remainder of the paper proceeds as follows: Section 2 reviews relevant organization capital and policy uncertainty literature. Section 3 details the research design. Section 4 reviews results of the analysis. Section 5 summarizes key conclusions, lists limitations and identifies areas for future research.

1.2. Literature review

1.2.1 Organization Capital

Literature is rife with alternative conceptions of organization capital. Holding unit of analysis constant, the models supporting OC studies can be classified as specific when including theoretically supported specific accounting line items, third party surveys, and demographic variables. OC measures may be classified as general when considering firm, industry or nation level inputs. Closely linked to organization capital for the purpose of defining firm quality, is the construct of firm efficiency. For the purpose of this review firm efficiency can also be conveniently classified by specific measures which overlap with management skill, and general measures oriented to measuring firm level efficiency. General measures are characterized by use of advanced econometric techniques such as data envelopment analysis ("DEA"), where efficiency or skill is defined by residuals from linear regressions. Specific measures of management skill are characterized by individual or group level data on management tenure or education, firm-specific external surveys (e.g. Computerworld 100) or by a specific theoretical link to standardized accounting line items (e.g. S,G&A). A working map of the classification oriented literature review is given in figure 1.

Figure 1: Literature Review Two by Two Classification

	Organization Capital	Management Skill
Specific	Lev & Radhakrishnan, 2005 Bloom, Sadun & Van Reenen, 2012 Chemmanur, Paeglis, & Simonyan, 2009 Eisfeldt & Papanikolaou, 2013. Li, Qui & Shen, 2018	Chevalier & Ellison, 1999 Betrand & Schoar 2003, Bloom & Van Reenen, 2007 Bloom & Van Reenen 2010
General	Evenson & Westphal, 1995 Brensnahan, Brynjolfsson & Hitt, 2002 Atkeson & Kehoe, 2005 Demerjian, Lev & McVay, 2012	Murthi, Choi & Desai, 1997 Demerjian, Lev & McVay, 2012 Albequerque, De Franco & Verdi, 2013 Delis & Tsionis, 2018

1.2.1.1. Specific Organization Capital

Shareholders must share excess cash flow of the firm with skilled labor and managers. In order to estimate the split a model is required to measure the productivity shocks. The shock is associated with the choice that skilled managers of a firm have to depart their existing firm for a new firm (Eisfeldt & Papanikolaou, 2013). The consequence of the risk to cash flows from OC productivity shocks compared to physical plant capital shocks requires each form of capital earn corresponding risk premia. Eisfeldt & Papanikolaou (2013) use S,G&A to directly measure the association of OC and the risk premia. S,G&A is the most common direct measure of OC. It is assumed that S,G&A spending includes elements such as firm wide information technology ("IT") spending, formal and informal training, apprenticeship programs, senior management compensation not billed to line managers, consulting fees, human resources recruiting and retention, ESG spending (environment, social and governance) and firm community service initiatives. Similar to R&D, S,G&A is an expense item rather than a balance sheet account. Also

analogous to R&D, capitalizing S,G&A provides a measure of a firm intangible asset that can be empirically tested to see if it is an intangible asset relevant to risk taking, financial policy and firm value (Chan, Lakonishok & Sougiannis, 2001).

Further supporting capitalized S,G&A is the model of Lev & Radhakrishnan (2005) developed specifically to address the tacit and hard to measure nature of OC. The extent to which a firm is able to outperform, in terms of sales, the inputs of physical capital, number of employees and the investment in innovation, is attributable to the stock of intangibles of the organization. To move the literature beyond this general approach however, Lev & Radhakrishnan posit that capitalized S,G&A is an appropriate proxy for the residuals of the TFP model. Firms generally don't specifically disclose key investments in OC such as employee training expenditures, average tenure, and brand enhancement activities. However, those items are often consolidated and proxied, in an industry specific way, into S,G&A. Such an approach to measuring intangible firm assets is common. R&D and patent filings are direct proxies for innovativeness (Balsmeier, Fleming & Manso, 2017)(Bhattacharya, Hsu, Tian & Yu, 2017) (Luong, Moshirian, Nguyen, Tian & Zhang, 2017)(Hirshleifer, Low & Teoh, 2012). Indeed we believe it is straightforward to conceptualize that S,G&A captures much of the known firm investment in OC. Building on the capitalizing of S,G&A as a proxy for OC, Li, Qui & Shen (2018) relate it to the M&A investment success. Organization capital is shown to be causally and positively related to post deal performance. OC is also linked to post deal asset turnover, cost synergies and innovative efficiency.

1.2.1.2 General Organization Capital

An alternative to specifically linking OC to S,G&A or exogenous third-party data (Computerworld IT 100 for example), OC can be measured with general, external to the firm, data. To motivate general OC theory, it is assumed that payments to organization capital accumulated by a firm are always positive, scale higher with entry costs and may be influenced by market structure. In developing a theoretical model of OC, Atkeson & Kehoe (2005) assume perfect competition, discrete time, and the return to owners is variable profit minus fixed costs. Changing the market assumption to imperfect competition increases the returns to OC owners. The expertise that one plant embodies in comparison to another is OC. Atkeson & Kehoe use national accounts profit data to estimate the share of payments to intangible capital are 10% greater than payments to tangible capital.

Intangible capital has been considered in economic development literature. Evenson & Westphal (1995) have a common notion that tacit knowledge is a firm intangible, difficult to measure and difficult to transfer. The review undertaken is most concerned with the economic development implications of R&D in less developed countries. Nations have endogenous processes of technological change to potentially take advantage of growth and innovation opportunity. Investment in country-level and firm-level technology infrastructure is required to develop the industrial technology and organization capital required to compete. However, included in the required infrastructure investment are experience and knowledge of how to combine capital and labor for productive outcomes. Evenson & Westphal encourage future empirical research to fill in voids in understanding management processes that may improve productivity. This study falls squarely within that mandate.

1.2.1.3 Specific Management Skill

One of the first papers to investigate the influence of management quality on firm investment and financial policies hypothesized lower firm leverage and better access to equity markets because quality managers keep owners informed, and suffer less cost of information asymmetry ("IA") (Chemmanur, Paeglis & Simonyan, 2009). Lower IA also implies less need to signal future cash flow with dividends and thus lower dividend payout ratios, and higher investments. Prior to Chemmanur there has been some disagreement on determinants and relevance to returns, of firm financial policies. The gap remains in part due to challenges operationalizing management quality as a construct. The specific management skill indicator is seasoned equity offerings. Measures of information asymmetry include number of analysts following a firm, analyst forecast error, analyst estimate dispersion, average bid/ask spread, and liquidity. Manager fixed effects are associated with specific demographic characteristics such as education and age. The demographic characteristics were significantly associated with stylistic differences in decision making. The extensive differences in managers included both investment policy and financial policy.

1.2.1.4 General Management Skill

Generalizable theory of management skill based on widely available accounting data has been approached in the literature several ways. Such approaches are classified here as general when quantitative techniques are employed to calculated variables of interest in indirect ways. For example, data envelopment analysis (DEA) or linear modelling are often used in research designs to obtain residuals as a single measure to instrument for management fixed effects. We highlight two issues with this approach as a primary source of variation to explain variation in

the dependent variables. First, the theory and literature build up to the hypothesis of some general management skill models can be summarized as hypothesizing managers influence firm performance. We certainly do not take issue with the point. However, valid conclusions benefit from further theory development. Second, endogeneity issues are problematic in corporate finance research designs in general, and introducing general skill management skill scores may compound the issue. High skill managers may join firms for perceived quality (i.e. firm fixed effects) rather than firms benefiting exclusively from the skill of the managers. Regardless, several general management skill measurement techniques have become prevalent and are vital to comprehensive study of our research question.

Demerjian, Lev & McVay (2012) use DEA to measure the industry adjusted efficiency of managers converting firm inputs into sales. The firm efficiency measure is closer in concept to OC than the MA measure. Murthi, Choi & Desai also use DEA to measure relative skill of mutual fund managers (1997). Using three different constructs for CEO talent, Albuquerque, DeFranco &Verdi (2013) determine excess CEO pay is more attributable to unidentified skill rather than self-serving behavior. The second CEO talent construct uses the residuals of a pay benchmarking model to proxy for talent. Each prior study of specific and general management skill enables us to make theoretical inferences about potential associations between OC and firm behaviors in operating environments that differ due to exogenous factors.

1.2.2 Policy Uncertainty alters investment and financial policy decisions of the firm.

Policy Uncertainty is exogenous to firms. The aggregate level of uncertainty caused by actual and potential change in tax policy, regulation, and monetary policy is outside the direct control

of individual firms in the United States. Pindyck (1988) and Bernanke (1983) present models and predictions of the consequences of uncertainty on the investment decisions of the firm. Investment decisions of the firm include capital expenditures, mergers and acquisitions, and R&D. Examples of financial policy decisions include dividend and share repurchase, capital structure, accumulation of financial slack, and earnings management. Pindyck assumes the future has a non-zero level of uncertainty as a constant. The value of a firm relates to its assets in place and its future investment options. Uncertainty influences firm's future investment decisions. However, it also may influence firm choice and action regarding investments in place. The latter choices tend to be more related to firm policy than strictly to investment decisions. The first type of decision corresponds to Bernanke's conclusions about the consequence of uncertainty. Firms will retain the optionality of future investments rather than exercise the options in times of uncertainty. The negative association of uncertainty and investment is well established at the nation and firm level. Firms may also seek to retain optionality in financial policy decisions as well given the influence of uncertainty on assets in place.

The influence of PU on investment and financial policy decisions has been studied. U.S. firms have been found to lower investment due to the uncertainty of state gubernatorial elections. Jens (2017) difference-in-difference research design showed a 5% to 15% drop in investment for firms headquartered in states with current elections. Firms did undertake to exercise some of the retained investment options in future periods as post-election firm investment rebounded. Elections have been found to reduce investment at a nation level as well (Julio & Yook, 2012). From the period of 1980 to 2005, across 48 countries, a national election was shown to reduce corporate capital investment by 4.8%. Firms may alter financial policies to retain future earnings

report optionality by altering discretionary accruals in periods of policy uncertainty (Yung & Root, 2019). PU has a pervasive influence on the real investment decisions of firms as well as the financial policy decisions of firms. However, a gap in the literature remains to empirically measure how, in the face of policy uncertainty, organization capital influences investment and financial policy decisions of the firm. OC is a firm intangible that improves the overall efficiency of a firm in converting physical plant, intellectual property and labor into sales and cash flow. We expect that OC will improve firm efficiency in periods of elevated PU.

H1: Organization capital is positively associated with firm risk taking in periods of elevated PU.

1.2.3 Policy Uncertainty, Organization Capital and firm value.

Intangible assets are valued by the stock market. Chan, Lakonishok & Sougiannis (2001) measure the association of R&D intensity to firm value. The future returns of high R&D stocks is the same as low R&D stocks suggesting that the market efficiently incorporates R&D intensity into firm value. However, cross-sectional regressions indicate that high R&D/sales and high R&D/market cap firms earn future excess returns, despite having glamour stock valuations. The high future returns were essentially payments for high volatility. Said another way, the excess future return of the investment in innovation was compensation for the associated elevated risk. The choices made by a firm to productively convert resources to sales, attributable to OC, has a direct influence on value maximization (Prescott & Visscher, 1980). Eisfeldt & Papanikolaou (2013) find high OC firms have higher average returns than low OC firms. This implies that the relative efficiency gain of the high OC firms more than offsets the elevated compensation and higher share of cash flow demanded by senior managers relative to shareholders. Using a

somewhat less common measure of firm value, abnormal earnings, Lev & Radhakrishnan (2005) estimate that OC accounts for 24% of the cross-sectional variation in the excess of the market value of firms to book value. The straightforward conclusion being that markets price OC as a factor expected to contribute to future growth.

Policy uncertainty has a negative association with firm value. Episcopos (1994) model predicts a negative firm value effect of PU on assets in place, greater than the negative influence of delaying future investment options. PU theory is extended by Pastor & Veronesi (2012) showing the dual influence of uncertainty regarding a policy change and uncertainty regarding the effect of the change on firm cash flow. Rather than discovery by government announcement, investors discover policy change by observing firm cash flow. The predicted influence of PU on firm value is negative and is a function of both cash flow effects and discount rate effects. Quantitative predictions of the model are not influenced by the timing of policy announcement. The experience within an organization to deal with PU falls squarely in the construct of its OC. Intangible assets are relevant to firm value and policy uncertainty influences firm value, thus we expect OC will have a significant influence on firm value in the face of PU.

H2: Organization capital is positively associated with firm value in periods of elevated PU.

1.3. Research Design

1.3.1 Organization Capital

Following Li, Qui & Shen and Eisfeldt & Papanikolou we assume that S,G&A is indicative of spending and investment in OC. Li et al notes that noise in S,G&A from items not oriented to

OC biases against results with significant associations. We use four measures of OC. The first three use S,G&A directly. The fourth method serves as a robustness check to observe similarities and differences in measures of OC with a general measure of management skill. The fourth method is the firm efficiency score ("FE" or "FirmEffic") available from Demerjian et al (2012). Using a perpetual inventory method we follow Li et al and calculate the initial stock of OC (1) and each subsequent year OC balance (2).

$$OC_{i,0} = realSGA/AT_{i,1}/(sectorG+DeprOC) \quad (1)$$

$$OC_{i,t} = (1-DeprOC)OC_{i,t-1} + realSG\&A_{i,t}/AT_{i,t} \quad (2)$$

S,G&A is deflated by CPI as reported by fred.stlouisfed.org, and by total firm assets. Sector growth is the median compound S,G&A growth rate for a firm's 2-digit GIC sector. The depreciation rate of OC is assumed to be 15% following prior literature and the bureau of economic statistics 15% depreciation rate for R&D capital.

The second measure of OC is industry median adjusted OC. Within each industry there tends to be standard reporting conventions that make S,G&A comparable across firms. We subtract industry median OC from firm OC at the 2-digit level. The third method is 5-year straight line depreciation. This method follows Li et al (2018) and also follows Chan, Lakonishok & Sougiannis (2001) approach to calculating a R&D asset. The fourth measure is a robustness check on our S,G&A based measures. Demerjian (2012) provides data on his website for a DEA-

based general measure of FE, as it is closer to the characteristics of the efficiency inducing firm stock of OC, than the MA score also defined in the 2012 study.

1.3.2 Policy Uncertainty

The Baker, Bloom and Davis("BBD")(2016) policy uncertainty index is externally provided at www.policyuncertainty.com and serves as key independent variable on its own, as an interaction term with OC, and in splitting our sample into quartiles of PU. The BBD PU index provides a convenient way to measure of the economic influence of real or perceived government action for the purpose of estimating its influence on firm investments and policies through the channel of OC. The BBD policy uncertainty index is based on taking qualitative inputs to quantify policy-induced economic uncertainty. The results often match ex ante intuition. For example, the BBD index shows large increases around wars and presidential elections.

The standardized and normalized (mean=100) BBD index measures policy-related economic uncertainty. The index is reported monthly and is comprised of three underlying components. The first is text analysis of newspaper coverage of policy-related economic uncertainty. The second is a function of a count of expiring federal tax code provisions. The third element of the BBD index is professional economic forecast dispersion. We follow Nguyen et al. (2017) and annualize the index by summing monthly values as the authors demonstrate robust estimation results with the annualized index.

1.3.3 Sample

From WRDS, for the period of 1998-2017 we obtain data on all U.S. firms excluding utilities, financials and ADRs. We eliminate firms under $5mln market value, under $5mln in revenue or a share price under $2. We also exclude firms with missing data reported for assets, revenue, or shares outstanding. Following prior literature we set to zero missing values for S,G&A, R&D and interest expense. Negative values for capital spending, acquisitions, R&D, cash, dividends, share repurchases, and interest are set to zero. We winsorize relevant continuous variables at the 1st and 99th percentiles.

We acquire and merge in data from several additional sources. We calculate an annual average CPI deflator from monthly consumer price index data obtained from fred.stlouisfed.org. Policy uncertainty data is obtained from the data source maintained by Baker, Bloom and Davis at http://www.policyuncertainty.com. Instrumental variables data is based on weekly unemployment insurance benefits and data on maximum number of weeks of benefits, as taken from https://fileunemployment.org/ unemployment-benefits/unemployment-benefits-comparison-by-state.html. A dummy variable is used for whether states have adopted inevitable disclosure doctrine ("IDD") laws is sourced . We merge in state level business combination ("BC") law dummy variables for governance control. BC laws limit a firm's ability to engage in large deals or merger transactions with new minority shareholders or their firms for a period of time (http://people.duke.edu/~charvey/Classes/wpg/bfglosb.htm). Firm efficiency is sourced from the personal website of Demerjian (http://faculty.washington.edu/pdemerj/data.html). A comprehensive list of variable definitions, sources and formulas is given in appendix Table A1.

1.3.4 Summary statistics and correlations.

The total number of records in our database following this procedure is 66,243 (table 1), with 4507 different firms with at least one-year of OC and valid data for each specified control variable. The average (median) firm has $2.65bln ($374mln) in assets, a market value of $3.326bln ($460mln) and revenue of $2.331bln ($347mln). The average firm has S,G&A expense representing 28% of assets and 30c of each revenue dollar goes to S,G&A. Mean (median) organization capital of 1.90 (1.44) compares to a mean of 0.97 (0.69) reported by Li et al. Li's average firm is 55% larger than our sample, with average (median) assets of $3.187 bln (537mln). Eisfeldt & Papanicolaou (2013) report middle quintile OC of 1.09 with a quintile range of 0.27 to 2.71. Firms in our sample have a median ROA of 4.3%, one-year trailing sales growth of 7.9%, market to book of 2.11, cash/assets of 10.8% and total leverage of 48%. In terms of risk taking, our average firm acquisition, R&D and capex to asset ratios are 5.0%, 4.9% and 6.6%, respectively.

Table 1.1: Descriptive Statistics

	Assets	Market Value	Revenue	S,G&A	Cash/Assets	Acquisitions	R&D/Assets	Capex/Assets	Leverage
count	66,243	60,119	66,243	66,243	66,235	52,813	55,174	54,668	66,055
mean	2,649.3	3,326.0	2,331.4	389.6	0.195	0.050	0.049	0.066	0.501
sd	7,390.1	10,154.0	6,469.2	1,114.8	0.217	0.190	0.114	0.102	0.419
min	7.6	9.1	6.8	0.000	0.000	0.000	0.000	0.000	0.000
p25	100.2	117.5	84.3	17.4	0.030	0.000	0.000	0.019	0.298
p50	374.0	460.4	347.4	64.7	0.108	0.000	0.000	0.038	0.484
p75	1,547.3	1,756.4	1,418.7	234.8	0.291	0.023	0.056	0.075	0.651
max	51,759.8	76,218.5	46,499.0	8,319.0	1.000	10.121	7.478	4.876	74.934

	Dividend/Sales	Div Dummy	OC	ROA	Ebitda/Assets	Sales Growth	MTB	Tobin's Q	1 Year Return
count	65,236	66,243	50,536	55,174	55,057	55,174	60,084	57,798	55,174
mean	0.014	0.375	1.904	0.024	0.15	14.5	3.291	4.793	11.6
sd	0.042	0.484	1.973	0.148	1.90	34.7	5.737	9.276	57.7
min	0.000	0	(0.184)	(0.637)	(5.58)	(50.7)	(16.210)	(32.572)	(79.5)
p25	0.000	0	0.574	(0.008)	0.07	(1.4)	1.244	2.162	(24.1)
p50	0.000	0	1.440	0.043	0.13	7.9	2.116	3.375	2.8
p75	0.009	1	2.602	0.090	0.20	21.4	3.771	5.489	33.1
max	0.303	1	33.075	0.436	226.54	200.6	38.603	60.561	272.3

Assets, market cap, revenue, s,g&a, mtb, sales growth, 1 year trailing return, roa, Tobin's Q, all winsorized at the 1st,99th percentiles.
S,G&A, R&D, acquisitions, capex, common dividends, interest expense and cash holdings all set to zero if negative.
Dropped financials, utilities, ADRs, foreign HQ firms, all firms with revenue under $5mln, less than $5mln in market cap or less than $2 stock.

Pearson correlations of key variables provide some notable associations including that OC is negatively and significantly correlated with dividend payout, leverage and firm size. OC is positively associated with market-to-book ("MTB"), Tobin's Q, stock return and cash holdings.

In terms of firm risk-taking correlations are less consistent, with notable positive associations with R&D spending but small negative results for acquisitions and capital spending. As expected, policy uncertainty is negatively and significantly correlated with investment activities of the firm (R&D, acquisitions, capex).

Table 1.2: Pairwise correlation of main variables.

	Assets	Mkt Value	Revenue	S,G&A	Cash/Assets	Acq/Assets	R&D/Assets	Real SGA/At	Capex/Assets	Div/Sales	Div Dummy	Leverage	OC	PU	ROA	Ebitda/Assets	Sales G	MTB	Tobin's Q
Assets	1																		
Mkt Value	0.853***	1																	
Revenue	0.876***	0.777***	1																
S,G&A	0.770***	0.798***	0.794***	1															
Cash/Assets	-0.143***	-0.0635***	-0.146***	-0.0806***	1														
Acq/Assets	-0.0136**	-0.0176***	-0.0302***	-0.0246***	-0.109***	1													
R&D/Assets	-0.0808***	-0.0183***	-0.0938***	-0.0328***	0.473***	-0.00158	1												
Real SGA/At	-0.197***	-0.126***	-0.137***	-0.0106*	0.175***	-0.0705***	0.196***	1											
Capex/Assets	-0.0267***	-0.0222***	-0.0472***	-0.0649***	-0.142***	0.0380***	-0.0561***	-0.105***	1										
Div/Sales	0.154***	0.176***	0.0929***	0.105***	-0.0463***	0.00548	-0.0972***	-0.148***	0.0305***	1									
Div Dummy	0.279***	0.230***	0.276***	0.217***	-0.273***	-0.00896	-0.220***	-0.178***	-0.0236***	0.444***	1								
Leverage	0.153***	0.0787***	0.166***	0.124***	-0.325***	0.0497***	-0.126***	-0.0539***	0.0211***	0.0476***	0.121***	1							
OC	-0.187***	-0.110***	-0.131***	-0.0059	0.192***	-0.0134**	0.205***	0.850***	-0.0764***	-0.149***	-0.180***	-0.0918***	1						
PU	0.0680***	0.0421***	0.0566***	0.0516***	0.0105*	-0.0446***	-0.0155**	-0.0632***	-0.0563***	0.0659***	0.0418***	0.0223***	-0.0836***	1					
ROA	0.0653***	0.109***	0.0838***	0.0803***	-0.189***	0.0161**	-0.385***	-0.174***	0.0377***	0.165***	0.210***	-0.111***	-0.0810***	-0.0225***	1				
Ebitda/Assets	0.0171***	0.0610***	0.0332***	0.0388***	-0.179***	0.0839***	-0.340***	-0.139***	0.118***	0.196***	0.162***	0.009	-0.0802***	-0.0176***	0.713***	1			
Sales G	-0.0516***	-0.0219***	-0.0587***	-0.0655***	0.0762***	0.251***	0.141***	-0.0183***	0.226***	-0.0455***	-0.125***	-0.0411***	0.0145**	-0.0964***	-0.00126	0.0669***	1		
MTB	0.0196***	0.123***	0.0233***	0.0556***	0.160***	0.00453	0.149***	0.0921***	0.0183***	0.0633***	-0.00618	0.006	0.100***	-0.0157**	0.0286***	0.108***	0.112***	1	
Tobin's Q	0.0535***	0.0896***	0.0533***	0.0552***	0.0460***	0.0256***	0.0594***	0.0189***	0.0221***	0.0520***	0.0291***	0.0927***	0.0241***	-0.0036	0.00948	0.0894***	0.0732***	0.914***	1
1 Yr Return	-0.0167**	0.0174***	-0.0148**	-0.0156**	0.0648***	-0.00698	0.0463***	-0.00725	-0.00603	-0.0332***	-0.0433***	-0.0168**	0.0258***	0.0326***	0.109***	0.0664***	0.0788***	0.150***	0.0897***

* p < 0.05, ** p < 0.01, *** p < 0.001

Assets, market cap, revenue, s,g&a, mtb, sales growth, 1 year trailing return, roa, Tobin's Q, all winsorized at the 1st,99th percentiles.

1.4. Results

1.4.1. Univariate analysis.

Throughout the study the perpetual inventory method of calculating OC is denoted as such, industry adjusted perpetual inventory method is "OCb", five-year straight-line depreciation is "OCc" and a DEA-based firm efficiency score is shown as "FE". We begin our empirical analysis by splitting the sample into high and low quartiles for each of the four measures of organization capital. Each of the risk taking and financial policy variables in Table 3 are dependent variables in the multivariate regressions that follow. Based on a simple univariate analysis, the financial policy of high OC firms is significantly different from low OC firms. High OC firms have less total leverage, maintain more financial slack and pay out less total cash to shareholders. Firms with higher OC appear to invest more as shown by higher mean and median

R&D and capital expenditures. The univariate finding on acquisition investment is less clear. High OC firms also appear to have substantially higher ROA and EBITDA variation than low OC firms. Overall, we consider our findings largely consistent with prior empirical findings. Panel D of table 3 splits the sample by FE rather than an S,G&A based measure of OC. Findings in panel D are directionally the same as Panels A, B and C for risk taking and operating fundamentals. Univariate data appears to confirm that high OC firms are more oriented to investment and risk-taking than a quiet life (Bertrand & Mullainathan, 2003) and distributing cash to shareholders. In terms of operating fundamentals high OC firms exhibit faster sales growth, higher returns, higher future growth prospects, and are somewhat smaller and younger firms.

Table 1.3 Panel A: Univariate analysis with perpetual inventory method of Organization Capital

	Q4_OC (high) Mean (median)	Q1_OC (low) Mean (median)	Means Difference (p-value)	Medians Difference (p-value)***
OC	4.436 (3.742)	0.219 (0.201)		
Risk Taking				
Capex/TA	0.061 (0.041)	0.097 (0.054)	0.000	0.000
R&D/TA	0.087 (0.032)	0.037 (0.000)	0.000	0.000
Acquisitions/TA	0.046 (0.000)	0.048 (0.000)	0.453	0.011
ROA sd*	0.215 (0.053)	0.058 (0.031)	0.000	0.000
EBITDA/TA sd*	0.296 (0.138)	0.139 (0.117)	0.000	0.000
Financial Policy				
Leverage	0.454 (0.408)	0.556 (0.567)	0.000	0.000
Cash Holdings	0.258 (0.200)	0.152 (0.056)	0.000	0.000
Dividend/Sales	0.007 (0.000)	0.03 (0.000)	0.000	0.000
Dividend+Repurchase/S	0.029 (0.001)	0.058 (0.013)	0.000	0.000
Operating Fundamentals and Performance				
Sales Growth	18.346 (9.04)	23.569 (8.505)	0.001	0.050
ROA	0.002 (0.045)	0.018 (0.034)	0.000	0.000
EBITDA/TA	0.193 (0.130)	0.129 (0.120)	0.096	0.000
MTB	4.562 (2.808)	2.929 (1.945)	0.000	0.000
Tobin's Q	5.618 (3.765)	5.003 (3.576)	0.000	0.000
LnAT	5.066 (4.962)	7.031 (7.008)	0.000	0.000
LnAge	7.307 (7.487)	7.541 (7.765)	0.000	0.000

Table 1.3 Panel B: Univariate analysis with quartiles of industry median adjusted organization capital.

	Q4_OCb (high) Mean (median)	Q1_OCb (low) Mean (median)	Means Difference (p-value)	Medians Difference (p-value)***
OCb	2.687 (2.002)	-1.194 (-1.166)		
Risk Taking				
Capex/TA	0.065 (0.042)	0.059 (0.033)	0.000	0.000
R&D/TA	0.077 (0.016)	0.054 (0.000)	0.000	0.000
Acquisitions/TA	0.047 (0.000)	0.047 (0.000)	0.961	0.000
ROA sd*	0.241 (0.049)	0.053 (0.031)	0.000	0.000
EBITDA/TA sd*	0.323 (0.138)	0.125 (0.109)	0.000	0.000
Financial Policy				
Leverage	0.468 (0.425)	0.524 (0.523)	0.000	0.000
Cash Holdings	0.236 (0.165)	0.213 (0.109)	0.000	0.000
Dividend/Sales	0.007 (0.000)	0.0160 (0.000)	0.000	0.000
Dividend+Repurchase/S	0.028 (0.001)	0.053 (0.010)	0.000	0.000
Operating Fundamentals and Performance				
Sales Growth	17.856 (8.83)	19.588 (7.886)	0.089	0.000
ROA	0.007 (0.049)	0.012 (0.036)	0.086	0.000
EBITDA/TA	0.245 (0.137)	0.105 (0.115)	0.001	0.000
MTB	4.466 (2.682)	3.076 (2.064)	0.000	0.000
Tobin's Q	5.652 (3.705)	4.832 (3.474)	0.000	0.000
LnAT	5.055 (4.956)	6.803 (6.683)	0.000	0.000
LnAge	7.340 (7.530)	7.664 (7.910)	0.000	0.000

Table 1.3 Panel C: Univariate analysis with 5 year straight line depreciation organization capital.

	Q4_OCc (high) Mean (median)	Q1_OCc (low) Mean (median)	Means Difference (p-value)	Medians Difference (p-value)***
OCc	2.687 (2.002)	0.032 (0.031)		
Risk Taking				
Capex/TA	0.065 (0.042)	0.087 (0.050)	0.000	0.000
R&D/TA	0.077 (0.016)	0.019 (0.000)	0.000	0.000
Acquisitions/TA	0.047 (0.000)	0.036 (0.000)	0.659	0.000
ROA sd*	0.241 (0.049)	0.056 (0.031)	0.001	0.000
EBITDA/TA sd*	0.323 (0.138)	0.136 (0.117)	0.001	0.000
Financial Policy				
Leverage	0.457 (0.425)	0.573 (0.576)	0.000	0.000
Cash Holdings	0.236 (0.165)	0.121 (0.055)	0.000	0.000
Dividend/Sales	0.007 (0.000)	0.028 (0.004)	0.000	0.000
Dividend+Repurchase/S	0.028 (0.001)	0.056 (0.018)	0.000	0.000
Operating Fundamentals and Performance				
Sales Growth	17.856 (8.830)	12.611 (6.206)	0.000	0.092
ROA	0.007 (0.049)	0.032 (0.037)	0.530	0.000
EBITDA/TA	0.245 (0.137)	0.140 (0.120)	0.025	0.000
MTB	4.466 (2.682)	2.741 (1.871)	0.000	0.000
Tobin's Q	5.652 (3.705)	4.902 (3.457)	0.075	0.001
LnAT	5.055 (4.956)	7.571 (7.576)	0.000	0.000
LnAge	7.340 (7.530)	8.369 (8.400)	0.000	0.000

Table 1.3 Panel D: Univariate analysis with Firm Efficiency ("FE") (Demerjian, 0212) used to measure organization capital construct.

	Q4_FE (high) Mean (median)	Q1_FE (low) Mean (median)	Means Difference (p-value)	Medians Difference (p-value)***
FE	0.537 (0.474)	0.195 (0.208)		
Risk Taking				
Capex/TA	0.07 (0.042)	0.066 (0.036)	0.010	0.000
R&D/TA	0.052 (0.003)	0.034 (0)	0.000	0.000
Acquisitions/TA	0.049 (0)	0.031 (0)	0.000	0.000
ROA sd*	0.047 (0.028)	0.069 (0.041)	0.000	0.000
EBITDA/TA sd*	0.134 (0.119)	0.134 (0.112)	0.971	0.000
Financial Policy				
Leverage	0.537 (0.537)	0.513 (0.485)	0.006	0.000
Cash Holdings	0.181 (0.105)	0.155 (0.077)	0.000	0.000
Dividend/Sales	0.019 (0.003)	0.008 (0)	0.000	0.000
Dividend+Repurchase/S	0.064 (0.028)	0.022 (0)	0.000	0.000
Operating Fundamentals and Performance				
Sales Growth	18.292 (7.669)	7.967 (4.615)	0.000	0.000
ROA	0.072 (0.068)	-0.029 (0.012)	0.000	0.000
EBITDA/TA	0.186 (0.167)	0.048 (0.082)	0.000	0.000
MTB	4.056 (2.847)	2.234 (1.475)	0.000	0.000
Tobin's Q	5.751 (4.294)	3.664 (2.625)	0.000	0.000
LnAT	7.752 (7.829)	5.007 (4.85)	0.000	0.000
LnAge	8.194 (8.42)	8.105 (8.274)	0.000	0.000

*ROA standard deviation and EBITDA/TA variables calculated with 5 year rolling window.
**equal variance t-test that difference is means not equal to zero.
*** Pearson chi-squared test.
Assets, market cap, revenue, s,g&a, mtb, sales growth, 1 year trailing return, roa, Tobin's Q, all winsorized at the 1st,99th percentiles.
S,G&A, R&D, acquisitions, capex, common dividends, interest expense and cash holdings all set to zero if negative.

1.4.2. Multivariate regressions.

Risk taking and financial policy variables are each used in turn with our series of five base-line multivariate regressions, and reproduced for each of the four formulations of OC. The base line regression is given in formula (3).

$$\text{Risk Taking}_{it} = \beta_{0i} + \beta_{1i}\text{OC}_{it} + \beta_{2i}\text{Controls}_{it} + \text{Industry FE} + \text{Year FE} + \varepsilon_{it} \quad (3)$$

Formula (3) is the first of the five base line regressions presented in tables 4, 5 and 6. The remaining four specification of formula 1 substitute for OC_{it} alone to include: ii) PU, iii) OC + PU + OC*PU, iv) OC + Q1_PU + Q4_PU + Q1_PU*OC + Q4_PU*OC, and v) Q1_OC + Q4_OC + PU + Q1_OC*PU + Q4_OC*PU. Standard errors are clustered by firm and year. We

do not include year fixed effects in estimations including PU as an independent variable. PU affects all firms at the same time each year.

Risk-taking regression control variables follow the large body of prior literature to include firm size, leverage, performance, future growth prospects, cash holdings, trailing sales growth and stock returns, firm age and corporate governance. As a proxy for governance we use business combination laws ("BC"). The influence of business combination law on governance is the focus of Bertrand & Mullainathan (2003). The study includes a table of state-by-state business combination law precedents. BC laws continue to be used as a governance control in finance literature (Jiang & Lie, 2016). The attraction of using BC laws is a US list is easily obtained, the legal precedents are stable for long periods of time, it is an exogenous measure of governance and the underlying theory of a lower risk of hostile takeover is straightforward. The limitation of using a BC law-oriented governance control for empirical studies is the lack of international applicability as the legal jurisdiction applies to U.S. domiciled firms only.

We find that without controlling for PU, OC is strongly associated with firm risk taking ($p<0.01$ in 4 of 5 measures). In order to interpret the OC coefficient consider for example B1 = 0.003 for the partial effect on dependent variable capex/assets, and an OC sample standard deviation of 1.973. A one standard deviation increase in OC is associated with a 0.6% higher level of capex/assets. Given a mean capex/assets ratio 6.6%, a one standard deviation increase in OC is therefore associated with a 9% increase in capex. The association of OC with acquisition activity is not significant, however the positive sign on the coefficient fits expectations ex ante, and with univariate analysis showing no difference in acquisition means but significant differences in

terms of median ($p<0.01$). Consistent with current theory PU has a negative and significant influence on capital spending. Controlling for PU, OC has a significant and positive influence on firm risk taking and the magnitude of the partial effect of OC changes very little when controlling for PU. Hypothesis 1, that OC has a positive and significant influence on firm risk taking when controlling for PU, is supported. The interaction term OC*PU is also positive and significant in base-line regression 3. Splitting the OC*PU interaction term into quartiles of PU, shows a strong positive and significant association with investment activity. High OC firms (4_{th} quartile) exhibit significantly higher roa and ebitda variation when controlling for PU. We interpret this result to mean the high OC firms are more oriented to strategy than just year to year financials. Results are largely consistent across the four formulations of organization capital. Table 4, Panel D shows that FE score, based on a more general measure of OC, shows a stronger significant association with R&D spending than OC calculated from firm and industry S,G&A.

Financial policy multivariate regressions show modest differences compared to univariate results. A test of difference of means indicated high OC firms had lower leverage and higher cash balances. Across the five base line specifications that match our risk-taking models, a multivariate leverage model controls for firm size, future growth prospects, returns, asset intensity, trailing stock returns and non-debt tax shield. Cash holdings model controls follow Opler, Pinkowitz, Stulz & Williamson (1999). Table 5 Panel A shows a different association for capital structure. OC is positively associated with firm leverage and modestly higher financial slack. The change in sign of leverage is consistent with higher level of risk taking and returns for high OC firms. Splitting the sample into high and low OC, while controlling for PU and including leverage model controls indicates low OC firms maintain lower leverage.

Table 1.4 Panel A1 Multivariate regression risk-taking dependent variables. Organization Capital calculated with perpetual inventory method. Industry fixed effects are on.

Dependent Variable:	Capital Expenditures/Assets					Research & Development/Assets					Acquisitions/Assets				
OC	0.003***		-0.000	0.003***		0.012***		0.013***	0.013***		0.002		-0.001	-0.000	
	(0.001)		(0.002)	(0.001)		(0.002)		(0.003)	(0.002)		(0.002)		(0.004)	(0.001)	
ln(Assets)	0.002*	-0.000	0.001	0.001	-0.000	-0.003*	-0.009***	-0.002	-0.002	-0.005***	0.015***	0.013***	0.014***	0.014***	0.014***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.002)	(0.001)	(0.002)	(0.002)	(0.001)	(0.002)	(0.001)	(0.002)	(0.002)	(0.002)
leverage	-0.020***	-0.004*	-0.020***	-0.019***	-0.019***	-0.008	-0.000	-0.006	-0.006	-0.003	0.035***	0.007	0.037***	0.037***	0.038***
	(0.005)	(0.002)	(0.005)	(0.005)	(0.005)	(0.008)	(0.001)	(0.008)	(0.008)	(0.008)	(0.008)	(0.004)	(0.008)	(0.008)	(0.008)
ROA	0.011	0.019***	0.015*	0.015*	0.015*	-0.171***	-0.162***	-0.170***	-0.168***	-0.167***	0.009	0.011	0.016	0.015	0.015
	(0.009)	(0.007)	(0.009)	(0.009)	(0.009)	(0.016)	(0.013)	(0.016)	(0.016)	(0.016)	(0.020)	(0.016)	(0.020)	(0.020)	(0.020)
MTB	0.000***	0.001***	0.001***	0.001***	0.001***	0.001***	0.001***	0.001***	0.001***	0.001***	-0.000*	-0.000*	-0.000*	-0.000*	-0.000*
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Cash/Assets	-0.031***	-0.032***	-0.039***	-0.039***	-0.039***	0.068***	0.064***	0.065***	0.065***	0.064***	-0.150***	-0.159***	-0.151***	-0.151***	-0.150***
	(0.005)	(0.004)	(0.005)	(0.005)	(0.005)	(0.008)	(0.007)	(0.008)	(0.008)	(0.008)	(0.009)	(0.008)	(0.009)	(0.009)	(0.009)
Tr. 1-Year Return	-0.000***	-0.000***	-0.000***	-0.000***	-0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	-0.000	-0.000	-0.000	-0.000	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Tr. 1-Year Sales Growth	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.001***	0.001***	0.001***	0.001***	0.001***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
ln(Age)	-0.014***	-0.020***	-0.020***	-0.020***	-0.021***	0.000	0.001	0.002	0.002	0.002	-0.012***	-0.011***	-0.013***	-0.014***	-0.014***
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.003)	(0.002)	(0.003)	(0.003)	(0.003)
BC_Gov	-0.010***	-0.010***	-0.010***	-0.010***	-0.010***	-0.010***	-0.011***	-0.010***	-0.010***	-0.011***	0.008*	0.006	0.008**	0.008**	0.009**
	(0.003)	(0.002)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)
PU		-0.000***	-0.000***		-0.000**		-0.000***	-0.000		0.000		-0.000***	-0.000***		-0.000**
		(0.000)	(0.000)		(0.000)		(0.000)	(0.000)		(0.000)		(0.000)	(0.000)		(0.000)
OC_PU			0.000***					-0.000					0.000		
			(0.000)					(0.000)					(0.000)		
quartilePU_1				0.005**					-0.002					0.017***	
				(0.002)					(0.001)					(0.004)	
quartilePU_4				-0.004***					-0.001					-0.005*	
				(0.001)					(0.001)					(0.003)	
quartileOC_PU1				0.003					0.023***					-0.016***	
				(0.003)					(0.003)					(0.006)	
quartileOC_PU4				0.003*					0.004					0.014***	
				(0.002)					(0.002)					(0.004)	
quartileOC_1					0.011					0.038***					0.018
					(0.010)					(0.008)					(0.020)
quartileOC_4					0.005					0.041***					0.012
					(0.006)					(0.005)					(0.013)
quartileOC_1_PU					-0.000**					-0.000***					-0.000**
					(0.000)					(0.000)					(0.000)
quartileOC_4_PU					0.000					-0.000***					-0.000
					(0.000)					(0.000)					(0.000)
Constant	0.323***	0.361***	0.372***	0.351***	0.373***	0.014	0.055***	-0.003	-0.024*	0.005	0.062**	0.069***	0.081***	0.061**	0.077***
	(0.023)	(0.017)	(0.020)	(0.020)	(0.022)	(0.014)	(0.010)	(0.013)	(0.012)	(0.011)	(0.029)	(0.023)	(0.029)	(0.027)	(0.028)
Observations	24,016	30,496	24,016	24,016	24,016	24,186	30,695	24,186	24,186	24,186	23,310	29,676	23,310	23,310	23,310
Number of gvkeyanna	3,976	4,494	3,976	3,976	3,976	3,990	4,507	3,990	3,990	3,990	3,938	4,456	3,938	3,938	3,938
R-Squared	0.199	0.194	0.190	0.190	0.190	0.403	0.395	0.397	0.405	0.399	0.0898	0.0830	0.0857	0.0865	0.0865

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Assets, market cap, revenue, sgdta, mtb, sales growth, 1 year trailing return, roa, Tobin's Q, all winsorized at the 1st,99th percentiles.

Table 1.4 Panel A2 Multivariate regression risk-taking dependent variables. Organization Capital calculated with perpetual inventory method.

Dependent Variable	5-Year ROA Standard Deviation					5-Year EBITDA/TA Standard Deviation				
OC	0.033***		0.030***	0.035***		0.035***		0.032***	0.037***	
	(0.007)		(0.007)	(0.007)		(0.007)		(0.008)	(0.007)	
ln(Assets)	-0.001	-0.010***	-0.001	-0.001	-0.008***	0.005	-0.005**	0.004	0.004	-0.004
	(0.003)	(0.002)	(0.003)	(0.003)	(0.002)	(0.004)	(0.002)	(0.003)	(0.003)	(0.003)
leverage	0.012	0.011	0.012	0.012	0.012	0.042***	0.041***	0.042***	0.041***	0.042***
	(0.009)	(0.008)	(0.009)	(0.009)	(0.009)	(0.011)	(0.009)	(0.011)	(0.011)	(0.011)
ROA	-0.058***	-0.061***	-0.058***	-0.057***	-0.051**	-0.035	-0.031	-0.034	-0.033	-0.027
	(0.022)	(0.019)	(0.022)	(0.022)	(0.022)	(0.025)	(0.021)	(0.024)	(0.024)	(0.024)
MTB	-0.000	0.000	-0.000	-0.000	0.000	0.000	0.000**	0.000	0.000	0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Cash/Assets	0.050***	0.057***	0.050***	0.050***	0.050***	0.027*	0.033**	0.026*	0.026*	0.026*
	(0.013)	(0.012)	(0.013)	(0.013)	(0.013)	(0.014)	(0.013)	(0.014)	(0.014)	(0.014)
Tr. 1-Year Return	0.000	0.000	0.000	0.000	0.000	-0.000	-0.000	0.000	0.000	0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Tr. 1-Year Sales Growth	0.000***	0.000***	0.000**	0.000**	0.000**	0.000*	0.000*	0.000*	0.000*	0.000*
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
ln(Age)	-0.024***	-0.025***	-0.017***	-0.019***	-0.025***	-0.029***	-0.048***	-0.038***	-0.040***	-0.046***
	(0.006)	(0.004)	(0.004)	(0.004)	(0.005)	(0.007)	(0.005)	(0.005)	(0.005)	(0.005)
BC_Gov	-0.005	-0.006	-0.006	-0.006	-0.005	-0.006	-0.006	-0.006	-0.006	-0.005
	(0.006)	(0.005)	(0.006)	(0.006)	(0.006)	(0.007)	(0.005)	(0.007)	(0.007)	(0.007)
PU		0.000***	0.000***		0.000***		0.000***	0.000**		0.000***
		(0.000)	(0.000)		(0.000)		(0.000)	(0.000)		(0.000)
OC_PU			0.000					0.000		
			(0.000)					(0.000)		
quartilePU_1				-0.018***					-0.021***	
				(0.003)					(0.003)	
quartilePU_4				0.006***					0.004***	
				(0.001)					(0.001)	
quartileOC_PU1				0.015***					0.013***	
				(0.004)					(0.005)	
quartileOC_PU4				-0.006					-0.004	
				(0.005)					(0.005)	
quartileOC_1					-0.006					-0.004
					(0.009)					(0.010)
quartileOC_4					0.029**					0.033***
					(0.011)					(0.012)
quartileOC_1_PU					0.000					0.000
					(0.000)					(0.000)
quartileOC_4_PU					0.000					0.000
					(0.000)					(0.000)
Constant	0.249***	0.318***	0.174***	0.203***	0.295***	0.336***	0.540***	0.378***	0.405***	0.508***
	(0.050)	(0.032)	(0.038)	(0.039)	(0.032)	(0.057)	(0.037)	(0.043)	(0.044)	(0.037)
Observations	12,701	15,821	12,701	12,701	12,701	12,667	15,782	12,667	12,667	12,667
Number of gvkeynum	1,697	2,142	1,697	1,697	1,697	1,694	2,139	1,694	1,694	1,694
R-Squared	0.151	0.149	0.149	0.158	0.156	0.0796	0.0645	0.0740	0.0798	0.0726

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Assets, market cap, revenue, s,g&a, mtb, sales growth, 1 year trailing return, roa, Tobin's Q, all winsorized at the 1st,99th percentiles.

Table 1.4 Panel B1 Multivariate regression risk-taking dependent variables. Industry adjusted organization capital. Industry fixed effecst are on.

Dependent Variable	Capital Expenditures/Assets					Research & Development/Assets					Acquisitions/Assets				
OCb	0.003***		0.002	0.003***		0.012***		0.013***	0.012***		0.002		0.002	0.000	
	(0.001)		(0.002)	(0.001)		(0.002)		(0.003)	(0.002)		(0.002)		(0.004)	(0.002)	
ln(Assets)	0.002*	-0.000	0.001	0.001	-0.000	-0.003*	-0.009***	-0.002	-0.002	-0.005***	0.015***	0.013***	0.014***	0.014***	0.014***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.002)	(0.001)	(0.002)	(0.002)	(0.001)	(0.002)	(0.001)	(0.002)	(0.002)	(0.002)
leverage	-0.020***	-0.004*	-0.020***	-0.020***	-0.019***	-0.008	-0.000	-0.006	-0.005	-0.002	0.035***	0.007	0.037***	0.037***	0.037***
	(0.005)	(0.002)	(0.005)	(0.005)	(0.005)	(0.008)	(0.001)	(0.008)	(0.008)	(0.008)	(0.008)	(0.004)	(0.008)	(0.009)	(0.008)
ROA	0.011	0.019***	0.015*	0.015*	0.015*	-0.171***	-0.162***	-0.170***	-0.169***	-0.168***	0.009	0.011	0.016	0.016	0.015
	(0.009)	(0.007)	(0.009)	(0.008)	(0.009)	(0.016)	(0.013)	(0.016)	(0.016)	(0.016)	(0.020)	(0.016)	(0.020)	(0.020)	(0.020)
MTB	0.000***	0.001***	0.001***	0.001***	0.001***	0.001***	0.001***	0.001***	0.001***	0.001***	-0.000*	-0.000*	-0.000*	-0.000*	-0.000*
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Cash/Assets	-0.031***	-0.032***	-0.039***	-0.039***	-0.039***	0.068***	0.064***	0.065***	0.066***	0.064***	-0.150***	-0.159***	-0.151***	-0.151***	-0.151***
	(0.005)	(0.004)	(0.005)	(0.005)	(0.005)	(0.008)	(0.007)	(0.008)	(0.008)	(0.008)	(0.009)	(0.008)	(0.009)	(0.009)	(0.009)
Tr. 1-Year Return	-0.000***	-0.000***	-0.000***	-0.000***	-0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	-0.000	-0.000	-0.000	-0.000	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Tr. 1-Year Sales Growth	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.001***	0.001***	0.001***	0.001***	0.001***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
ln(Age)	-0.014***	-0.020***	-0.020***	-0.021***	-0.021***	0.000	0.001	0.002	0.002	0.001	-0.012***	-0.011***	-0.014***	-0.014***	-0.013***
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.003)	(0.002)	(0.003)	(0.003)	(0.003)
BC_Gov	-0.010***	-0.010***	-0.010***	-0.010***	-0.010***	-0.010***	-0.011***	-0.010***	-0.010***	-0.011***	0.008*	0.006	0.008**	0.008*	0.008*
	(0.003)	(0.002)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)
PU		-0.000***	-0.000***		-0.000***		-0.000***	-0.000**		-0.000		-0.000***	-0.000***		-0.000***
		(0.000)	(0.000)		(0.000)		(0.000)	(0.000)		(0.000)		(0.000)	(0.000)		(0.000)
OCb_PU			0.000					-0.000					0.000		
			(0.000)					(0.000)					(0.000)		
quartilePU_1				0.005***					0.000					0.013***	
				(0.002)					(0.001)					(0.004)	
quartilePU_4				-0.004***					-0.003**					-0.002	
				(0.001)					(0.001)					(0.003)	
quartileOCb_PU1				0.003					0.008***					-0.008*	
				(0.002)					(0.003)					(0.005)	
quartileOCb_PU4				0.001					0.005					0.011**	
				(0.002)					(0.003)					(0.005)	
quartileOCb_1					-0.000					0.009					-0.030*
					(0.007)					(0.007)					(0.015)
quartileOCb_4					0.001					0.034***					-0.015
					(0.007)					(0.005)					(0.013)
quartileOCb_1_PU					-0.000					-0.000*					0.000
					(0.000)					(0.000)					(0.000)
quartileOCb_4_PU					0.000					-0.000*					0.000*
					(0.000)					(0.000)					(0.000)
Constant	0.324***	0.361***	0.367***	0.355***	0.374***	0.017	0.055***	0.003	-0.002	0.017	0.063**	0.069***	0.076***	0.048*	0.081***
	(0.023)	(0.017)	(0.020)	(0.019)	(0.021)	(0.013)	(0.010)	(0.012)	(0.012)	(0.011)	(0.029)	(0.023)	(0.027)	(0.026)	(0.028)
Observations	24,016	30,496	24,016	24,016	24,016	24,186	30,695	24,186	24,186	24,186	23,310	29,676	23,310	23,310	23,310
Number of gvkeynum	3,976	4,494	3,976	3,976	3,976	3,990	4,507	3,990	3,990	3,990	3,938	4,456	3,938	3,938	3,938
R-Squared	0.199	0.194	0.189	0.190	0.190	0.403	0.395	0.397	0.399	0.394	0.0898	0.0830	0.0857	0.0860	0.0861

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Assets, market cap, revenue, s,g&a, mtb, sales growth, 1 year trailing return, roa, Tobin's Q, all winsorized at the 1st,99th percentiles.

Table 1.4 Panel B2 Multivariate regression risk-taking dependent variables. Industry median adjusted organization capital. Industry fixed effects are on.

Dependent Variable	5-Year ROA Standard Deviation					5-Year EBITDA/TA Standard Deviation				
OCb	0.033***		0.031***	0.033***		0.035***		0.034***	0.036***	
	(0.007)		(0.007)	(0.008)		(0.007)		(0.008)	(0.008)	
ln(Assets)	-0.001	-0.010***	-0.001	-0.001	-0.007***	0.005	-0.005**	0.004	0.004	-0.002
	(0.003)	(0.002)	(0.003)	(0.003)	(0.002)	(0.004)	(0.002)	(0.003)	(0.003)	(0.003)
leverage	0.012	0.011	0.012	0.012	0.012	0.042***	0.041***	0.042***	0.041***	0.041***
	(0.009)	(0.008)	(0.009)	(0.009)	(0.009)	(0.011)	(0.009)	(0.011)	(0.011)	(0.011)
ROA	-0.058***	-0.061***	-0.058***	-0.057***	-0.054**	-0.035	-0.031	-0.034	-0.033	-0.030
	(0.022)	(0.019)	(0.022)	(0.022)	(0.022)	(0.025)	(0.021)	(0.024)	(0.024)	(0.025)
MTB	-0.000	0.000	-0.000	-0.000	0.000	0.000	0.000**	0.000	0.000	0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Cash/Assets	0.050***	0.057***	0.050***	0.050***	0.051***	0.027*	0.033**	0.026*	0.026*	0.027*
	(0.013)	(0.012)	(0.013)	(0.013)	(0.013)	(0.014)	(0.013)	(0.014)	(0.014)	(0.014)
Tr. 1-Year Return	0.000	0.000	0.000	0.000	0.000	-0.000	-0.000	0.000	0.000	0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Tr. 1-Year Sales Growth	0.000***	0.000***	0.000**	0.000**	0.000***	0.000*	0.000*	0.000*	0.000*	0.000*
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
ln(Age)	-0.024***	-0.025***	-0.017***	-0.019***	-0.024***	-0.029***	-0.048***	-0.038***	-0.040***	-0.046***
	(0.006)	(0.004)	(0.004)	(0.004)	(0.005)	(0.007)	(0.005)	(0.005)	(0.005)	(0.005)
BC_Gov	-0.005	-0.006	-0.006	-0.006	-0.005	-0.006	-0.006	-0.006	-0.006	-0.005
	(0.006)	(0.005)	(0.006)	(0.006)	(0.006)	(0.007)	(0.005)	(0.007)	(0.007)	(0.007)
PU		0.000***	0.000***		0.000***		0.000***	0.000***		0.000***
		(0.000)	(0.000)		(0.000)		(0.000)	(0.000)		(0.000)
OCb_PU			0.000					0.000		
			(0.000)					(0.000)		
quartilePU_1				-0.014***					-0.018***	
				(0.002)					(0.002)	
quartilePU_4				0.004***					0.002*	
				(0.001)					(0.001)	
quartileOCb_PU1				0.008*					0.005	
				(0.004)					(0.005)	
quartileOCb_PU4				-0.000					0.002	
				(0.009)					(0.010)	
quartileOCb_1					-0.026***					-0.034***
					(0.009)					(0.010)
quartileOCb_4					0.025**					0.021*
					(0.012)					(0.013)
quartileOCb_1_PU					0.000**					0.000**
					(0.000)					(0.000)
quartileOCb_4_PU					0.000					0.000
					(0.000)					(0.000)
Constant	0.258***	0.318***	0.179***	0.222***	0.291***	0.345***	0.540***	0.381***	0.422***	0.504***
	(0.049)	(0.032)	(0.039)	(0.037)	(0.034)	(0.057)	(0.037)	(0.044)	(0.042)	(0.040)
Observations	12,701	15,821	12,701	12,701	12,701	12,667	15,782	12,667	12,667	12,667
Number of gvkeynum	1,697	2,142	1,697	1,697	1,697	1,694	2,139	1,694	1,694	1,694
R-Squared	0.151	0.149	0.149	0.154	0.154	0.0796	0.0645	0.0742	0.0772	0.0711

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Assets, market cap, revenue, s,g&a, mtb, sales growth, 1 year trailing return, roa, Tobin's Q, all winsorized at the 1st,99th percentiles.

Table 1.4 Panel C1 Multivariate regression risk-taking dependent variables. Organization Capital calculated with 5-year straight line depreciation. Industry fixed effects are on.

Dependent Variable	Capital Expenditures/Assets					Research & Development/Assets					Acquisitions/Assets				
OCc	0.018*		0.003	0.017		0.145***		0.117***	0.145***		0.012*		0.013	-0.013	
	(0.010)		(0.014)	(0.013)		(0.017)		(0.017)	(0.018)		(0.007)		(0.024)	(0.009)	
ln(Assets)	-0.000	-0.000	-0.001	-0.001	-0.001	-0.005***	-0.009***	-0.003***	-0.004***	-0.009***	0.006***	0.013***	0.006***	0.006***	0.006***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
leverage	-0.010**	-0.004*	-0.010***	-0.010***	-0.010**	0.000	-0.000	0.002	0.002	0.007	0.009**	0.007	0.010**	0.011**	0.011**
	(0.004)	(0.002)	(0.004)	(0.004)	(0.004)	(0.007)	(0.001)	(0.007)	(0.007)	(0.008)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)
ROA	0.049***	0.019***	0.049***	0.049***	0.050***	-0.123***	-0.162***	-0.123***	-0.123***	-0.118***	-0.011	0.011	-0.011	-0.015	-0.015
	(0.006)	(0.007)	(0.006)	(0.006)	(0.006)	(0.015)	(0.013)	(0.015)	(0.015)	(0.015)	(0.014)	(0.016)	(0.014)	(0.014)	(0.014)
MTB	0.000***	0.001***	0.000***	0.000***	0.000***	0.000***	0.001***	0.001***	0.001***	0.001***	-0.000	-0.000*	-0.000	-0.000	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Cash/Assets	-0.033***	-0.032***	-0.036***	-0.036***	-0.036***	0.029***	0.064***	0.031***	0.031***	0.032***	-0.114***	-0.159***	-0.114***	-0.113***	-0.113***
	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.006)	(0.007)	(0.006)	(0.006)	(0.007)	(0.007)	(0.008)	(0.007)	(0.007)	(0.007)
Tr. 1-Year Return	-0.000***	-0.000***	-0.000***	-0.000***	-0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	-0.000**	-0.000	-0.000***	-0.000***	-0.000***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Tr. 1-Year Sales Growth	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.001***	0.001***	0.001***	0.001***	0.001***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
ln(Age)	-0.007***	-0.020***	-0.012***	-0.011***	-0.012***	-0.005*	0.001	0.010***	0.010***	0.008***	-0.006**	-0.011***	-0.003	-0.003	-0.003
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.003)	(0.002)	(0.003)	(0.003)	(0.003)
BC_Gov	-0.008***	-0.010***	-0.007***	-0.007***	-0.007***	-0.007**	-0.011***	-0.009***	-0.008***	-0.009***	0.006**	0.006	0.005**	0.005*	0.005**
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.004)	(0.003)	(0.003)	(0.003)
PU		-0.000***	-0.000*		0.000		-0.000***	-0.000		0.000		-0.000***	-0.000		-0.000
		(0.000)	(0.000)		(0.000)		(0.000)	(0.000)		(0.000)		(0.000)	(0.000)		(0.000)
OCc_PU			0.000					0.000*					-0.000		
			(0.000)					(0.000)					(0.000)		
quartilePU_1				0.004***					0.000					0.010***	
				(0.001)					(0.001)					(0.003)	
quartilePU_4				-0.000					0.001**					0.001	
				(0.001)					(0.001)					(0.003)	
quartileOCc_PU1				0.004*					0.010***					-0.015***	
				(0.002)					(0.002)					(0.004)	
quartileOCc_PU4				0.004**					0.002					0.006	
				(0.002)					(0.002)					(0.004)	
quartileOCc_1					0.016**					0.011**					-0.015
					(0.007)					(0.005)					(0.016)
quartileOCc_4					0.006*					0.020***					0.004
					(0.003)					(0.005)					(0.010)
quartileOCc_1_PU					-0.000**					-0.000					0.000
					(0.000)					(0.000)					(0.000)
quartileOCc_4_PU					-0.000					0.000					-0.000
					(0.000)					(0.000)					(0.000)
Constant	0.237***	0.361***	0.266***	0.253***	0.264***	0.052***	0.055***	-0.056***	-0.069***	-0.011	0.030	0.069***	0.013	0.017	0.022
	(0.021)	(0.017)	(0.017)	(0.017)	(0.017)	(0.020)	(0.010)	(0.016)	(0.016)	(0.014)	(0.024)	(0.023)	(0.025)	(0.023)	(0.023)
Observations	18,200	30,496	18,200	18,200	18,200	18,277	30,695	18,277	18,277	18,277	17,680	29,676	17,680	17,680	17,680
Number of gvkeynum	2,484	4,494	2,484	2,484	2,484	2,492	4,507	2,492	2,492	2,492	2,469	4,456	2,469	2,469	2,469
R-Squared	0.250	0.194	0.245	0.247	0.247	0.475	0.395	0.472	0.476	0.466	0.0943	0.0830	0.0924	0.0935	0.0934

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Assets, market cap, revenue, s,g&a, mtb, sales growth, 1 year trailing return, roa, Tobin's Q, all winsorized at the 1st,99th percentiles.

Table 1.4 Panel C2 Multivariate regression risk-taking dependent variables. Organization Capital calculated with 5-year straight line depreciation. Industry fixed effects on.

Dependent Variable	5-Year ROA Standard Deviation					5-Year EBITDA/TA Standard Deviation				
OCc	0.145***		0.157***	0.154***		0.157***		0.163***	0.167***	
	(0.031)		(0.038)	(0.034)		(0.032)		(0.040)	(0.035)	
ln(Assets)	-0.003	-0.010***	-0.003	-0.003	-0.008***	0.004	-0.005**	0.003	0.003	-0.003
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.003)	(0.002)	(0.003)	(0.003)	(0.002)
leverage	0.007	0.011	0.007	0.007	0.011	0.037***	0.041***	0.036***	0.036***	0.040***
	(0.008)	(0.008)	(0.008)	(0.008)	(0.008)	(0.010)	(0.009)	(0.010)	(0.010)	(0.009)
ROA	-0.068***	-0.061***	-0.068***	-0.067***	-0.062***	-0.037*	-0.031	-0.039*	-0.036*	-0.032
	(0.019)	(0.019)	(0.019)	(0.019)	(0.019)	(0.021)	(0.021)	(0.021)	(0.021)	(0.021)
MTB	0.000	0.000	0.000	0.000	0.000	0.000	0.000**	0.000	0.000	0.000*
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Cash/Assets	0.055***	0.057***	0.056***	0.055***	0.056***	0.034***	0.033**	0.032**	0.032**	0.032**
	(0.012)	(0.012)	(0.012)	(0.012)	(0.012)	(0.013)	(0.013)	(0.013)	(0.013)	(0.013)
Tr. 1-Year Return	0.000	0.000	0.000	0.000	0.000	-0.000	-0.000	-0.000	-0.000	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Tr. 1-Year Sales Growth	0.000***	0.000***	0.000***	0.000***	0.000***	0.000**	0.000*	0.000**	0.000**	0.000*
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
ln(Age)	-0.023***	-0.025***	-0.022***	-0.023***	-0.024***	-0.028***	-0.048***	-0.045***	-0.045***	-0.047***
	(0.005)	(0.004)	(0.004)	(0.004)	(0.004)	(0.006)	(0.005)	(0.005)	(0.005)	(0.005)
BC_Gov	-0.005	-0.006	-0.005	-0.005	-0.006	-0.006	-0.006	-0.005	-0.005	-0.005
	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)
PU		0.000***	0.000***		0.000***		0.000***	0.000***		0.000***
		(0.000)	(0.000)		(0.000)		(0.000)	(0.000)		(0.000)
OCc_PU			-0.000					-0.000		
			(0.000)					(0.000)		
quartilePU_1				-0.017***					-0.020***	
				(0.002)					(0.003)	
quartilePU_4				0.002**					0.001	
				(0.001)					(0.001)	
quartileOCc_PU1				0.010***					0.006*	
				(0.003)					(0.003)	
quartileOCc_PU4				-0.002					-0.001	
				(0.004)					(0.004)	
quartileOCc_1					-0.007					-0.002
					(0.008)					(0.010)
quartileOCc_4					0.023**					0.026***
					(0.009)					(0.010)
quartileOCc_1_PU					0.000					-0.000
					(0.000)					(0.000)
quartileOCc_4_PU					-0.000					-0.000
					(0.000)					(0.000)
Constant	0.259***	0.318***	0.233***	0.259***	0.293***	0.346***	0.540***	0.447***	0.475***	0.512***
	(0.045)	(0.032)	(0.035)	(0.037)	(0.031)	(0.052)	(0.037)	(0.040)	(0.041)	(0.036)
Observations	15,821	15,821	15,821	15,821	15,821	15,782	15,782	15,782	15,782	15,782
Number of gvkeynum	2,142	2,142	2,142	2,142	2,142	2,139	2,139	2,139	2,139	2,139
R-Squared	0.151	0.149	0.149	0.153	0.153	0.0721	0.0645	0.0649	0.0683	0.0655

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Assets, market cap, revenue, s,g&a, mtb, sales growth, 1 year trailing return, roa, Tobin's Q, all winsorized at the 1st,99th percentiles.

Table 1.4 Panel D1 Multivariate regression risk-taking dependent variables. Firm Efficiency (Demerjian, 2012) used to quantify organzation capital construct. Industry fixed effects are on. Year fixed effects not required for PU regressions as PU affects all firms at the same time, by year.

Dependent Variable	Capital Expenditures/Assets					Research & Development/Assets					Acquisitions/Assets				
FE	-0.003		-0.007	0.006		0.097***		0.141***	0.097***		0.011		-0.015	0.014	
	(0.007)		(0.023)	(0.009)		(0.017)		(0.036)	(0.018)		(0.016)		(0.038)	(0.021)	
ln(Assets)	0.001	-0.000	-0.002**	-0.002**	-0.002**	-0.013***	-0.009***	-0.013***	-0.013***	-0.012***	0.013***	0.013***	0.012***	0.012***	0.011***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.002)	(0.001)	(0.001)	(0.001)	(0.001)	(0.002)	(0.001)	(0.002)	(0.002)	(0.002)
leverage	-0.003**	-0.004*	-0.003**	-0.003**	-0.003**	-0.001*	-0.000	-0.001**	-0.001*	-0.001*	0.004**	0.007	0.004*	0.004*	0.004*
	(0.001)	(0.002)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.002)	(0.004)	(0.002)	(0.002)	(0.002)
ROA	0.027***	0.019***	0.031***	0.032***	0.030***	-0.146***	-0.162***	-0.141***	-0.140***	-0.136***	-0.064*	0.011	-0.063*	-0.061*	-0.068**
	(0.008)	(0.007)	(0.008)	(0.008)	(0.008)	(0.018)	(0.013)	(0.018)	(0.018)	(0.018)	(0.033)	(0.016)	(0.033)	(0.032)	(0.032)
MTB	0.001***	0.001***	0.001***	0.001***	0.001***	0.001**	0.001***	0.001**	0.001***	0.001***	0.000	-0.000*	0.000	0.000	0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Cash/Assets	-0.020***	-0.032***	-0.031***	-0.031***	-0.031***	0.055***	0.064***	0.053***	0.053***	0.052***	-0.135***	-0.159***	-0.142***	-0.142***	-0.143***
	(0.006)	(0.004)	(0.006)	(0.006)	(0.006)	(0.010)	(0.007)	(0.010)	(0.010)	(0.010)	(0.011)	(0.008)	(0.011)	(0.011)	(0.011)
Tr. 1-Year Return	-0.000*	-0.000***	-0.000***	-0.000***	-0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	-0.000	-0.000	-0.000	-0.000	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Tr. 1-Year Sales Growth	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.001***	0.001***	0.001***	0.001***	0.001***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
ln(Age)	-0.004	-0.020***	-0.018***	-0.019***	-0.018***	0.002	0.001	0.000	0.000	0.001	0.000	-0.011***	-0.007*	-0.008*	-0.006
	(0.003)	(0.002)	(0.002)	(0.002)	(0.002)	(0.003)	(0.002)	(0.002)	(0.002)	(0.002)	(0.005)	(0.002)	(0.004)	(0.004)	(0.004)
BC_Gov	-0.014***	-0.010***	-0.012***	-0.012***	-0.012***	-0.016***	-0.011***	-0.017***	-0.017***	-0.017***	0.004	0.006	0.005	0.005	0.005
	(0.003)	(0.002)	(0.003)	(0.003)	(0.003)	(0.004)	(0.003)	(0.004)	(0.004)	(0.004)	(0.006)	(0.004)	(0.006)	(0.006)	(0.006)
PU		-0.000***	-0.000**		-0.000***		-0.000***	0.000		-0.000*		-0.000***	-0.000**		-0.000***
		(0.000)	(0.000)		(0.000)		(0.000)	(0.000)		(0.000)		(0.000)	(0.000)		(0.000)
FE_PU			0.000					-0.000*					0.000		
			(0.000)					(0.000)					(0.000)		
quartilePU_1				0.002					-0.001					0.006	
				(0.002)					(0.002)					(0.004)	
quartilePU_4				-0.002**					-0.002					-0.004	
				(0.001)					(0.002)					(0.004)	
quartileFE_PU1				0.004*					0.001					0.004	
				(0.002)					(0.002)					(0.005)	
quartileFE_PU4				0.001					-0.003					0.005	
				(0.003)					(0.002)					(0.006)	
quartileFE_1					0.010					-0.014***					-0.014
					(0.006)					(0.005)					(0.015)
quartileFE_4					0.007					0.026***					-0.007
					(0.009)					(0.007)					(0.015)
quartileFE_1_PU					-0.000*					0.000					0.000
					(0.000)					(0.000)					(0.000)
quartileFE_4_PU					-0.000					-0.000*					0.000
					(0.000)					(0.000)					(0.000)
Constant	0.245***	0.361***	0.366***	0.354***	0.359***	0.043**	0.055***	0.040***	0.050***	0.068***	-0.019	0.069***	0.045	0.025	0.046
	(0.025)	(0.017)	(0.023)	(0.023)	(0.022)	(0.019)	(0.010)	(0.014)	(0.012)	(0.012)	(0.048)	(0.023)	(0.036)	(0.038)	(0.037)
Observations	13,387	30,496	13,387	13,387	13,387	13,483	30,695	13,483	13,483	13,483	13,042	29,676	13,042	13,042	13,042
Number of gvkeynum	1,858	4,494	1,858	1,858	1,858	1,860	4,507	1,860	1,860	1,860	1,842	4,456	1,842	1,842	1,842
R-Squared	0.252	0.194	0.239	0.239	0.240	0.474	0.395	0.469	0.468	0.463	0.0948	0.0830	0.0913	0.0914	0.0921

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Assets, market cap, revenue, s,g&a, mtb, sales growth, 1 year trailing return, roa, Tobin's Q, all winsorized at the 1st,99th percentiles.

Table 1.4 Panel D2 Multivariate regression risk-taking dependent variables. Firm Efficiency (Demerjian, 2012) used to quantify organzation capital construct. Industry fixed effects are on. Year fixed effects not required for PU regressions as PU affects all firms at the same time, by year.

Dependent Variable	5-Year ROA Standard Deviation					5-Year EBITDA/TA Standard Deviation				
FE	0.036***		0.002	0.044***		0.054***		0.015	0.057***	
	(0.010)		(0.021)	(0.013)		(0.012)		(0.021)	(0.014)	
ln(Assets)	-0.011***	-0.010***	-0.011***	-0.011***	-0.010***	-0.005**	-0.005**	-0.005**	-0.005**	-0.004**
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
leverage	0.017	0.011	0.016	0.016	0.017	0.048***	0.041***	0.046***	0.046***	0.047***
	(0.011)	(0.008)	(0.010)	(0.010)	(0.011)	(0.013)	(0.009)	(0.013)	(0.013)	(0.013)
ROA	-0.060**	-0.061***	-0.060**	-0.058**	-0.052**	-0.030	-0.031	-0.030	-0.028	-0.023
	(0.025)	(0.019)	(0.025)	(0.025)	(0.026)	(0.026)	(0.021)	(0.025)	(0.025)	(0.027)
MTB	0.000	0.000	0.000	0.000	0.000	0.001**	0.000**	0.001**	0.001**	0.001**
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Cash/Assets	0.049***	0.057***	0.050***	0.050***	0.052***	0.032**	0.033**	0.033**	0.032**	0.034**
	(0.014)	(0.012)	(0.014)	(0.014)	(0.014)	(0.015)	(0.013)	(0.015)	(0.015)	(0.015)
Tr. 1-Year Return	-0.000*	0.000	-0.000	-0.000	-0.000	-0.000***	-0.000	-0.000**	-0.000***	-0.000**
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Tr. 1-Year Sales Growth	0.000*	0.000***	0.000*	0.000*	0.000**	0.000	0.000*	0.000	0.000	0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
ln(Age)	-0.021	-0.025***	-0.020***	-0.021***	-0.018***	-0.033*	-0.048***	-0.056***	-0.057***	-0.054***
	(0.014)	(0.004)	(0.006)	(0.006)	(0.006)	(0.017)	(0.005)	(0.007)	(0.007)	(0.007)
BC_Gov	-0.010**	-0.006	-0.010**	-0.010**	-0.010**	-0.011**	-0.006	-0.010*	-0.010*	-0.010**
	(0.004)	(0.005)	(0.004)	(0.004)	(0.004)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)
PU		0.000***	0.000		0.000***		0.000***	0.000		0.000***
		(0.000)	(0.000)		(0.000)		(0.000)	(0.000)		(0.000)
FE_PU			0.000					0.000*		
			(0.000)					(0.000)		
quartilePU_1				-0.014***					-0.014***	
				(0.003)					(0.003)	
quartilePU_4				0.005***					0.005***	
				(0.002)					(0.002)	
quartileFE_PU1				0.006**					0.003	
				(0.003)					(0.003)	
quartileFE_PU4				-0.004					-0.003	
				(0.003)					(0.003)	
quartileFE_1					-0.001					-0.003
					(0.006)					(0.006)
quartileFE_4					-0.016*					-0.007
					(0.009)					(0.009)
quartileFE_1_PU					0.000					-0.000
					(0.000)					(0.000)
quartileFE_4_PU					0.000**					0.000
					(0.000)					(0.000)
Constant	0.323***	0.318***	0.302***	0.317***	0.287***	0.471***	0.540***	0.654***	0.669***	0.638***
	(0.112)	(0.032)	(0.050)	(0.051)	(0.051)	(0.139)	(0.037)	(0.061)	(0.061)	(0.061)
Observations	7,481	15,821	7,481	7,481	7,481	7,464	15,782	7,464	7,464	7,464
Number of gvkeynum	883	2,142	883	883	883	883	2,139	883	883	883
R-Squared	0.198	0.149	0.197	0.198	0.192	0.111	0.0645	0.104	0.104	0.100

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Assets, market cap, revenue, s,g&a, mtb, sales growth, 1 year trailing return, roa, Tobin's Q, all winsorized at the 1st,99th percentiles.

Table 1.5 Panel A Multivariate regression financial policy dependent variables. Organization capital calculated with perpetual inventory method. Indsutry fixed effects are on.

Dependent Variable	Leverage					Cash Holdings				
OC	0.018***		0.013**	0.017***		0.004*		0.003	0.002	
	(0.004)		(0.006)	(0.004)		(0.003)		(0.003)	(0.002)	
ln(Assets)	0.019***	0.033***	0.028***	0.027***	0.023***	-0.021***	-0.018***	-0.019***	-0.020***	-0.019***
	(0.003)	(0.002)	(0.003)	(0.003)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
MTB	-0.001*	-0.000	-0.000	-0.000	-0.000	0.000**	0.001***	0.000***	0.000***	0.000***
	(0.000)	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
ROA	-0.298***	-0.186	-0.303***	-0.303***	-0.302***					
	(0.039)	(0.146)	(0.038)	(0.038)	(0.039)					
ppeAT	0.100***	-0.211	0.081***	0.084***	0.082***					
	(0.026)	(0.275)	(0.025)	(0.025)	(0.025)					
Tr. 1-Year Return	0.000***	0.000***	0.000***	0.000***	0.000***					
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)					
Depreciation/Assets	0.246***	3.220	0.248***	0.243***	0.263***					
	(0.081)	(2.730)	(0.082)	(0.082)	(0.083)					
PU		-0.000*	-0.000		-0.000		0.000	0.000		-0.000
		(0.000)	(0.000)		(0.000)		(0.000)	(0.000)		(0.000)
OC_PU			0.000					-0.000		
			(0.000)					(0.000)		
quartilePU_1				-0.002					0.003	
				(0.002)					(0.002)	
quartilePU_4				0.008***					0.005***	
				(0.002)					(0.001)	
quartileOC_PU1				-0.006					-0.000	
				(0.005)					(0.003)	
quartileOC_PU4				-0.017***					0.001	
				(0.005)					(0.003)	
quartileOC_1					-0.017					0.004
					(0.012)					(0.009)
quartileOC_4					0.001					0.009
					(0.012)					(0.010)
quartileOC_1_PU					0.000					0.000
					(0.000)					(0.000)
quartileOC_4_PU					0.000					-0.000
					(0.000)					(0.000)
EBITDA/Assets						0.072***	0.076***	0.073***	0.071***	0.073***
						(0.013)	(0.012)	(0.013)	(0.013)	(0.013)
Net Working Capital/Assets						-0.255***	-0.256***	-0.255***	-0.255***	-0.254***
						(0.013)	(0.011)	(0.013)	(0.013)	(0.013)
Capex/Assets						-0.202***	-0.190***	-0.208***	-0.208***	-0.208***
						(0.020)	(0.023)	(0.020)	(0.020)	(0.020)
leverage						-0.175***	-0.191***	-0.174***	-0.175***	-0.174***
						(0.012)	(0.012)	(0.012)	(0.012)	(0.012)
sdebitdaAT5						0.009	0.016	0.006	0.006	0.005
						(0.015)	(0.016)	(0.014)	(0.014)	(0.014)
R&D/Sales						0.024***	0.026***	0.024***	0.024***	0.024***
						(0.008)	(0.007)	(0.008)	(0.008)	(0.008)
Distribution Dummy						0.000	0.002	0.000	-0.000	0.000
						(0.003)	(0.002)	(0.003)	(0.003)	(0.003)
Acquisition Dummy						-0.022***	-0.024***	-0.023***	-0.023***	-0.023***
						(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Constant	0.320***	0.258***	0.291***	0.296***	0.342***	0.336***	0.336***	0.338***	0.340***	0.337***
	(0.027)	(0.022)	(0.028)	(0.027)	(0.026)	(0.016)	(0.015)	(0.017)	(0.016)	(0.017)
Observations	41,905	53,760	41,905	41,905	41,905	23,019	29,203	23,019	23,019	23,019
Number of gvkeynum	6,164	7,102	6,164	6,164	6,164	2,759	3,546	2,759	2,759	2,759
R-Squared	0.154	0.114	0.167	0.166	0.161	0.493	0.478	0.490	0.491	0.490

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Assets, market cap, revenue, s,g&a, mtb, sales growth, 1 year trailing return, roa, Tobin's Q, all winsorized at the 1st,99th percentiles.

Table 1.5 Panel B Multivariate regression financial policy dependent variables. Organization capital calculated with perpetual inventory method. Industry fixed effects are on.

Dependent Variable	Leverage					Cash Holdings				
OCb	0.018***		0.015**	0.019***		0.004*		-0.000	0.002	
	(0.004)		(0.006)	(0.005)		(0.003)		(0.004)	(0.003)	
ln(Assets)	0.019***	0.033***	0.028***	0.026***	0.022***	-0.021***	-0.018***	-0.019***	-0.019***	-0.019***
	(0.003)	(0.002)	(0.003)	(0.003)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
MTB	-0.001*	-0.000	-0.000	-0.000	-0.000	0.000**	0.001***	0.000***	0.000***	0.000***
	(0.000)	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
ROA	-0.298***	-0.186	-0.303***	-0.301***	-0.302***					
	(0.039)	(0.146)	(0.038)	(0.038)	(0.039)					
ppeAT	0.100***	-0.211	0.081***	0.082***	0.081***					
	(0.026)	(0.275)	(0.025)	(0.025)	(0.025)					
Tr. 1-Year Return	0.000***	0.000***	0.000***	0.000***	0.000***					
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)					
Depreciation/Assets	0.246***	3.220	0.249***	0.248***	0.263***					
	(0.081)	(2.730)	(0.082)	(0.083)	(0.084)					
PU		-0.000*	0.000		-0.000**		0.000	-0.000		0.000
		(0.000)	(0.000)		(0.000)		(0.000)	(0.000)		(0.000)
OCb_PU			-0.000					0.000		
			(0.000)					(0.000)		
quartilePU_1				0.001					0.002	
				(0.002)					(0.002)	
quartilePU_4				0.006***					0.005***	
				(0.002)					(0.001)	
quartileOCb_PU1				0.016***					-0.002	
				(0.006)					(0.004)	
quartileOCb_PU4				-0.019***					0.001	
				(0.007)					(0.004)	
quartileOCb_1					-0.032***					0.015*
					(0.012)					(0.009)
quartileOCb_4					-0.015					0.010
					(0.011)					(0.010)
quartileOCb_1_PU					0.000***					-0.000**
					(0.000)					(0.000)
quartileOCb_4_PU					0.000**					-0.000
					(0.000)					(0.000)
EBITDA/Assets						0.072***	0.076***	0.073***	0.071***	0.073***
						(0.013)	(0.012)	(0.013)	(0.013)	(0.013)
Net Working Capital/Assets						-0.255***	-0.256***	-0.255***	-0.255***	-0.255***
						(0.013)	(0.011)	(0.013)	(0.013)	(0.013)
Capex/Assets						-0.202***	-0.190***	-0.209***	-0.207***	-0.209***
						(0.020)	(0.023)	(0.020)	(0.020)	(0.020)
leverage						-0.175***	-0.191***	-0.174***	-0.175***	-0.174***
						(0.012)	(0.012)	(0.012)	(0.012)	(0.012)
sdebitdaAT5						0.009	0.016	0.006	0.006	0.007
						(0.015)	(0.016)	(0.014)	(0.014)	(0.014)
R&D/Sales						0.024***	0.026***	0.024***	0.024***	0.024***
						(0.008)	(0.007)	(0.008)	(0.008)	(0.008)
Distribution Dummy						0.000	0.002	0.000	-0.000	0.000
						(0.003)	(0.002)	(0.003)	(0.003)	(0.003)
Acquisition Dummy						-0.022***	-0.024***	-0.023***	-0.023***	-0.023***
						(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Constant	0.324***	0.258***	0.293***	0.302***	0.350***	0.338***	0.336***	0.341***	0.341***	0.338***
	(0.027)	(0.022)	(0.027)	(0.026)	(0.026)	(0.016)	(0.015)	(0.016)	(0.016)	(0.016)
Observations	41,905	53,760	41,905	41,905	41,905	23,019	29,203	23,019	23,019	23,019
Number of gvkeynum	6,164	7,102	6,164	6,164	6,164	2,759	3,546	2,759	2,759	2,759
R-Squared	0.154	0.114	0.167	0.167	0.162	0.493	0.478	0.490	0.491	0.490

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Assets, market cap, revenue, s,g&a, mtb, sales growth, 1 year trailing return, roa, Tobin's Q, all winsorized at the 1st,99th percentiles.

Table 1.5 Panel C Multivariate regression financial policy dependent variables. Organization capital calculated with 5 year straight line depreciation. Industry fixed effects are on.

Dependent Variable	Leverage					Cash Holdings				
OCc	0.172***		0.133***	0.146***		0.005		0.010	-0.006	
	(0.032)		(0.036)	(0.036)		(0.017)		(0.023)	(0.017)	
ln(Assets)	0.023***	0.033***	0.034***	0.034***	0.028***	-0.021***	-0.018***	-0.018***	-0.019***	-0.018***
	(0.004)	(0.002)	(0.003)	(0.003)	(0.003)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
MTB	-0.000	-0.000	0.000	0.000	0.000	0.000***	0.001***	0.001***	0.001***	0.001***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
ROA	-0.340***	-0.186	-0.345***	-0.345***	-0.340***					
	(0.023)	(0.146)	(0.023)	(0.023)	(0.023)					
ppeAT	0.033	-0.211	0.007	0.009	0.008					
	(0.027)	(0.275)	(0.026)	(0.026)	(0.026)					
Tr. 1-Year Return	0.000***	0.000***	0.000***	0.000***	0.000***					
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)					
Depreciation/Assets	0.413***	3.220	0.448***	0.440***	0.476***					
	(0.111)	(2.730)	(0.118)	(0.118)	(0.119)					
PU		-0.000*	0.000		0.000		0.000	0.000		0.000
		(0.000)	(0.000)		(0.000)		(0.000)	(0.000)		(0.000)
OCc_PU			0.000					-0.000		
			(0.000)					(0.000)		
quartilePU_1				-0.005*					-0.000	
				(0.003)					(0.002)	
quartilePU_4				0.007***					0.003***	
				(0.002)					(0.001)	
quartileOCc_PU1				-0.003					0.001	
				(0.005)					(0.003)	
quartileOCc_PU4				-0.006					-0.002	
				(0.004)					(0.003)	
quartileOCc_1					-0.007					0.003
					(0.012)					(0.008)
quartileOCc_4					0.001					0.014*
					(0.010)					(0.008)
quartileOCc_1_PU					-0.000					-0.000
					(0.000)					(0.000)
quartileOCc_4_PU					0.000					-0.000*
					(0.000)					(0.000)
EBITDA/Assets						0.077***	0.076***	0.076***	0.076***	0.076***
						(0.012)	(0.012)	(0.012)	(0.012)	(0.012)
Net Working Capital/Assets						-0.255***	-0.256***	-0.256***	-0.256***	-0.256***
						(0.011)	(0.011)	(0.011)	(0.011)	(0.011)
Capex/Assets						-0.178***	-0.190***	-0.189***	-0.188***	-0.190***
						(0.022)	(0.023)	(0.023)	(0.023)	(0.023)
leverage						-0.191***	-0.191***	-0.190***	-0.191***	-0.191***
						(0.012)	(0.012)	(0.012)	(0.012)	(0.012)
sdebitdaAT5						0.022	0.016	0.017	0.017	0.015
						(0.017)	(0.016)	(0.016)	(0.016)	(0.016)
R&D/Sales						0.026***	0.026***	0.026***	0.026***	0.026***
						(0.007)	(0.007)	(0.007)	(0.007)	(0.007)
Distribution Dummy						0.001	0.002	0.002	0.001	0.002
						(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Acquisition Dummy						-0.024***	-0.024***	-0.024***	-0.024***	-0.024***
						(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Constant	0.299***	0.258***	0.257***	0.268***	0.312***	0.322***	0.336***	0.336***	0.341***	0.331***
	(0.033)	(0.022)	(0.032)	(0.032)	(0.030)	(0.016)	(0.015)	(0.016)	(0.016)	(0.016)
Observations	34,077	53,760	34,077	34,077	34,077	29,203	29,203	29,203	29,203	29,203
Number of gvkeynum	4,124	7,102	4,124	4,124	4,124	3,546	3,546	3,546	3,546	3,546
R-Squared	0.203	0.114	0.226	0.225	0.223	0.478	0.478	0.477	0.477	0.478

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Assets, market cap, revenue, s,g&a, mtb, sales growth, 1 year trailing return, roa, Tobin's Q, all winsorized at the 1st,99th percentiles.

Table 1.5 Panel D Multivariate regression financial policy dependent variables. Firm Efficiency used to measure organization capital (Demerjian, 2012). Industry fixed effects are on.

Dependent Variable	Leverage					Cash Holdings				
FE	-0.040		-0.189***	-0.017		0.034***		0.007	0.023**	
	(0.051)		(0.072)	(0.051)		(0.010)		(0.022)	(0.011)	
ln(Assets)	0.042***	0.033***	0.041***	0.041***	0.041***	-0.018***	-0.018***	-0.014***	-0.015***	-0.014***
	(0.005)	(0.002)	(0.006)	(0.006)	(0.006)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
MTB	-0.000	-0.000	-0.000	-0.000	-0.000	0.001***	0.001***	0.001***	0.001***	0.001***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
ROA	-0.174	-0.186	-0.163	-0.156	-0.151					
	(0.234)	(0.146)	(0.236)	(0.239)	(0.248)					
ppeAT	-0.520	-0.211	-0.521	-0.523	-0.525					
	(0.480)	(0.275)	(0.490)	(0.492)	(0.495)					
Tr. 1-Year Return	0.000***	0.000***	0.000***	0.000***	0.000***					
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)					
Depreciation/Assets	6.437	3.220	6.483	6.487	6.492					
	(5.059)	(2.730)	(5.083)	(5.087)	(5.090)					
PU		-0.000*	-0.000***		-0.000***		0.000	-0.000		0.000
		(0.000)	(0.000)		(0.000)		(0.000)	(0.000)		(0.000)
FE_PU			0.000***					0.000		
			(0.000)					(0.000)		
quartilePU_1				-0.001					-0.001	
				(0.005)					(0.002)	
quartilePU_4				-0.016*					0.005***	
				(0.010)					(0.002)	
quartileFE_PU1				0.016					0.001	
				(0.010)					(0.002)	
quartileFE_PU4				-0.009					0.004*	
				(0.006)					(0.002)	
quartileFE_1					0.018					-0.008
					(0.021)					(0.006)
quartileFE_4					-0.056***					0.001
					(0.018)					(0.007)
quartileFE_1_PU					0.000					0.000
					(0.000)					(0.000)
quartileFE_4_PU					0.000***					0.000
					(0.000)					(0.000)
EBITDA/Assets						0.095***	0.076***	0.096***	0.095***	0.093***
						(0.016)	(0.012)	(0.016)	(0.016)	(0.016)
Net Working Capital/Assets						-0.239***	-0.256***	-0.241***	-0.241***	-0.241***
						(0.015)	(0.011)	(0.015)	(0.015)	(0.015)
Capex/Assets						-0.181***	-0.190***	-0.195***	-0.193***	-0.195***
						(0.032)	(0.023)	(0.034)	(0.033)	(0.034)
leverage						-0.191***	-0.191***	-0.192***	-0.193***	-0.192***
						(0.015)	(0.012)	(0.015)	(0.015)	(0.015)
sdebitdaAT5						0.002	0.016	-0.004	-0.004	-0.003
						(0.017)	(0.016)	(0.014)	(0.014)	(0.015)
R&D/Sales						0.052***	0.026***	0.051***	0.051***	0.050***
						(0.009)	(0.007)	(0.009)	(0.009)	(0.009)
Distribution Dummy						-0.001	0.002	-0.000	-0.000	-0.000
						(0.003)	(0.002)	(0.003)	(0.003)	(0.003)
Acquisition Dummy						-0.022***	-0.024***	-0.023***	-0.023***	-0.023***
						(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Constant	0.105	0.258***	0.176	0.082	0.121	0.305***	0.336***	0.317***	0.318***	0.321***
	(0.133)	(0.022)	(0.116)	(0.130)	(0.136)	(0.020)	(0.015)	(0.020)	(0.019)	(0.020)
Observations	32,430	53,760	32,430	32,430	32,430	18,974	29,203	18,974	18,974	18,974
Number of gvkeynum	3,848	7,102	3,848	3,848	3,848	2,059	3,546	2,059	2,059	2,059
R-Squared	0.152	0.114	0.151	0.151	0.151	0.441	0.478	0.440	0.441	0.440

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Assets, market cap, revenue, s,g&a, mtb, sales growth, 1 year trailing return, roa, Tobin's Q, all winsorized at the 1st,99th percentiles.

The dependent variable dividends plus buybacks relative to sales provide clear empirical direction about the influence of OC on cash flow allocation. Even as shareholders have claims on excess firm cash flow in the modern corporate form, Table 6 Panel A indicate that high OC managers have a significant claim as well (Eisfeldt & Papanikolaou, 2013). We estimate a negative and significant ($p<0.01$) association between OC and total shareholder payouts. For every standard deviation difference in OC, controlling for PU and the interaction of PU and OC, total shareholder payout is $1.60 less per $100 of revenue. Given mean sample revenue of $2.331bln, a one standard deviation higher OC firm pays out $37mln less per year to shareholders. The excess cash not going to dividends and buybacks is split between employees and capex in particular.

1.4.3. Firm Value

Testing hypothesis 2 requires estimating the effects of OC on firm value under PU. We follow Fama French (1998), with modifications to suit our study. The model is well cited and well used in Finance literature, in part because it is readily adaptable and robust to different research designs. By way of example, Dittmar & Mahrt-Smith (2007), and Pinkowitz, Stulz & Williamson (2006) estimate the association of cash (another potentially endogenous explanatory variable) and firm value based on a modified Fama French model. The current level of OC should approximately cover what is empaneled in current firm value, with two year forward independent variables providing inference about expected persistence of OC. The base specification for estimating firm value is given in formula (4).

Table 1.6 Panel A Multivariate regression for payout, dividend and stock repurchase, dependent variables. Organization capital calculated with perpetual inventory method. Industry fixed effects are on.

DV's	Dividend/Sales					Dividend/Net Income					Dividends+Buybacks / Sales					Dividends + Buybacks / Net Income				
OC	-0.001***		-0.001	-0.001***		-0.005		0.003	-0.009		-0.005***		-0.008**	-0.006***		0.001		-0.002	-0.010	
	(0.000)		(0.001)	(0.000)		(0.005)		(0.010)	(0.006)		(0.001)		(0.003)	(0.002)		(0.015)		(0.037)	(0.020)	
MTB	0.000	0.000	0.000	0.000	0.000	-0.001	-0.000	0.000	-0.000	-0.000	0.000	0.000	0.000	0.000	0.000	0.005	0.004	0.006	0.006	0.006
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.002)	(0.001)	(0.002)	(0.002)	(0.002)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)
ROA	0.004	0.004	0.004	0.004	0.004	0.217***	0.238***	0.223***	0.221***	0.224***	0.072***	0.067***	0.071***	0.069***	0.070***	1.611***	1.654***	1.613***	1.580***	1.611***
	(0.005)	(0.004)	(0.005)	(0.005)	(0.005)	(0.045)	(0.037)	(0.045)	(0.045)	(0.045)	(0.015)	(0.013)	(0.015)	(0.015)	(0.015)	(0.159)	(0.131)	(0.158)	(0.157)	(0.158)
EBITDA/Assets	0.018	0.017*	0.017	0.017	0.017	-0.004	0.002	-0.022	-0.020	-0.016	0.048***	0.045***	0.048***	0.048***	0.046***	-0.128	-0.151	-0.158	-0.153	-0.160
	(0.012)	(0.010)	(0.012)	(0.012)	(0.012)	(0.059)	(0.049)	(0.061)	(0.060)	(0.060)	(0.016)	(0.014)	(0.016)	(0.016)	(0.016)	(0.168)	(0.131)	(0.168)	(0.168)	(0.169)
ln(Assets)	-0.001	-0.000	-0.001	-0.001	-0.000	0.006	0.010*	0.010	0.010	0.011	0.004***	0.007***	0.005***	0.006***	0.006***	0.071***	0.074***	0.078***	0.079***	0.078***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.007)	(0.005)	(0.007)	(0.007)	(0.007)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.016)	(0.013)	(0.016)	(0.016)	(0.016)
RetEarn/Equity	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	0.000	0.000	0.000	0.000	0.000	-0.000	-0.000	-0.000	-0.000	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Cash/Assets	0.011***	0.014***	0.011***	0.011***	0.011***	0.027	0.056	0.035	0.032	0.032	0.056***	0.057***	0.055***	0.056***	0.055***	0.094	0.142	0.087	0.088	0.088
	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.042)	(0.035)	(0.042)	(0.042)	(0.042)	(0.011)	(0.010)	(0.011)	(0.011)	(0.011)	(0.121)	(0.106)	(0.121)	(0.121)	(0.121)
leverage	0.011**	0.011***	0.012**	0.012**	0.012**	0.065**	0.073***	0.072**	0.070**	0.069**	0.034***	0.030***	0.035***	0.036***	0.035***	0.307***	0.316***	0.324***	0.329***	0.325***
	(0.005)	(0.004)	(0.005)	(0.005)	(0.005)	(0.031)	(0.028)	(0.031)	(0.031)	(0.031)	(0.009)	(0.008)	(0.009)	(0.009)	(0.009)	(0.076)	(0.069)	(0.078)	(0.078)	(0.077)
ln(Age)	0.003***	0.009***	0.008***	0.008***	0.008***	0.038***	0.080***	0.073***	0.070***	0.076***	0.007**	0.015***	0.015***	0.016***	0.015***	0.084**	0.132***	0.140***	0.138***	0.139***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.015)	(0.012)	(0.013)	(0.013)	(0.013)	(0.003)	(0.002)	(0.003)	(0.003)	(0.003)	(0.041)	(0.033)	(0.036)	(0.037)	(0.036)
sdret1	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.001	-0.000	-0.000	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.001)	(0.000)	(0.000)	(0.000)
BC_Gov	-0.000	-0.001	-0.001	-0.000	-0.001	-0.002	0.003	-0.004	-0.003	-0.004	-0.007**	-0.007***	-0.007***	-0.007**	-0.007**	-0.066*	-0.063**	-0.069*	-0.067*	-0.068*
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.013)	(0.012)	(0.014)	(0.014)	(0.013)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.036)	(0.032)	(0.037)	(0.037)	(0.037)
PU		0.000*	0.000***		0.000***		0.000**	0.000**		0.000		-0.000***	-0.000***		-0.000***		-0.000**	-0.000		-0.000
		(0.000)	(0.000)		(0.000)		(0.000)	(0.000)		(0.000)		(0.000)	(0.000)		(0.000)		(0.000)	(0.000)		(0.000)
OC_PU			-0.000					-0.000					0.000					-0.000		
			(0.000)					(0.000)					(0.000)					(0.000)		
quartilePU_1				-0.001					-0.004					0.012***					0.126***	
				(0.001)					(0.009)					(0.002)					(0.039)	
quartilePU_4				0.002***					0.025**					-0.005***					0.011	
				(0.001)					(0.011)					(0.002)					(0.035)	
quartileOC_PU1				0.002*					0.009					-0.006*					-0.069	
				(0.001)					(0.018)					(0.003)					(0.050)	
quartileOC_PU4				-0.001					0.012					0.001					-0.006	
				(0.001)					(0.014)					(0.003)					(0.052)	
quartileOC_1					0.004					-0.034					0.006					-0.017
					(0.003)					(0.043)					(0.010)					(0.142)
quartileOC_4					0.002					-0.009					-0.020**					0.007
					(0.002)					(0.037)					(0.009)					(0.140)
quartileOC_1_PU					0.000					0.000					-0.000					0.000
					(0.000)					(0.000)					(0.000)					(0.000)
quartileOC_4_PU					-0.000					0.000					0.000					-0.000
					(0.000)					(0.000)					(0.000)					(0.000)
Constant	-0.017*	-0.070***	-0.059***	-0.053***	-0.065***	-0.312**	-0.691***	-0.633***	-0.563***	-0.651***	-0.095***	-0.151***	-0.130***	-0.159***	-0.148***	-1.232***	-1.449***	-1.548***	-1.630***	-1.540***
	(0.010)	(0.009)	(0.009)	(0.009)	(0.010)	(0.129)	(0.112)	(0.118)	(0.116)	(0.118)	(0.026)	(0.022)	(0.023)	(0.024)	(0.024)	(0.352)	(0.300)	(0.324)	(0.322)	(0.319)
Observations	12,218	15,313	12,218	12,218	12,218	12,218	15,313	12,218	12,218	12,218	11,434	14,354	11,434	11,434	11,434	11,434	14,354	11,434	11,434	11,434
Number of gvkeynum	1,629	2,072	1,629	1,629	1,629	1,629	2,072	1,629	1,629	1,629	1,585	2,015	1,585	1,585	1,585	1,585	2,015	1,585	1,585	1,585
R-Squared	0.0881	0.0723	0.0798	0.0815	0.0826	0.0534	0.0418	0.0482	0.0492	0.0495	0.171	0.158	0.159	0.160	0.160	0.0507	0.0457	0.0459	0.0467	0.0459

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Assets, market cap, revenue, s,g&a, mtb, sales growth, 1 year trailing return, roa, Tobin's Q, all winsorized at the 1st,99th percentiles.

Table 1.6 Panel B Multivariate regression for payout, dividend and stock repurchase, dependent variables. Industry median adjusted organization capital. Industry fixed effects are on.

VARIABLES	Dividend/Sales					Dividend/Net Income					Dividends+Buybacks / Sales					Dividends + Buybacks / Net Income				
OCb	-0.001***		-0.000	-0.002***		-0.005		0.007	-0.006		-0.005***		-0.008***	-0.005***		0.001		0.000	-0.002	
	(0.000)		(0.001)	(0.001)		(0.005)		(0.010)	(0.007)		(0.001)		(0.003)	(0.002)		(0.015)		(0.041)	(0.021)	
MTB	0.000	0.000	0.000	0.000	0.000	-0.001	-0.000	0.000	-0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.005	0.004	0.006	0.006	0.006
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.002)	(0.001)	(0.002)	(0.002)	(0.002)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)
ROA	0.004	0.004	0.004	0.004	0.004	0.217***	0.238***	0.224***	0.219***	0.225***	0.072***	0.067***	0.070***	0.070***	0.072***	1.611***	1.654***	1.613***	1.587***	1.615***
	(0.005)	(0.004)	(0.005)	(0.005)	(0.005)	(0.045)	(0.037)	(0.045)	(0.045)	(0.045)	(0.015)	(0.013)	(0.015)	(0.015)	(0.016)	(0.159)	(0.131)	(0.158)	(0.157)	(0.158)
EBITDA/Assets	0.018	0.017*	0.017	0.017	0.017	-0.004	0.002	-0.023	-0.019	-0.021	0.048***	0.045***	0.048***	0.049***	0.049***	-0.128	-0.151	-0.158	-0.147	-0.152
	(0.012)	(0.010)	(0.012)	(0.012)	(0.012)	(0.059)	(0.049)	(0.060)	(0.060)	(0.060)	(0.016)	(0.014)	(0.016)	(0.016)	(0.016)	(0.168)	(0.131)	(0.168)	(0.168)	(0.167)
ln(Assets)	-0.001	-0.000	-0.001	-0.001	-0.000	0.006	0.010*	0.010	0.009	0.010	0.004***	0.007***	0.005***	0.005***	0.005***	0.071***	0.074***	0.078***	0.078***	0.074***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.007)	(0.005)	(0.007)	(0.007)	(0.007)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.016)	(0.013)	(0.016)	(0.016)	(0.016)
RetEarn/Equity	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	0.000	0.000	0.000	0.000	0.000	-0.000	-0.000	-0.000	-0.000	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Cash/Assets	0.011***	0.014***	0.011***	0.011***	0.011***	0.027	0.056	0.036	0.032	0.034	0.056***	0.057***	0.055***	0.056***	0.054***	0.094	0.142	0.087	0.087	0.095
	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.042)	(0.035)	(0.042)	(0.042)	(0.042)	(0.011)	(0.010)	(0.011)	(0.011)	(0.011)	(0.121)	(0.106)	(0.121)	(0.122)	(0.121)
leverage	0.011**	0.011***	0.012**	0.012**	0.012**	0.065**	0.073***	0.072**	0.070**	0.070**	0.034***	0.030***	0.035***	0.036***	0.035***	0.307***	0.316***	0.324***	0.325***	0.325***
	(0.005)	(0.004)	(0.005)	(0.005)	(0.005)	(0.031)	(0.028)	(0.031)	(0.031)	(0.031)	(0.009)	(0.008)	(0.009)	(0.009)	(0.009)	(0.076)	(0.069)	(0.078)	(0.078)	(0.078)
ln(Age)	0.003***	0.009***	0.008***	0.008***	0.008***	0.038***	0.080***	0.073***	0.069***	0.074***	0.007**	0.015***	0.015***	0.016***	0.013***	0.084**	0.132***	0.140***	0.139***	0.138***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.015)	(0.012)	(0.013)	(0.013)	(0.013)	(0.003)	(0.002)	(0.003)	(0.003)	(0.003)	(0.041)	(0.033)	(0.036)	(0.037)	(0.037)
sdret1	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.001	-0.000	-0.000	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.001)	(0.000)	(0.000)	(0.000)
BC_Gov	-0.000	-0.001	-0.000	-0.000	-0.001	-0.002	0.003	-0.004	-0.003	-0.004	-0.007**	-0.007***	-0.007***	-0.007***	-0.007**	-0.066*	-0.063**	-0.069*	-0.067*	-0.069*
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.013)	(0.012)	(0.014)	(0.014)	(0.014)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.036)	(0.032)	(0.037)	(0.037)	(0.037)
PU		0.000*	0.000***		0.000**		0.000**	0.000**		0.000		-0.000***	-0.000***				-0.000**	-0.000**		-0.000*
		(0.000)	(0.000)		(0.000)		(0.000)	(0.000)		(0.000)		(0.000)	(0.000)				(0.000)	(0.000)		(0.000)
OCb_PU			-0.000*					-0.000					0.000					-0.000		
			(0.000)					(0.000)					(0.000)					(0.000)		
quartilePU_1				-0.000					-0.002					0.012***					0.116***	
				(0.001)					(0.009)					(0.002)					(0.038)	
quartilePU_4				0.002**					0.024**					-0.005***					0.017	
				(0.001)					(0.011)					(0.002)					(0.035)	
quartileOCb_PU1				0.002					0.020					0.006*					-0.023	
				(0.001)					(0.016)					(0.003)					(0.047)	
quartileOCb_PU4				0.002*					0.009					0.002					-0.023	
				(0.001)					(0.017)					(0.004)					(0.061)	
quartileOCb_1					0.004					0.021					0.038***					-0.013
					(0.003)					(0.038)					(0.008)					(0.149)
quartileOCb_4					0.001					0.021					-0.004					-0.052
					(0.002)					(0.039)					(0.008)					(0.143)
quartileOCb_1_PU					-0.000					0.000					-0.000***					0.000
					(0.000)					(0.000)					(0.000)					(0.000)
quartileOCb_4_PU					-0.000					-0.000					-0.000					0.000
					(0.000)					(0.000)					(0.000)					(0.000)
Constant	-0.018*	-0.070***	-0.057***	-0.053***	-0.062***	-0.313**	-0.691***	-0.613***	-0.556***	-0.621***	-0.097***	-0.151***	-0.136***	-0.165***	-0.143***	-1.232***	-1.449***	-1.546***	-1.685***	-1.492***
	(0.010)	(0.009)	(0.009)	(0.009)	(0.009)	(0.129)	(0.112)	(0.116)	(0.119)	(0.120)	(0.026)	(0.022)	(0.023)	(0.024)	(0.023)	(0.352)	(0.300)	(0.317)	(0.324)	(0.321)
Observations	12,218	15,313	12,218	12,218	12,218	12,218	15,313	12,218	12,218	12,218	11,434	14,354	11,434	11,434	11,434	11,434	14,354	11,434	11,434	11,434
Number of gvkeynum	1,629	2,072	1,629	1,629	1,629	1,629	2,072	1,629	1,629	1,629	1,585	2,015	1,585	1,585	1,585	1,585	2,015	1,585	1,585	1,585
R-Squared	0.0881	0.0723	0.0797	0.0821	0.0830	0.0534	0.0418	0.0482	0.0491	0.0487	0.171	0.158	0.159	0.159	0.160	0.0507	0.0457	0.0459	0.0466	0.0458

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Assets, market cap, revenue, s,g&a, mtb, sales growth, 1 year trailing return, roa, Tobin's Q, all winsorized at the 1st,99th percentiles.

Table 1.6 Panel C Multivariate regression for payout, dividend and stock repurchase, dependent variables. Organization capital calculated with 5 year straight line depreciation. Industry fixed effects are on.

VARIABLES	Dividend/Sales							Dividend/Net Income			Dividends+Buybacks / Sales					Dividends + Buybacks / Net Income				
OCc	-0.015***		-0.011**	-0.013***		-0.066*		0.035	-0.064		-0.043***		-0.067***	-0.055***		0.096		0.150	-0.041	
	(0.004)		(0.005)	(0.004)		(0.036)		(0.074)	(0.043)		(0.009)		(0.019)	(0.010)		(0.098)		(0.284)	(0.138)	
MTB	0.000	0.000	0.000	0.000	0.000	-0.001	-0.000	-0.000	-0.000	-0.000	0.000	0.000	0.000	0.000*	0.000	0.003	0.004	0.004	0.004	0.004
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)
ROA	0.004	0.004	0.004	0.004	0.004	0.229***	0.238***	0.238***	0.237***	0.238***	0.069***	0.067***	0.068***	0.067***	0.067***	1.650***	1.654***	1.651***	1.628***	1.655***
	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.038)	(0.037)	(0.038)	(0.038)	(0.038)	(0.013)	(0.013)	(0.013)	(0.013)	(0.013)	(0.133)	(0.131)	(0.131)	(0.131)	(0.132)
EBITDA/Assets	0.019**	0.017*	0.018*	0.018*	0.018*	0.025	0.002	0.007	0.010	0.012	0.046***	0.045***	0.045***	0.045***	0.045***	-0.133	-0.151	-0.154	-0.153	-0.146
	(0.010)	(0.010)	(0.010)	(0.010)	(0.010)	(0.048)	(0.049)	(0.049)	(0.048)	(0.048)	(0.014)	(0.014)	(0.014)	(0.014)	(0.014)	(0.131)	(0.131)	(0.131)	(0.130)	(0.130)
ln(Assets)	-0.001**	-0.000	-0.001	-0.001	-0.001	0.003	0.010*	0.007	0.006	0.008	0.004***	0.007***	0.005***	0.005***	0.006***	0.072***	0.074***	0.076***	0.078***	0.071***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.006)	(0.005)	(0.006)	(0.006)	(0.005)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.014)	(0.013)	(0.014)	(0.014)	(0.013)
RetEarn/Equity	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	0.000	0.000	0.000	0.000	0.000	-0.000	-0.000	-0.000	-0.000	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Cash/Assets	0.013***	0.014***	0.014***	0.014***	0.014***	0.050	0.056	0.061*	0.059	0.056	0.060***	0.057***	0.059***	0.059***	0.058***	0.141	0.142	0.137	0.137	0.145
	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.036)	(0.035)	(0.036)	(0.036)	(0.036)	(0.010)	(0.010)	(0.010)	(0.010)	(0.010)	(0.107)	(0.106)	(0.107)	(0.107)	(0.107)
leverage	0.011***	0.011***	0.012***	0.012***	0.011***	0.067**	0.073***	0.075***	0.073***	0.071**	0.030***	0.030***	0.032***	0.033***	0.031***	0.293***	0.316***	0.313***	0.317***	0.315***
	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.028)	(0.028)	(0.028)	(0.028)	(0.028)	(0.008)	(0.008)	(0.008)	(0.008)	(0.008)	(0.068)	(0.069)	(0.069)	(0.070)	(0.070)
ln(Age)	0.003***	0.009***	0.009***	0.008***	0.009***	0.036***	0.080***	0.078***	0.076***	0.081***	0.006**	0.015***	0.014***	0.015***	0.015***	0.070*	0.132***	0.133***	0.134***	0.133***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.014)	(0.012)	(0.012)	(0.012)	(0.012)	(0.003)	(0.002)	(0.002)	(0.002)	(0.002)	(0.038)	(0.033)	(0.033)	(0.034)	(0.033)
sdret1	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000*	-0.000	-0.000*	-0.000*	-0.000*	-0.001	-0.001	-0.001	-0.001	-0.001
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.001)	(0.001)	(0.001)	(0.001)
BC_Gov	-0.000	-0.001	-0.001	-0.001	-0.001	0.004	0.003	0.002	0.003	0.003	-0.007***	-0.007***	-0.008***	-0.008***	-0.008***	-0.059*	-0.063**	-0.063**	-0.062**	-0.064**
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.012)	(0.012)	(0.012)	(0.012)	(0.012)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.032)	(0.032)	(0.032)	(0.032)	(0.032)
PU		0.000*	0.000*		0.000*		0.000**	0.000**		0.000		-0.000***	-0.000***		-0.000***		-0.000**	-0.000		-0.000**
		(0.000)	(0.000)		(0.000)		(0.000)	(0.000)		(0.000)		(0.000)	(0.000)		(0.000)		(0.000)	(0.000)		(0.000)
OCc_PU			-0.000					-0.000*					0.000					-0.000		
			(0.000)					(0.000)					(0.000)					(0.000)		
quartilePU_1				-0.001					-0.010					0.014***					0.144***	
				(0.001)					(0.009)					(0.002)					(0.037)	
quartilePU_4				0.001**					0.020**					-0.004***					0.006	
				(0.001)					(0.009)					(0.001)					(0.029)	
quartileOCc_PU1				0.002**					0.022					-0.006**					-0.051	
				(0.001)					(0.017)					(0.003)					(0.048)	
quartileOCc_PU4				-0.001*					0.002					0.003					0.035	
				(0.001)					(0.012)					(0.002)					(0.046)	
quartileOCc_1					0.007**					0.004					0.011					-0.017
					(0.003)					(0.040)					(0.009)					(0.141)
quartileOCc_4					-0.000					-0.011					-0.027***					-0.117
					(0.002)					(0.034)					(0.007)					(0.119)
quartileOCc_1_PU					-0.000					0.000					-0.000					0.000
					(0.000)					(0.000)					(0.000)					(0.000)
quartileOCc_4_PU					-0.000					0.000					0.000**					0.000
					(0.000)					(0.000)					(0.000)					(0.000)
Constant	-0.018*	-0.070***	-0.062***	-0.059***	-0.070***	-0.329***	-0.691***	-0.671***	-0.612***	-0.701***	-0.083***	-0.151***	-0.122***	-0.152***	-0.137***	-1.287***	-1.449***	-1.502***	-1.619***	-1.419***
	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)	(0.123)	(0.112)	(0.112)	(0.114)	(0.115)	(0.024)	(0.022)	(0.021)	(0.021)	(0.021)	(0.337)	(0.300)	(0.308)	(0.314)	(0.309)
Observations	15,313	15,313	15,313	15,313	15,313	15,313	15,313	15,313	15,313	15,313	14,354	14,354	14,354	14,354	14,354	14,354	14,354	14,354	14,354	14,354
Number of gvkeynum	2,072	2,072	2,072	2,072	2,072	2,072	2,072	2,072	2,072	2,072	2,015	2,015	2,015	2,015	2,015	2,015	2,015	2,015	2,015	2,015
R-Squared	0.0861	0.0723	0.0785	0.0808	0.0792	0.0473	0.0418	0.0420	0.0428	0.0430	0.170	0.158	0.159	0.160	0.161	0.0507	0.0457	0.0458	0.0467	0.0456

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Assets, market cap, revenue, s,g&a, mtb, sales growth, 1 year trailing return, roa, Tobin's Q, all winsorized at the 1st,99th percentiles.

Table 1.6 Panel D Multivariate regression for payout, dividend and stock repurchase, dependent variables. Organization capital measured with Firm Efficiency (Demerjian, 2012). Industry fixed effects are on.

VARIABLES	Dividend/Sales					Dividend/Net Income					Dividends+Buybacks / Sales					Dividends + Buybacks / Net Income				
FE	0.006		-0.009	0.011*		0.122*		-0.036	0.173*		0.036***		0.101***	0.037**		0.665***		1.457**	0.610**	
	(0.005)		(0.011)	(0.006)		(0.067)		(0.088)	(0.090)		(0.012)		(0.039)	(0.015)		(0.203)		(0.574)	(0.252)	
MTB	-0.000	0.000	-0.000	-0.000	-0.000	-0.001	-0.000	-0.001	-0.001	-0.001	0.000	0.000	0.001	0.001	0.001	0.005	0.004	0.006	0.006	0.006
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.005)	(0.004)	(0.005)	(0.005)	(0.005)
ROA	0.002	0.004	0.002	0.002	0.002	0.201***	0.238***	0.208***	0.212***	0.204***	0.037**	0.067***	0.039**	0.037**	0.039**	1.372***	1.654***	1.412***	1.387***	1.384***
	(0.005)	(0.004)	(0.005)	(0.005)	(0.004)	(0.055)	(0.037)	(0.055)	(0.055)	(0.054)	(0.017)	(0.013)	(0.017)	(0.017)	(0.017)	(0.208)	(0.131)	(0.206)	(0.206)	(0.202)
EBITDA/Assets	0.024*	0.017*	0.021	0.022	0.024	-0.030	0.002	-0.045	-0.038	-0.030	0.060**	0.045***	0.061***	0.060**	0.067***	-0.151	-0.151	-0.153	-0.176	-0.142
	(0.014)	(0.010)	(0.014)	(0.014)	(0.014)	(0.090)	(0.049)	(0.089)	(0.088)	(0.088)	(0.024)	(0.014)	(0.023)	(0.023)	(0.024)	(0.233)	(0.131)	(0.231)	(0.227)	(0.207)
ln(Assets)	-0.000	-0.000	-0.000	-0.000	-0.000	0.006	0.010*	0.007	0.008	0.009	0.006***	0.007***	0.006***	0.006***	0.007***	0.054***	0.074***	0.056***	0.055***	0.061***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.006)	(0.005)	(0.006)	(0.006)	(0.007)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.016)	(0.013)	(0.016)	(0.017)	(0.018)
RetEarn/Equity	0.000	-0.000	0.000	0.000	0.000	0.000	-0.000	0.000	0.000	0.000	0.000***	0.000	0.000***	0.000***	0.000***	0.002*	-0.000	0.002*	0.002*	0.002*
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.001)	(0.000)	(0.001)	(0.001)	(0.001)
Cash/Assets	0.017***	0.014***	0.017***	0.017***	0.017***	0.015	0.056	0.010	0.012	0.017	0.048***	0.057***	0.045***	0.045***	0.045***	-0.124	0.142	-0.149	-0.154	-0.148
	(0.006)	(0.004)	(0.006)	(0.006)	(0.007)	(0.047)	(0.035)	(0.047)	(0.047)	(0.046)	(0.015)	(0.010)	(0.015)	(0.015)	(0.015)	(0.149)	(0.106)	(0.148)	(0.147)	(0.143)
leverage	0.013*	0.011***	0.013*	0.013*	0.013*	0.032	0.073***	0.034	0.034	0.035	0.013	0.030***	0.016*	0.015*	0.015*	0.180*	0.316***	0.202**	0.197**	0.202**
	(0.007)	(0.004)	(0.007)	(0.007)	(0.007)	(0.042)	(0.028)	(0.041)	(0.042)	(0.042)	(0.009)	(0.008)	(0.009)	(0.009)	(0.009)	(0.098)	(0.069)	(0.099)	(0.099)	(0.100)
ln(Age)	-0.000	0.009***	0.012***	0.012***	0.012***	0.041	0.080***	0.099***	0.100***	0.099***	0.005	0.015***	0.022***	0.021***	0.022***	-0.023	0.132***	0.089	0.083	0.086
	(0.002)	(0.001)	(0.002)	(0.002)	(0.002)	(0.030)	(0.012)	(0.018)	(0.019)	(0.018)	(0.007)	(0.002)	(0.003)	(0.004)	(0.004)	(0.087)	(0.033)	(0.056)	(0.058)	(0.057)
sdret1	-0.000	-0.000	-0.000*	-0.000*	-0.000*	-0.000**	-0.000	-0.000**	-0.000**	-0.000**	-0.000***	-0.000	-0.000***	-0.000***	-0.000***	-0.002***	-0.001	-0.002***	-0.002***	-0.002***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
BC_Gov	0.000	-0.001	-0.000	-0.000	-0.001	0.011	0.003	0.009	0.009	0.008	-0.010***	-0.007***	-0.011***	-0.011***	-0.011***	-0.072*	-0.063**	-0.077**	-0.077**	-0.079**
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.014)	(0.012)	(0.014)	(0.014)	(0.014)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.039)	(0.032)	(0.039)	(0.039)	(0.039)
PU		0.000*	-0.000*		0.000		0.000**	-0.000		-0.000		-0.000***	0.000		-0.000**		-0.000**	0.000		-0.000
		(0.000)	(0.000)		(0.000)		(0.000)	(0.000)		(0.000)		(0.000)	(0.000)		(0.000)		(0.000)	(0.000)		(0.000)
FE_PU			0.000					0.000*					-0.000*					-0.001		
			(0.000)					(0.000)					(0.000)					(0.000)		
quartilePU_1				-0.001					-0.031*					0.014***					0.150**	
				(0.001)					(0.017)					(0.004)					(0.068)	
quartilePU_4				0.000					0.002					-0.000					-0.010	
				(0.001)					(0.014)					(0.002)					(0.041)	
quartileFE_PU1				0.002					0.020					-0.006*					-0.107	
				(0.001)					(0.018)					(0.004)					(0.069)	
quartileFE_PU4				-0.001					-0.018					-0.001					-0.003	
				(0.001)					(0.019)					(0.003)					(0.059)	
quartileFE_1					0.004*					-0.049					-0.007					-0.167
					(0.002)					(0.045)					(0.006)					(0.143)
quartileFE_4					-0.001					-0.041					0.035***					0.432**
					(0.004)					(0.040)					(0.014)					(0.189)
quartileFE_1_PU					-0.000					0.000					0.000					0.000
					(0.000)					(0.000)					(0.000)					(0.000)
quartileFE_4_PU					0.000					0.000*					-0.000**					-0.000
					(0.000)					(0.000)					(0.000)					(0.000)
Constant	-0.005	-0.070***	-0.099***	-0.107***	-0.106***	-0.447*	-0.691***	-0.837***	-0.898***	-0.848***	-0.091	-0.151***	-0.236***	-0.226***	-0.217***	-0.414	-1.449***	-1.298**	-1.099**	-0.904*
	(0.018)	(0.009)	(0.014)	(0.015)	(0.015)	(0.250)	(0.112)	(0.164)	(0.171)	(0.170)	(0.059)	(0.022)	(0.032)	(0.032)	(0.033)	(0.741)	(0.300)	(0.515)	(0.526)	(0.514)
Observations	7,397	15,313	7,397	7,397	7,397	7,397	15,313	7,397	7,397	7,397	6,937	14,354	6,937	6,937	6,937	6,937	14,354	6,937	6,937	6,937
Number of gvkeynum	878	2,072	878	878	878	878	2,072	878	878	878	856	2,015	856	856	856	856	2,015	856	856	856
R-Squared	0.0974	0.0723	0.0970	0.0962	0.0969	0.0468	0.0418	0.0443	0.0443	0.0442	0.233	0.158	0.225	0.226	0.225	0.0682	0.0457	0.0632	0.0635	0.0635

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Assets, market cap, revenue, s,g&a, mtb, sales growth, 1 year trailing return, roa, Tobin's Q, all winsorized at the 1st,99th percentiles.

Market value/total assets is the measure of firm value used as the dependent variable in equation (4). OC is the explanatory variable of interest, as well as quartiles of OC and PU, and interaction terms. Control variables are standard for the Fama and French (1998) model. The control variables capture current investor expectations about firm performance, cash flow and investment. Equation (4) controls include past change (t-2), current and future change (t+2) of earning before extraordinary items plus interest, R&D expense, dividends, interest expense, future market value, and past and future change in assets. All variables in equation (2) are divided by total assets. Prior findings of Lev & Radhakrishnan (2005) indicate the market expectation of the contribution to future abnormal earnings from the current stock of OC is 2.4 years. This fits relatively well with the Fama French (1998) technique of two year leads and lags on explanatory variables.

$$MV_{i,t}/TA_{i,t} = \alpha + \beta_1 OC_{i,t} + \beta_2 OC_{i,t-2} + \beta_3 OC_{i,t+2} + \beta_4 Earnings_{i,t}/TA_{i,t} + \beta_5 Earnings_{i,t-2}/TA_{i,t} + \beta_6 Earnings_{i,t+2}/TA_{i,t} + \beta_7 R\&D_{i,t}/TA_{i,t} + \beta_8 R\&D_{i,t-2}/TA_{i,t} + \beta_9 R\&D_{i,t+2}/TA_{i,t} + \beta_{10} InterestExpense_{i,t}/TA_{i,t} + \beta_{11} InterestExpense_{i,t-2}/TA_{i,t} + \beta_{12} InterestExpense_{i,t+2}/TA_{i,t} + \beta_{13} Dividends_{i,t}/TA_{i,t} + \beta_{14} Dividends_{i,t-2}/TA_{i,t} + \beta_{15} Dividends_{i,t+2}/TA_{i,t} + \beta_{16} MV_{i,t+2}/TA_{i,t} + \beta_{17}(TA_{i,t} - TA_{i,t-2})/TA_{i,t} + \beta_{18}(TA_{i,t+2} - TA_{i,t})/TA_{i,t} + \text{Industry fixed effects} + \varepsilon_{i,t} \quad (4)$$

The results of the firm value procedure are shown in Tables 7 and 8. We find that OC is significant and positively associated with firm value, and is robust to the regression specification, controls and operationalization of OC. PU has a negative association with firm value, and high (4^{th} quartile) PU has a larger negative and significant include on firm value than periods of low PU. This is in line with findings in prior literature. The interaction of OC and PU is positively

associated with firm value at the 10% level. The quartiled PU interaction with OC shows a highly significant ($p<0.01$) and positive relationship between firm value and OC in periods of elevated policy uncertainty. We find OC is almost always a significant contributor to firm value, especially so PU is high. The results indicate that all else equal, a 1 standard deviation in OC is associated with a 35 bp increase in firm value, and 23 bp increase in firm value in periods of high PU. The economic significance of OC to firm value is similar to changes in leverage, assets, and future firm value. It is less economically relevant than earnings, dividends and R&D. Hypothesis 2 is well supported by firm value regression results shown in table 8. Organization capital is significantly and positively associated with firm value in the context of PU.

1.4.4. Instrumental Variable Robustness Test

Estimating effects of organization capital on firm risk taking and financial policy risks violating the zero conditional mean assumption of our estimation procedure: the error term has an expected value of zero and is not correlated to OC. It is possible that high quality managers choose to work for firms with the most sensible financial policy and most attractive investment plan. Atkeson & Kehoe (1994) model OC as jointly produced with output. Most empirical finance literature deploy an instrumental variable approach to account for potential endogeneity of OC. Li, Qui & Shen (2018) use state-level variables inevitable disclosure doctrine ("IDD") and unemployment insurance benefits ("UIB") to instrument for organization capital. In order to match a firm to state level IDD and UIB data we must establish the location of the firm. Pirinsky & Wang (2006) ask the research question if corporate HQ location matters for returns. The study uses state-level Federal Reserve Bank of Philadelphia based economic indices to account for the observed local co-movement in stock prices. The state-level data is merged into the sample based

on the headquarter state in Compustat. Likewise, we take the firm state variable in our sample to be appropriate for merging with state-level IDD and UIB data.

Table 1.7: Firm Value regression with dependent variable and controls following Fama & French (1998), and four variants of organization capital.

OC =	Perpetual Inventory		Industry Adj Perp Inventory		5 Year Str Line Dep.		Firm Effic (Demerjian, 2012)	
OC	0.1032*	0.1351***	0.0816	0.1305***	-0.1502	0.7119***	2.1729***	0.7269***
	(0.0585)	(0.0301)	(0.0625)	(0.0305)	(0.4073)	(0.1867)	(0.4872)	(0.1928)
dOC	0.0908	0.0570	0.1008	0.0445	1.1454**	0.2976	-0.6090***	0.1833*
	(0.1043)	(0.1026)	(0.1058)	(0.1026)	(0.4783)	(0.4785)	(0.2304)	(0.1035)
dOC2	0.0060	0.0730	0.0419	0.0731	0.3710	0.5746	0.4320*	0.5894***
	(0.1267)	(0.1220)	(0.1246)	(0.1205)	(0.4413)	(0.4082)	(0.2448)	(0.1054)
quartilePU_1		-0.0556		0.0609*		-0.0936		0.1731**
		(0.0447)		(0.0320)		(0.0670)		(0.0673)
dquartilePU_1		0.0202		0.0149		0.1443***		0.0502
		(0.0216)		(0.0157)		(0.0286)		(0.0329)
dquartilePU_12		-0.0261		0.0232		-0.0166		0.1993***
		(0.0267)		(0.0168)		(0.0329)		(0.0364)
quartilePU_4		-0.1323***		-0.0500**		-0.2221***		0.0090
		(0.0305)		(0.0222)		(0.0366)		(0.0597)
dquartilePU_42		-0.0187		-0.0049		-0.0328		-0.0615*
		(0.0194)		(0.0137)		(0.0203)		(0.0362)
OC_quartilePU_1		0.0891***		0.0950***		-0.7074**		0.1755
		(0.0227)		(0.0250)		(0.3097)		(0.2081)
dOC_quartilePU_1		-0.0112		-0.0032		0.4437***		-0.3416***
		(0.0106)		(0.0113)		(0.1277)		(0.0919)
dOC_quartilePU_12		0.0256		0.0565***		-0.1825		-0.3855***
		(0.0158)		(0.0172)		(0.1585)		(0.1204)
OC_quartilePU_4		0.1154***		0.1076***		-0.1671		0.0794
		(0.0244)		(0.0299)		(0.2017)		(0.1824)
dOC_quartilePU_4		-0.0553***		-0.0300*		-0.2095***		-0.3169***
		(0.0099)		(0.0161)		(0.0497)		(0.0548)
dOC_quartilePU_42		0.0105		0.0195		-0.0535		0.0142
		(0.0128)		(0.0137)		(0.1217)		(0.1044)
PU	-0.0000		0.0001*		-0.0001**		0.0002**	
	(0.0001)		(0.0000)		(0.0001)		(0.0001)	
dPU	-0.0001***		-0.0002***		-0.0002***		-0.0003***	
	(0.0000)		(0.0000)		(0.0000)		(0.0000)	
dPU2	0.0000		0.0001***		-0.0000		-0.0001	
	(0.0000)		(0.0000)		(0.0000)		(0.0000)	
OC_PU	0.0001*		0.0001**		0.0005*		-0.0010***	
	(0.0000)		(0.0000)		(0.0003)		(0.0003)	
dOC_PU	-0.0000**		-0.0001***		-0.0006***		0.0005***	
	(0.0000)		(0.0000)		(0.0002)		(0.0001)	
dOC_PU2	0.0000*		0.0000		0.0001		0.0001	
	(0.0000)		(0.0000)		(0.0002)		(0.0001)	
Constant	0.1567	0.1972***	0.0686	0.2053***	0.5577***	0.4597***	-0.3409**	-0.1130
	(0.1273)	(0.0695)	(0.1081)	(0.0672)	(0.1356)	(0.0864)	(0.1716)	(0.0943)
Observations	26,879	26,879	26,879	26,879	19,583	19,583	23,780	23,780
Number of gvkeynum	3,269	3,269	3,269	3,269	2,675	2,675	2,464	2,464
R-Squared	0.417	0.417	0.417	0.417	0.498	0.499	0.397	0.398

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 1.8 Panel A: Regression of firm value on OC, PU and controls following Fama & French 1998. Explanatory variable of interests are OC, and OC interacted with policy uncertainty.

OC Variables =	OC= Perpetual inventory method.					OC=Inventory adjusted perpetual inventory method.				
OC	0.1763***		0.1032*	0.1351***		0.1763***		0.0816	0.1305***	
	(0.0297)		(0.0585)	(0.0301)		(0.0297)		(0.0625)	(0.0305)	
dOC	0.0172		0.0908	0.0570		0.0172		0.1008	0.0445	
	(0.1035)		(0.1043)	(0.1026)		(0.1035)		(0.1058)	(0.1026)	
dOC2	0.0992		0.0060	0.0730		0.0992		0.0419	0.0731	
	(0.1208)		(0.1267)	(0.1220)		(0.1208)		(0.1246)	(0.1205)	
quartilePU_1				-0.0556					0.0609*	
				(0.0447)					(0.0320)	
dquartilePU_1				0.0202					0.0149	
				(0.0216)					(0.0157)	
dquartilePU_12				-0.0261					0.0232	
				(0.0267)					(0.0168)	
quartilePU_4				-0.1323***					-0.0500**	
				(0.0305)					(0.0222)	
dquartilePU_42				-0.0187					-0.0049	
				(0.0194)					(0.0137)	
OC_quartilePU_1				0.0891***					0.0950***	
				(0.0227)					(0.0250)	
dOC_quartilePU_1				-0.0112					-0.0032	
				(0.0106)					(0.0113)	
dOC_quartilePU_12				0.0256					0.0565***	
				(0.0158)					(0.0172)	
OC_quartilePU_4				0.1154***					0.1076***	
				(0.0244)					(0.0299)	
dOC_quartilePU_4				-0.0553***					-0.0300*	
				(0.0099)					(0.0161)	
dOC_quartilePU_42				0.0105					0.0195	
				(0.0128)					(0.0137)	
PU		-0.0002***	-0.0000		0.0000		-0.0002***	0.0001*		0.0001**
		(0.0000)	(0.0001)		(0.0001)		(0.0000)	(0.0000)		(0.0001)
dPU		-0.0001***	-0.0001***		-0.0002***		-0.0001***	-0.0002***		-0.0002***
		(0.0000)	(0.0000)		(0.0000)		(0.0000)	(0.0000)		(0.0000)
dPU2		-0.0000*	0.0000		0.0000		-0.0000*	0.0001***		0.0001**
		(0.0000)	(0.0000)		(0.0000)		(0.0000)	(0.0000)		(0.0000)
OC_PU			0.0001*					0.0001**		
			(0.0000)					(0.0000)		
dOC_PU			-0.0000**					-0.0001***		
			(0.0000)					(0.0000)		
dOC_PU2			0.0000*					0.0000		
			(0.0000)					(0.0000)		
quartileOC_1					-0.0951					0.0470
					(0.1456)					(0.1500)
dquartileOC_1					-0.1579*					-0.1901**
					(0.0890)					(0.0914)
dquartileOC_12					-0.1568*					-0.1517**
					(0.0873)					(0.0737)
quartileOC_4					0.0877					0.4205**
					(0.2246)					(0.2114)
dquartileOC_4					-0.0662					-0.2266**
					(0.1122)					(0.1082)
dquartileOC_42					-0.1228					0.1787*
					(0.1166)					(0.1052)
quartileOC_1_PU					0.0000					-0.0002**
					(0.0001)					(0.0001)
dquartileOC_1_PU					0.0001*					0.0002***
					(0.0000)					(0.0001)
dquartileOC_1_PU2					0.0000					-0.0000
					(0.0000)					(0.0000)
quartileOC_4_PU					0.0003					-0.0001
					(0.0002)					(0.0002)
dquartileOC_4_PU					-0.0001					0.0001
					(0.0001)					(0.0001)
dquartileOC_4_PU2					0.0002**					-0.0000
					(0.0001)					(0.0001)
Constant	0.1530**	0.5117***	0.1567	0.1972***	0.2649**	0.2005***	0.5117***	0.0686	0.2053***	0.0194
	(0.0668)	(0.1004)	(0.1273)	(0.0695)	(0.1187)	(0.0660)	(0.1004)	(0.1081)	(0.0672)	(0.1160)
Observations	26,879	37,854	26,879	26,879	26,879	26,879	37,854	26,879	26,879	26,879
Number of gvkeynum	3,269	4,469	3,269	3,269	3,269	3,269	4,469	3,269	3,269	3,269
r2_o	0.415	0.374	0.417	0.417	0.417	0.415	0.374	0.417	0.417	0.416

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 1.8 Panel B: Regression of firm value on OC, PU and controls following Fama & French 1998. Explanatory variable of interests are OC, and OC interacted with policy uncertainty.

OC Variables =	OCc = 5-Year Straight Line Depreciation					FE = Firm Efficiency (Demerjian et al., 2012)				
OC	0.6673***		-0.1502	0.7119***		0.8250***		2.1729***	0.7269***	
	(0.1428)		(0.4073)	(0.1867)		(0.1882)		(0.4872)	(0.1928)	
dOC	0.1825		1.1454**	0.2976		0.0442		-0.6090***	0.1833*	
	(0.4975)		(0.4783)	(0.4785)		(0.1021)		(0.2304)	(0.1035)	
dOC2	0.6493		0.3710	0.5746		0.5513***		0.4320*	0.5894***	
	(0.4615)		(0.4413)	(0.4082)		(0.0968)		(0.2448)	(0.1054)	
quartilePU_1				-0.0936					0.1731**	
				(0.0670)					(0.0673)	
dquartilePU_1				0.1443***					0.0502	
				(0.0286)					(0.0329)	
dquartilePU_12				-0.0166					0.1993***	
				(0.0329)					(0.0364)	
quartilePU_4				-0.2221***					0.0090	
				(0.0366)					(0.0597)	
dquartilePU_42				-0.0328					-0.0615*	
				(0.0203)					(0.0362)	
OC_quartilePU_1				-0.7074**					0.1755	
				(0.3097)					(0.2081)	
dOC_quartilePU_1				0.4437***					-0.3416***	
				(0.1277)					(0.0919)	
dOC_quartilePU_12				-0.1825					-0.3855***	
				(0.1585)					(0.1204)	
OC_quartilePU_4				-0.1671					0.0794	
				(0.2017)					(0.1824)	
dOC_quartilePU_4				-0.2095***					-0.3169***	
				(0.0497)					(0.0548)	
dOC_quartilePU_42				-0.0535					0.0142	
				(0.1217)					(0.1044)	
PU		-0.0002***	-0.0001**		-0.0001***		-0.0002***	0.0002**		-0.0000
		(0.0000)	(0.0001)		(0.0001)		(0.0000)	(0.0001)		(0.0001)
dPU		-0.0001***	-0.0002***		-0.0002***		-0.0001***	-0.0003***		-0.0001***
		(0.0000)	(0.0000)		(0.0000)		(0.0000)	(0.0000)		(0.0000)
dPU2		-0.0000*	-0.0000		-0.0000*		-0.0000*	-0.0001		-0.0000*
		(0.0000)	(0.0000)		(0.0000)		(0.0000)	(0.0000)		(0.0000)
OC_PU			0.0005*					-0.0010***		
			(0.0003)					(0.0003)		
dOC_PU			-0.0006***					0.0005***		
			(0.0002)					(0.0001)		
dOC_PU2			0.0001					0.0001		
			(0.0002)					(0.0001)		
quartileOC_1					-0.3756***					0.0336
					(0.1269)					(0.1008)
dquartileOC_1					-0.1151					-0.0531
					(0.0750)					(0.0493)
dquartileOC_12					-0.2325***					-0.0118
					(0.0624)					(0.0506)
quartileOC_4					-0.3471**					0.7635***
					(0.1601)					(0.1487)
dquartileOC_4					0.3229***					-0.2559***
					(0.0881)					(0.0673)
dquartileOC_42					-0.0510					0.1467**
					(0.0833)					(0.0710)
quartileOC_1_PU					0.0001*					-0.0001
					(0.0001)					(0.0001)
dquartileOC_1_PU					0.0001*					0.0000
					(0.0000)					(0.0000)
dquartileOC_1_PU2					0.0001**					-0.0000
					(0.0000)					(0.0000)
quartileOC_4_PU					0.0003**					-0.0003***
					(0.0001)					(0.0001)
dquartileOC_4_PU					-0.0002***					0.0002***
					(0.0001)					(0.0000)
dquartileOC_4_PU2					0.0001					0.0000
					(0.0001)					(0.0000)
Constant	0.3508***	0.5117***	0.5577***	0.4597***	0.7308***	-0.0938	0.5117***	-0.3409**	-0.1130	0.1588
	(0.0855)	(0.1004)	(0.1356)	(0.0864)	(0.1325)	(0.0937)	(0.1004)	(0.1716)	(0.0943)	(0.0991)
Observations	19,583	37,854	19,583	19,583	19,583	23,780	37,854	23,780	23,780	23,780
Number of gvkeynum	2,675	4,469	2,675	2,675	2,675	2,464	4,469	2,464	2,464	2,464
R-Squared	0.492	0.374	0.498	0.499	0.497	0.395	0.374	0.397	0.398	0.400

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

IDD and UIB are both relevant to organization capital and both are assumed to be exogenous to the firm. Appendix table A2 lists correlations of instruments. In Chicago, IL there is a non-profit called the Uniform Law Commission ("ULC", founded 1982). The purpose of the ULC is to draft legislation that can be implemented by individual states to reduce state-to-state variation in legal precedent. The ULC promulgated the Uniform Trade Secrets Act ("UTSA") in 1979 (https://www.uniformlaws.org). Part of the USTA is expressed in a legal theory of inevitable disclosure suggesting employees that depart a firm for another, are assumed to inevitably disclose the secret intellectual property of the prior firm. While all states except for NC and NY have adopted USTA, far fewer recognize IDD. For example, California, Virginia and Florida totally reject the IDD precedent. States that adopt IDD into employment law precedent restrict the movement of certain types of employees from one firm to another. Firms located in states with IDD are more likely to invest in organization capital given tighter restriction on movement of firm know-how to a rival. Our review of current IDD precedent results in 20 instances of IDD=1 in our sample. We calculate maximum weekly unemployment benefits by state based on data obtained from fileunemployment.org. The theory and empirical findings linking UIB and OC indicates that the level of unemployment benefits available to employees is negatively associated with voluntary job switching and positively associated with employee skill acquisition. Higher levels of UIB mean employees don't feel as great a need to switch jobs proactively to avoid unemployment (Light & Omori, 2004). Firms headquartered in states with higher level of UIB are expected to invest more in OC.

In the first stage of our instrumental variable analysis we regress IDD and maximum UIB ("UI_max") on each of the four formulations of OC as shown in equation (5). The residuals from

estimating equation (5) are saved and used in the second stage as the instrument for OC ("OChat"). We re-estimate all regressions with the four formulations of OChat.

$$OC_{it} = \beta_{0i} + \beta_{1i}IDD_{it} + \beta_{2i}UI\_max_{it} + \beta_{2i}Controls_{it} + \text{Industry FE} + \text{Year FE} + \varepsilon_{it} \quad (5)$$

The risk-taking, financial policy and payout 2SLS regression results are shown in table 9, 10 and 11, respectively. In addition, we replace OC with OChat, re-estimate our firm value coefficients and show the results in table 12. Overall the instrumental variable results are broadly consistent, and in certain cases stronger, than results based on equations (3) and (4). OChat is positively and significantly associated with capital spending when controlling for quartiles of PU. The association of OChat with R&D, EBITDA volatility is significant and positive. Other estimates of the effect OChat on firm risk taking are less conclusive. Financial policy associations are stronger with OChat. OChat is positively and significantly associated with firm leverage across all base model specifications, and negatively and significantly associated with cash holdings across all specifications. The cash holding result with OChat is different compared to OC. This again points to a future empirical question about the relationship between OC and exogenous cash. Instrumental variable estimators of the effect of OC on shareholder payouts are negative and significant across 10 of 13 models. The consistency of the results with base regressions further point to high OC firms allocate less excess cash flow to shareholder payouts and more to risk taking and employees.

1.5. Conclusions, Implications and Limitations

Firms with high organization capital take more risk in periods of policy uncertainty. The magnitude of the partial effect of OC on risk taking changes little based on quartile of OC. Further, the coefficient of the interaction term of OC*PU is positive and significant, suggesting that in periods of uncertainty some of the additional investment activity and risk taking of the firm is attributable to managers taking advantage of opportunity that may be created by uncertainty. Hypothesis 1 is supported by our results. Eisfeldt & Papanikolaou (2013) indicate labor in high OC firms have a partial claim on excess cash flow. The consistency of the results between base regressions and 2SLS estimations indicate that high OC firms have lower payouts, higher leverage and similar or lower levels of cash holdings. Certainly some of the excess cash flow is being allocated to capex (which is a capital item). However, it appears that high OC firms do in fact allocate a higher share of excess cash flow to employees.

OC is a significant contributor to firm value, particularly when PU is high ($p<0.01$). The partial effect of OC on firm value is robust to formulation of OC and PU controls. The economic significance of OC to firm value is in line with the influence of leverage, assets, and future firm value. It is less economically relevant than earnings, dividends and R&D. Using a 2SLS procedure with exogenous instruments for OC show consistent, and somewhat statistically and economically stronger results. Overall, hypothesis 2 is well supported by firm value regression result. Organization capital is significantly and positively associated with firm value in the context of PU.

1.5.1 Implications for Academics.

Controlling for PU, high OC firms have significantly higher ROA and EBITDA volatility than low OC firms. This leads to future research questions regarding OC and earnings management. Using a S,G&A based measure of OC, Chemmanur et al. (2009) show OC is associated with lower information asymmetry suggesting that high OC firms do a better job of communicating with stakeholders than low OC firms. This finding supports a future empirical study to determine if OC is negatively associated with earnings management and financial statement comparability. The association of OC and Cash was not clearly established. In base regressions there was a small positive, weakly significant association between OC and Cash. However, in the instrumental variable regressions OChat was shown to be significantly and negatively associated with cash holdings. The latter result appears more consistent with agency theory (Jensen & Meckling, 1976). However, prior finance literature includes several procedures to predict exogenous cash (Opler, Pinkowitz, Stulz & Williamson, 1999)(Fresard, 2010). Future research could more precisely specify a research design to study the association of OC and cash holdings in the face of exogenous firm stressors.

1.5.2 Implications for Practitioners

OC enhances firm value in periods of uncertainty. Driving to eliminate fixed costs that promote development of firm intangible assets will harm the firm. This conclusion is consistent with Li, Qui & Shen (2018) and anecdotal observations from Kraft Heinz. Fixed cost is not the place to focus M&A synergies or cost cutting programs. Rather invest in organization capital and maximize variable cost leverage by cutting variable operating expenses. This may be counter-intuitive, but the conclusion follows Krugman (1979) model of internal increasing returns to

scale in a straightforward way. High OC firms create more variable cost leverage and better returns to scale.

1.5.3 Limitations

There are several limitations in our study, with two being particularly noteworthy. First, studies on OC need to account for potential endogeneity in the research design. The instrumental variables used, following prior literature, are U.S. state specific data on legal doctrine and unemployment benefits. This limits our study to U.S. based firms. Second, we use Policy Uncertainty as an exogenous firm stressor to examine the influence of OC on firm decisions and firm value. PU affects all firms at the same time. PU cannot be used directly as a continuous variable in single country firm value calculations. The Fama MacBeth (1973) procedure omits a constant variable in the cross-sectional regressions. As there is no variation in the PU ‘x’ for each cross-sectional period, it is omitted.

CHAPTER 2

ORGANIZATION CAPITAL, PRODUCT MARKET STRESS AND FINANCIAL SLACK

Abstract

Agency theory implications regarding financial slack (Jensen & Meckling, 1976) are not in conflict with a product market view of slack (Benoit, 1984). This study integrates finance and economics theory (Krugman, 1979)(Jensen, 1986)(Bolton & Scharfstein, 1990)(Atkeson & Kehoe, 1994) to empirically test whether firm investment in the intangible asset organization capital ("OC") is associated with the product market benefits of cash. Consistent with the product market view, univariate tests show high OC firms operate in industries more likely to experience product market strain, have higher cash holdings ("EC"), take more risk, have lower leverage, lower total shareholder payouts and higher future growth prospects. Multivariate regressions show low OC firms hold more cash than high OC firms and that market share concentration and import intensity are positively associated with cash. The agency view of cash and product market view are not in conflict. Product market conditions influence the cash policy of risk averse managers. Controlling for product market conditions, high OC firms hold less financial slack than low OC firms. Firm value regressions (Fama & French, 1998) show OC and cash holdings are positively associated with firm value. Product market stress is negatively associated with firm value. Findings are robust to alternative measures of organization capital, financial slack and product market stress.

2.1. Introduction

Managers at General Electric made some attempt to conceal the fact former CEO Jeffrey Immelt was known internally to travel with two corporate jets[1]. Once reported, the two-jet arrangement was said to be for the CEO's travel surety and safety. Corporate jet travel, much less a two-jet-per-CEO arrangement, is a costly example of agency costs (Yermack, 2006) endemic to the modern corporate form. Approximately one year on, GE hired its new CEO away from Danaher. Danaher describes its Danaher Business Systems ("DBS") as a unique firm process for driving culture, performance and success. The DBS is an example of firm investment in Organization Capital ("OC"). All firms possess some amount of intangible fixed asset organization capital ("OC"). The OC investment of firms may be active or passive, and strategic or tactical. The example of Danaher Business System ("DBS")[2] is an active and strategic investment in OC. The success of DBS is what resulted in long-time CEO Larry Culp Jr. being hired by General Electric to resuscitate its fortunes. In this study organization capital is defined as firm investment in formal and informal processes and systems to enhance productivity and value creation.

As sensational as a two-jet discovery at a former Dow Jones Industrial Average ("DJIA") firm may be to the financial press, abuse of corporate perquisites is not new to academics. It is also not adequate on its own to motivate new research questions about financial slack and firm value. However, theory and empirical findings about the effect of financial slack on firm policy and value are not uniform. Agency costs associated with holding too much cash are reported in literature beginning shortly after elucidation of the theory of the firm in Jensen & Meckling (1976). Contrasting empirical results regarding financial slack and firm performance may be

1. https://www.wsj.com/articles/ges-new-chief-starts-making-cuts-starting-with-old-favorites-1508353939
2. https://www.danaher.com/how-we-work/danaher-business-system

in part attributed to prior literature on the product market view of cash. The product market view identifies the positive influence of financial slack on product market performance and market share (Benoit 1984)(Fresard, 2010). Conflict in empirical findings regarding the influence of cash on investment policies, financial policies and firm value was predicted by Bolton & Scharfstein (1990).

Huang, Jain & Kini (2019) show industry tournament-based compensation incentives ("ITI") increase cash holdings and the value of cash holdings. The study uses product market competition as an exogenous stressor. Resolving all conflicting implications of agency theory and the product market view of financial slack is not the focus of this paper. However, the solid theoretical and empirical associations demonstrated in prior literature of product market performance and financial slack make the former an appropriate exogenous factor to relate to new research questions regarding the potentially endogenous latter regressor (slack).

Prior literature has utilized M&A as an exogenous variable to identify the influences of OC (Li, Qui & Shen, 2018) and cash flow (Lang, Stulz & Walkling, 1991) on firm performance and value. Lang et al (1991) use Tobin's Q to control for the growth prospects of a firm when empirically testing for post-acquisition bidder performance. Li, Qui & Shen (2018) demonstrate superior post-deal performance of firms investing in OC. To extend the literature we focus on product market stress and OC. This paper is intended to empirically determine if high OC firms facing product market stress hold more cash, and if it enhances firm value? This study is the first to: 1) relate OC to product market stress, and 2) seek to reconcile and integrate product market views of financial slack with agency theory, rather than to compare and contrast.

In order to extend the insights of Huang, Jain & Kini (2019) and Li, Qui & Shen (2018) and answer the research question of this study we draw upon four streams of literature. The resultant hypotheses and empirical results indicate product market stressors act on firm behavior in a similar manner to compensation contracts, and what may be predicted by agency theory. This study further assists in resolving conflicting theoretical predictions of Bolton & Scharfstein (1990).

Four streams of motivating literature include: 1) Agency theory – The separation of ownership and control results in monitoring costs and manager incentives to retain excess cash, overinvest, and spend on management perquisites (Jensen & Meckling, 1976). Alternatively, risk averse managers may underutilize cash, choosing to manage the firm for lower risk and lower returns (Bertrand & Mullainathan, 2003). 2) The product market view of cash implies an incentive to hold cash as a precaution to enable firms to maintain investment plans and optimal financial policies during periods of elevated competitive stress (Huang, Jain & Kini, 2019) (Fresard, 2010). Cash may also act as a deterrent to predation or altogether prevent new competitive entry (Benoit 1984)(Bolton & Scharfstein, 1990). 3) Economic theory establishes that fixed costs internal to a firm result in the potential for positive economies of scale (Krugman, 1979). OC is a fixed firm intangible asset. 4) Recent finance studies employ several measures of organization capital ("OC"), showing an association with higher risk taking and firm value (Li, Qui & Shen, 2018).

We find the agency view of cash and product market view are not in conflict. Univariate tests show high OC firms operate in industries under greater product market strain. Top quartile OC firms are associated with lower market share concentration (Hirschman-Herfindahl index 378 vs 478, $p<0.001$), higher import intensity and a higher propensity to be influenced by tariff cuts. High OC firms are characterized by a greater investment in R&D. OC itself is a fixed intangible investment, analogous to R&D investment for innovation. In our study high OC firms and low OC firms did not exhibit material differences in acquisition spending.

Multivariate regressions across four formulations of OC, three formulations of cash and five product market variables indicate OC is positively associated with financial slack. However, when controlling for product market stress, and the interaction of OC and product market stress, OC association with EC becomes negative. An overall positive association of OC and financial slack appears due to the omission of a product market stress control. Multivariate regressions controlling for product market stress, with high and low OC dummy variables, consistently show low OC firms hold more cash than high OC firms, and market share concentration and import intensity are associated with higher cash. Product market conditions influence firm slack as expected. However, the effect is in the context of agency theory as controlling for product market conditions, we find high OC firms hold less EC than low OC firms. The combined effect is consistent with agency theory.

The remainder of this paper is organized as follows: Section 2 reviews relevant literature on agency theory, financial slack, the product market view of cash, a trade-based model of fixed costs, firm performance, and the theoretical foundations and empirical measurement of OC.

Section 3 details our sample and empirical methodology. Section 4 discusses results and of main regressions and robustness tests. Section 5 offers conclusions and implications for academics and practitioners.

This study contributes to the body of literature on organization capital, financial slack, agency theory and product markets. It is most closely tied to literature on organization capital, clearly identifying OC and its effects as a fixed intangible asset of the firm.

2.2. Literature Review

Bolton & Scharfstein (1990) develop a model of rational predation to approach to the question of product market stress and financial policy, leverage and financial constraints. Rival pricing or market entry actions have less impact on product market performance as firms are less financially constrained to pursue investments. Similarly, Benoit (1984) indicates product market benefits of cash as competitors are dissuaded from aggressive pricing tactics less likely to succeed, or from market entry altogether.

2.2.1 Mixed picture of financial slack.

Financial slack may aid firm product market performance by funding new investment out of cash on the balance sheet rather than external capital markets. Using inside equity makes it more likely managers overcome natural risk aversion and make positive NPV investments. Managers are risk averse agents of firm owners, and while lower slack may limit the private benefits managers extract it also may limit the financial flexibility of a firm to make value-creating investments. Said differently, a firm may pass on a positive net present value investment due to

insufficient inside equity. The level of risk aversion rises as new capital is required to fund new investments.

Risk sensitivity of CEOs is demonstrated in both directions by Edmans and Liu (2011) and Coles, Daniel and Naveen (2006). Edmans and Liu (2011) show a positive association between inside debt in CEO compensation packages, and risk aversion. In the other direction, Coles, Daniel and Naveen (2006) found that the risk seeking behavior of CEOs was positively associated with compensation package sensitivity to firm stock volatility.

Agency conflicts between managers and owners are thought to be most severe as financial slack exceeds any reasonable assumed level needed to fund positive NPV projects (Jensen, 1986). Managers incentive to overinvest (Richardson, 2006) means that inside equity may be used on negative NPV projects unless governance incentives channel firm resources in a more productive way. Lang & Litzenburger (1989) demonstrate that financial policy decisions of the firm, specifically increasing dividends, may have a significant restraining influence on overinvestment. In the research design of Lang & Litzenburger (1989) Tobin's Q is deployed to split the sample into over-investors ($Q<1$) and firms with attractive future growth prospects. Dividend announcements may include a confound, as it signals future earnings prospects and growth, raising Q, rather than purely reducing a risk of cash misuse (Miller and Rock, 1985). Lang, Stulz & Walkling (1991) take the investigation further and find support for the overinvestment hypothesis. Lang et al consider investment activities of the firm, namely large acquisitions. In controlling for growth prospects (Tobin's Q) the study showed that higher free cash flow is negatively associated with bidder performance.

The issue of limited financial slack leading to a less than optimal investment policy is formally identified within pecking order theory (Myers and Majluf , 1984). Pecking order predictions regarding how firms finance new investments has not been consistently supported by empirical testing. A generalized hierarchy theory of funding has been found to have support in some studies. Amihud, Lev & Travlos (1990) find that control-oriented insiders use inside equity (slack) and debt before outside equity. Opler, Pinkowitz, Stulz and Williamson (1999) show well performing firms hold more slack than static tradeoff models predict. Static trade off models identify the benefit of holding cash relative to the costs as a push and pull of transaction cost motives and precautionary motives (Keynes, 1934). Opler et al use data from 1971-1994 to show cash holdings and investment opportunities are positively associated, and firms with excess cash typically reduce slack to cover losses rather than to fund fixed investment or acquisitions. An important prediction of the static trade off model is large firms require less cash on hand as large firms typically have better access to external capital markets.

Precautionary motives of cash holdings extends to firm management of labor. Ghaly, Dang & Stathopoulos (2017) consider how reliance on skilled labor influences financial policy. The linkage of skilled labor, or labor heterogeneity, to financial policy is labor adjustment costs (Shapiro 1986). Labor adjustment costs include severance, search times, productivity and training. Ghaly identifies a significant and large influence of labor heterogeneity on cash. A one standard deviation in labor force skill was associated with a 21% increase in cash/assets. Low skill firms exhibited a 13.6% cash/asset ratio, and a high skill firms 26%. The results strongly suggest firms hold precautionary cash to avoid turnover of skilled labor when cash flow shocks

occur. The precautionary motive of cash holdings has similarities to a predation model indicating the benefits of cash to product market performance.

The flexibility motive of excess cash is also identified in prior literature. A survey of CFOs indicates financing flexibility is important to firms (Graham & Harvey, 2001). Financial flexibility is not directly observable. It may be defined as financial slack, total leverage or unused debt capacity (Arslan-Ayaydin et al. 2014)(Ferrando et al, 2014). Yung, Li & Jian (2015) define financial flexibility as a minimum of three consecutive years of unused debt capacity. Yung et al (2015) find corporate financial flexibility helps firms maintain investment programs. Financial flexibility is associated with higher future firm risk taking (de Jong et al, 2012). Financial flexibility in the form of internal capital markets, has been shown to add to firm value in a financial crisis (Kuppuswamy & Villalonga, 2015). The flexibility motive construct overlaps with precautionary motives and are rooted in the risk aversion of agent-managers (Jensen & Meckling, 1976). Firms do not want a financial market shock to reduce future investment programs. This issue is particularly acute in emerging markets where capital markets are not as deep or globally integrated (Yung et al, 2015).

Conflicts in prior literature regarding the influence of financial slack may be attributable in part to the endogeneity of cash and the empirical challenge of identifying the exogenous portion of slack (Opler, Pinkowitz, Williamson & Stulz, 1999)(Fresard, 2010). Exogenous cash (“EC”) is a measure of cash holdings instrumented for unknown endogenous factors correlated to independent variables on interest in the regressions, including variation based on firm and industry fundamentals. In general, the benefits of high cash holdings on product market

performance may be offset by higher agency related costs. Firms that hoard cash, and use internal equity for funding are subject to less external monitoring. This is a result of a lower need to access external capital markets. Firms with high cash holdings are not as likely to keep investors well informed and would have higher cost of information asymmetry. Firms with high levels of financial slack are also more likely to waste firm resources through managerial perquisites and overinvestment (Jensen & Meckling, 1976)(Jensen, 1986).

Prior literature is not conclusive on the importance of the level of cash and access to capital on the ultimate investment level of the firm and perceived future expected growth (Kaplan and Zingales, 1997 and 2000)(Fazzari, Hubbard, Peterson 1988 and 2000). An important finding in Shyam-Sunder and Myers (1998) shows that high cash flow, rather than high free cash flow, is associated with a high valuation. Antunovich (1996) and Opler and Titman (1994) identify additional variables with explanatory power regarding cash holdings. Excess slack is positively associated with information asymmetry and high R&D. It may be that markets assess the prospects of firms with high cash flow and higher investment activity differently than firms with high free cash flow due to low investment opportunity.

Bolton & Scharfstein (1990) predicts the potential for conflicting results given agency-oriented costs offset product market benefits. Further, rivals act to influence the agency relationship between external creditors and the firm in order to constrain firm product market actions. The model does not constrain principal-agent problems, as both the principal and agent are influenced by each other's decisions. Financial structure is shown to influence cost of capital and profitability, indicating that financial policy decisions of the firm may influence firm value when

facing product market stress. The capital market benefit is rival firms are less likely to engage in predatory product market behavior, absorbing the related cost to profitability, if the target firm does not need to access external capital markets to continue to invest. The trade-off we address in our research design is financial contracts and structure that deter predation, addressing product market stress, at the same time increase potential principal-agent incentive problems.

The joint dependence issue in common in corporate finance studies. Dammon & Senbet (1988) indicate real and financial policy decisions are often jointly dependent. The empirical challenge of dealing with the simultaneity of firm decisions leaves unanswered research questions. As a result of opposing influences of excess cash on real and policy decisions of firms, this study is narrowly focused on considering previously ignored firm assets or attributes that shed light on the true influences of financial slack. Our research question deals with financial policy jointly with product market performance and firm intangible organization capital.

MacKay & Phillips (2005) considered a joint dependency issue of how industry influences capital structure, as well as the market share and investment implications. The paper went beyond Myers & Majluf (1984) pecking order theory of capital structure to consider industry peer influence. The dependent variables in the paper are leverage, capital-labor ratio, and cash flow volatility. Findings showed only 13% of leverage variation due to industry, 54% is firm level effects, and 33% is within firm variation.

2.2.2. Compensation contract incentive tests extend to OC

Within the product market benefit stream, ITI's have consistently been shown to enhance the value of cash (Phan, Simpson & Nguyen 2017)(Huang, Jain & Kini 2019). CEO industry tournament incentives ("ITI"), controlling for exogenous product market stressors, are positively associated with the level of cash a firm holds, and its value of cash (Huang, Jain & Kini, 2019). ITI causally increases the value of cash by the channel of strategic CEO risk taking. The additional risk taking is a function of added ITI investment incentives, ultimately resulting in product market benefits for the firm. Phan, Simpson & Nguyen (2017) looks directly at ITI and the value of corporate cash, finding that ITI is positively related to cash level and the marginal value of cash holdings.

This study extends Huang et al (2019) and Phan et al (2017) by considering if investment in organization capital influences firm behavior and the level and value of cash in a manner similar to, or different from, compensation contracts. ITI suppresses agency costs of cash to unlock product market benefits of cash. Prior studies appear to imply a horse race between competing agency and product market views. We view the conclusions differently as all factors appear to modify the predictions of agency theory, explained by competing incentives of risk averse agents.

Prior literature has not dealt with the question as to whether high organization capital firms suffer the negative consequences to the same degree, of misappropriation of firm resources that excess slack may cause. Organization capital is an intangible fixed asset intended to improve the efficiency with which a firm converts its resources, including cash, into output. In the same way

ITI suppress the risk aversion of managers, OC should be positively associated with more efficient use of EC, higher risk taking and ultimately enhanced firm value.

Theory leading to the identification of firm intangible OC begins with an assumption shareholders and skilled managers each have a claim on excess firm cash flow. The relative share of excess cash is based on the effect of a productivity shock on firm performance. Skilled managers could choose to depart for a new firm (Eisfeldt & Papanikolaou, 2013). The skilled labor capital productivity shock risk is conceptually similar to physical plant capital shocks. Each form of capital must earn a return for the corresponding risk, resulting in corresponding risk premia. To operationalize the OC shock effect Eisfeldt & Papanikolaou (2013) use S,G&A. S,G&A is the most direct accounting measure of the association of OC and the corresponding risk premia. S,G&A is now commonly used in empirical studies and is assumed to represent firm-wide investment in formal and informal training, apprenticeships, mentoring, information technology ("IT"), senior management compensation expense not attributed to line manager cost of goods sold, ESG spending (environment, social and governance), consulting, HR recruiting and retention efforts, firm-level community service initiatives, and corporate philanthropy.

We regard prior OC literature as specific when supported by individual accounting line items, demographics of management or the firm, and third-party surveys. The most common specific measure of OC in prior literature is based on capitalized S,G&A expense (Chan, Lakonishok & Sougiannis, 2001)(Eisfeldt & Papanikolaou, 2013)(Li, Qui & Shen, 2018). Unlike physical plant and equipment, S,G&A is not capitalized, and is not reported as an asset on the balance sheet. If S,G&A is to measure a firm intangible asset OC that contributes to efficient conversion of inputs

to sales, it need be capitalized following prior literature (Chan, Lakonishok & Sougiannis, 2001). A brief summary of prior specific and general OC literature is given in figure 1.

Figure 2: Specific and General Organization Capital and Management Skill

	Organization Capital	Management Skill
Specific	Lev & Radhakrishnan, 2005 Bloom, Sadun & Van Reenen, 2012 Chemmanur, Paeglis, & Simonyan, 2009 Eisfeldt & Papanikolaou, 2013. Li, Qui & Shen, 2018	Chevalier & Ellison, 1999 Betrand & Schoar 2003, Bloom & Van Reenen, 2007 Bloom & Van Reenen 2010
General	Evenson & Westphal, 1995 Brensnahan, Brynjolfsson & Hitt, 2002 Atkeson & Kehoe, 2005 Demerjian, Lev & McVay, 2012	Murthi, Choi & Desai, 1997 Demerjian, Lev & McVay, 2012 Albequerque, De Franco & Verdi, 2013 Delis & Tsionis, 2018

Lev & Radhakrishnan (2005) develop a model to address the hard to measure and tacit elements of OC. Firms may have an expected output based on the inputs of employees, physical capital, and investment in innovation. If firms outperform (underperform) expected output, it is due to the adequate (inadequate) firm-specific stock of intangibles. To improve upon a general approach Lev & Radhakrishnan capitalize S,G&A to proxy for residuals of a total factor productivity model. Firms don't systematically report investments in OC such as training expenditures, retention spending leading to higher average tenure, or brand enhancement activities outside of advertising. However, those items are consolidated into S,G&A and may be measured, in an industry specific way.

Intangible firm assets are measured indirectly in other streams of literature. The most common example may be R&D expense and patent filings as proxies for innovativeness (Balsmeier, Fleming & Manso, 2017)(Bhattacharya, Hsu, Tian & Yu, 2017) (Luong, Moshirian, Nguyen, Tian & Zhang, 2017)(Hirshleifer, Low & Teoh, 2012). It is straightforward to conceptualize S,G&A well represents firm-level investment in efficiently converting inputs to sales and profits. Capitalized S,G&A as a proxy for OC continues to gain traction in the literature. Li, Qui & Shen (2018) show OC to be causally and positively associated with bidder post-deal cost synergy, innovation, performance and asset turnover.

An alternative to a capitalized S,G&A measure of OC, or to third-party data (Computerworld IT 100 for example) is to construct generalized measures. General OC measures are supported in theory assuming payments to an OC asset are always positive, are positively associated with entry costs, and are a function of market structure. Atkeson & Kehoe (2005) construct a total factor productivity model of OC assuming perfect competition, discrete time, and a return to OC of variable profit minus fixed costs. The expertise that one plant embodies in comparison to another is OC. Instead of assuming perfect competition, Atkeson & Kehoe (2005) then use a market structure of imperfect competition, showing an increase in returns to OC owners. Returns to OC are a function of market structure.

The relevance of market structure to returns on OC is an important element of the motivation for the research question of this study. Accordingly, three of the five measures of product market condition relate to market structure. Atkeson & Kehoe use macroeconomic data, namely national accounts profit, to estimate intangible capital share of payments exceed tangible capital by 10%.

Data envelopment analysis is also used in literature to measure general OC. An example is the firm efficiency score of Demerjian, Lev & McVay (2012). The study uses data envelopment analysis ("DEA") to define firm efficiency as residuals from a linear regression or firm inputs and output. General OC measures may also consider broad industry or nation level inputs. We use the general OC measure firm efficiency for a robustness test.

Intangible capital has been considered in economic development literature. Evenson & Westphal (1995) have a common notion that tacit knowledge is a firm intangible, difficult to measure and difficult to transfer. The review undertaken is most concerned with the economic development implications of R&D in less developed countries. Nations have endogenous processes of technological change to potentially take advantage of growth and innovation opportunity. Investment in country-level and firm-level technology infrastructure is required to develop the industrial technology and organization capital required to compete. However, included in the required infrastructure investment are experience and knowledge of how to combine capital and labor for productive outcomes. Evenson & Westphal encourage future empirical research to fill in voids in understanding management processes that may improve productivity. OC is a construct falling squarely within that mandate.

2.2.3 OC is an intangible fixed asset leading to increasing returns.

OC is a firm investment in intangible fixed assets that open up the possibility of increasing returns to scale. Krugman (1979) modeled trade based on as assumption of positive fixed costs, thereby opening up new trade theory. Prior to Krugman, trade had been explained based on the Ricardian concept of comparative advantage heterogeneity (Ricardo, 1817). New trade theory

establishes that similar countries will engage in trade due to increasing returns to scale derived from positive fixed cost. Krugman's work resulted in the 2008 Nobel Prize in Economic Sciences. The analysis of 'trade patterns and economic activity'[2] contains a crucial lesson for firms. Firms that invest in OC have an opportunity outperform peers.

Krugman (1979) has been extended in economics literature from a country level unit of analysis, to firm-level, and plant level. Clerides, Lach & Tybout (1998) develop a firm level model of

https://www.nobelprize.org/uploads/2018/06/advanced-economicsciences2008.pdf

international trade. The theoretical and empirical objective of the paper is to sort out the direction of causality for success in export markets. The cause could be either experience-based learning leading to greater export success, or more efficient firms self-selecting to export markets. The study finds firm efficiency is the causal element for firms to choose to be exporters. Bernard, Eaton, Jensen & Kortum (2003) explain dramatic differences in plant level productivity. The model implies producers with the highest efficiency have the largest cost advantage. This is an important finding for an OC study in at least three respects. First, certain firms have internal processes apart from learning via international trade that make them more efficient than competitors. Second, it links to empirically based conclusions of Li, Qui & Shen (2018). Bidder firms that perform best post-closing cut variable costs, and invest in fixed intangibles. Third, Bernard et al (2003) associates firm efficiency with product market performance.

Prior literature has provided a clear path and remaining gap for the research question and H1 of this study: Agency costs with excess cash flow are well known. The costs can be mitigated with compensation contracting (Huang et al, 2019)(Lazear & Rosen, 1981)(Kale, Reis &

Venkateswaram, 2007) and may even be justified with precautionary motives to avoid labor productivity shocks (Ghaly et al, 2017) or discourage rational predation in product markets (Bolton & Scharfstein, 1990)(Fresard, 2010)(Huang et al, 2019). The product market linkage to cash shows benefits to firm risk taking and firm value (Fresard, 2010)(Huang et al, 2019). Further, organization capital is a function of market structure and (Atkeson & Kehoe, 1994) and is separately associated with product market performance (Bernard et al, 2003).

H1: OC negatively mediates the association of financial slack and product market stress.

2.2.4. Firm value is influenced by intangible fixed asset investment.

The firm value question regarding firm cash policy, filtered through Modigliani and Miller (1963) indicates that even if OC does mediate EC and PM stress, both parts may not be relevant to firm value. OC can be regarded as firm investment in a fixed intangible asset. The riskiness and hard to reverse nature of OC investment implies it should be awarded a risk premia (Zhang, 2005). We expect OC to be significantly associated with firm value. The compensation for the firm level risk of costly to reverse investments has been cited in previous literature as the source for a 'high-minus-low' factor risk premium (Zhang, 2005)(Fama & French, 1992). Finance literature operationalizes OC as a fixed intangible asset by capitalizing S,G&A using a perpetual inventory method (Chemmanur, Paeglis & Simonyan, 2009) (Eisfeldt & Papnikolaou, 2013) (Li, Qui & Shen, 2018). The stock of firm OC depreciated at 15%-20% per year is more easily reversible than structures depreciating over 40 years. As such OC should realize a payment from firm cash flow according to its particular irreversibility risk (Atkeson & Kehoe, 2005). Firms

making investment in tangible and intangible fixed assets incur the risk of costly reversibility and variation in cost of capital.

The firm value effect of EC is considered separately from intangible fixed asset OC. Fama & French (1998)("FF98") was based on a self-described ad hoc approach (not based in theory) to test the relevance of financial policy to firm value. Prior theory and literature had concluded that investment decisions are relevant to firm value (Modigliani and Miller, 1963). However, taxes and financing decisions were not expected to be shown to be consistently relevant to firm value. FF98 show that an all but investment irrelevancy conclusion is overstated.

There is a growing body of literature indicating financial policy has a significant bearing on firm value. A study with predicted optimal financial slack (Opler, Pinkowitz, Stulz and Williamson, 1999) uses FF98. The Fama & French approach was deployed to test firm value relative to corporate cash and dividend policy (Pinkowitz, Stulz and Williamson, 2006). Dividend policy changes were found to carry positive information about the future prospects of a firm. Dittmar & Mahrt-Smith 2007 use FF98 to show well governed firms have a higher marginal value of cash. Earnings management policy is significantly associated with firm policy with significant influence on firm value (Yung & Root, 2019). In the context of product market studies, cash holdings was shown to be positively and significantly associated with firm value. In each case the authors use FF1998 as a base, with modifications to empirically test the research question of interest. We expect both EC and OC to have a significant influence on firm value in the context of PM stress.

H2: OC is positively associated with firm value in periods of PM stress.

2.3. Research Design.

2.3.1 Sample.

We obtain data from Compustat via Wharton Research Data Services, for the years 1998-2017. We exclude utilities, financials and ADRs. We eliminate firms under $5mln market value or revenue, or a share price under $2. Firms with missing data reported for fyear, revenue, assets or shares outstanding are also dropped form the sample. Following prior empirical OC studies we set to zero missing values for R&D, S,G&A and interest expense. Negative values for capital spending, acquisitions, R&D, cash, dividends, share repurchases, and interest are set to zero. We winsorize relevant continuous variables at the 1st and 99th percentiles.

Summary statistics are presented in table 1. The final sample for the study is 66,008 firm years. The average (median) firm has $2.65 billion ($373million) in assets, market value of $3.34 billion ($461 million) and revenue of $2.33 billion ($347 million). The sample exhibits an average firm size somewhat smaller than Li et al ($3.18 billion), Huang et al ($5.07 billion in assets) and Phan et al ($4.13 billion). The right-hand skew in firm size leads us to take the natural log of asset, and use the result as a control variable in our panel regressions. Mean (median) ROA, MTB and trailing one-year sales growth for the sample are 2.4% (4.3%), 3.3 (2.1), and 14.5% (8.0%), respectively. Relevant comparisons from Li et al reveal similar profitability and future growth prospect with reported sample ROA and MTB of 2.8% (4.0%) and 3.6 (2.3). Risk-taking characteristics of our sample are similar to Huang et al. Capex to

assets for 54,495 firm years average (median) 0.07 (0.04) compared to 0.07 (0.05) in Huang. Acquisitions to assets are 0.05 (0.00) compared to 0.03 (0.00). Huang reports R&D relative to sales at an average of 0.05 compared to 0.05 relative to assets in our study.

Table 2.1: Summary Statistics

	Assets	Market Value	Revenue	ROA	SG&A	EBITDA/Assets	Tangibility[1]	Cash/Assets	Exogenous Cash[2]	EC1[3]
count	66,008	59,898	66,008	54,997	66,008	54,880	54,180	66,000	45,971	29,127
mean	2,646.69	3,335.98	2,331.24	0.024	389.23	0.15	0.35	0.20	0.18	0.17
sd	7,391.34	10,198.21	6,475.89	0.148	1,116.27	1.90	0.22	0.22	0.17	0.12
min	7.67	9.12	6.80	(0.637)	-	(5.58)	-	-	(1.49)	(0.17)
p25	100.20	117.60	84.34	(0.008)	17.43	0.07	0.22	0.03	0.06	0.08
p50	373.49	460.68	347.10	0.043	64.76	0.13	0.35	0.11	0.12	0.15
p75	1,543.62	1,759.17	1,417.97	0.090	235.00	0.20	0.46	0.29	0.26	0.25
max	51,787.00	76,608.17	46,532.00	0.437	8,347.00	226.54	21.33	1.00	0.87	0.92

	Real S,G&A/At	Org Capital[4]	OCb (Ind Adj.)	OCc (5 Yr Str Line)	Firm Efficiency	Tariff Cut (CUT2)[5]	HHI Score	Import Intensity	Conc (HHI>1800)	Comp (HHI<1000)
count	65,215	50,358	50,358	34,396	39,040	33,655	20,883	19,529	20,883	20,883
mean	0.24	1.90	0.40	0.21	0.33	0.3	382.6	0.36	0.02	0.94
sd	0.24	1.96	1.82	0.19	0.16	0.5	364.9	0.21	0.1	0.2
min	(0.04)	(0.18)	(2.32)	(0.02)	0.02	-	5.8	0.01	-	-
p25	0.08	0.57	(0.64)	0.08	0.23	-	161.4	0.25	-	1.0
p50	0.18	1.44	(0.00)	0.17	0.28	-	316.5	0.34	-	1.0
p75	0.33	2.60	0.95	0.29	0.36	1.0	495.0	0.47	-	1.0
max	5.42	33.04	30.75	2.72	1.00	1.0	2,900.0	1.06	1.0	1.0

	Acq/Assets	R&D/Assets	Capex/Assets	Leverage	Divdend/Sales	Div Pay Dummy	MTB	TQ	Trl. Sales Growth	Trl. Stock Return
count	52,651	54,997	54,495	65,820	65,013	66,008	59,865	57,587	54,997	54,997
mean	0.05	0.05	0.07	0.50	0.014	0.38	3.3	4.8	14.53	11.61
sd	0.19	0.11	0.10	0.42	0.042	0.48	5.7	9.3	34.70	57.76
min	-	-	-	-	-	-	(15.9)	(32.3)	(50.79)	(79.50)
p25	-	-	0.02	0.30	-	-	1.2	2.2	(1.36)	(24.08)
p50	-	-	0.04	0.48	-	-	2.1	3.4	7.95	2.82
p75	0.02	0.06	0.08	0.65	0.009	1.00	3.8	5.5	21.39	33.10
max	10.12	7.48	4.88	74.93	0.303	1.00	38.5	60.8	200.55	272.28

1. TANG is asset tangibility calculated as: TANG = 0.715*rect/L1.at + 0.547*invt/L1.at + 0.535*ppent/L1.at. This Approach follows Berger, Ofek & Swary (1996).

2. Exogenous cash ("EC") predicted value of cash from the panel regression cheAT = Bo + B1*TANG + B2*L1.cheAT + B3*L2.cheAT + epsilon, with industry and year fixed effects on: following Fresard (2010).

3. EC1 follows Opler et. al (1999).

4. OC is organization capital calculated using perpetual inventory method. OCb is industry median adjusted OC. OCc is calculated using straight line depreciation. MA is managerial ability per Demerjian et al (2012).

5. CUT 2 requals 1 if cash tariff rate declined by two or more times the median change in industry tariff rate, per 109 NAICS industry sectors with US ITC data (https://dataweb.usitc.gov/).

Firm level data is combined with macroeconomic and product market measures. Following Fresard (2010) we use the North America Industrial Classification system for tariff data and Herfindahl-Hirshman index scores. From the U.S. International trade commission website we download available tariff and market concentration data for the years 1998-2017. An annual CPI deflator is derived from monthly consumer price index data (fred.stlouisfed.org). In order to estimate a two-stage least squares model two instrumental variables are recommended from prior literature. First, a dummy variable is used to identify states adopting inevitable disclosure doctrine ("IDD") laws. In our data fifteen states have an IDD law variable set to 1 for the entire sample period. An additional five states have IDD turned on from 0 to 1 during the sample period. The second instrumental variable is maximum weekly unemployment insurance benefits. The maximum benefit is a product of weeks eligible and weekly benefit. The data is acquired from https://fileunemployment.org/unemployment-benefits/unemployment-benefits-comparison-by-state.html. The maximum state level benefit and IDD is merged into the main sample by the compustat 'state' variable and by year. The governance control in the study is a state level Business Combination ("BC") law dummy variable. A state that adopts BC law precedent limits a large deals or merger transactions between a firm, related parties and new minority shareholders for a period of time (http://people.duke.edu/~charvey/Classes/wpg/bfglosb.htm). We record thirty instances of state level BC precedent. Firm Efficiency ("FE" or "FirmEffic") scores are obtained from Demerjian's website (http://faculty.washington.edu/pdemerj/data.html). The average (median) firm efficiency score is 0.33 (0.28).

2.3.2 Organization Capital

We assume that S,G&A is indicative of firm investment in efficiency and capitalizing S,G&A represents intangible fixed asset OC (Li, Qui & Shen, 2018)(Eisfeldt & Papanikolaou, 2013). Li et al note any noise in S,G&A expense from items not oriented to OC biases the study against identifying significant associations. Three alternative measures of OC capitalize S,G&A directly, and the fourth is a general measure of OC. The fourth measure is a DEA-based general measure of firm efficiency taken directly from the website of Peter Demerjian (Demerjian et al, 2012). The main calculation for OC uses a perpetual inventory method. The method is perpetual as if a firm ceases S,G&A investment altogether, OC would decline but never reach zero. Li et al and calculates the initial stock of OC (1) and each subsequent year OC balance (2).

$$OC_{i,0} = realSGA/AT_{i,1}/(sectorG+DeprOC) \quad (1)$$

$$OC_{i,t} = (1-DeprOC)OC_{i,t-1} + realSG\&A_{i,t}/AT_{i,t} \quad (2)$$

S,G&A is deflated by total assets and CPI (fred.stlouisfed.org). Sector growth is the median compound S,G&A growth rate for a firm's 2-digit GIC sector. We follow prior literature and the bureau of economic statistics standards for R&D capital and use a 15% depreciation rate of OC.

The main effects of the regression results reported in section 4 following use industry median adjusted OC ("OCb"). Industry financial reporting conventions vary, and S,G&A accounts are most comparable intra-industry. Industry median OC at the 2-digit level is subtracted from firm-level OC. The third method of calculating OC ("OCc") is 5-year straight line depreciation. This method follows Li et al (2018) and also Chan, Lakonishok & Sougiannis (2001) in calculating a

R&D asset. If a firm completely ceases S,G&A spending its stock of OCc would be zero six years on. The fourth measure is a robustness check on our S,G&A based measures. Demerjian (2012) provides data on his website for a DEA- based general measure of Firm Efficiency that is becoming common in the literature.

We obtain 50,358 observations of unadjusted perpetual inventory OC and industry adjusted OC (OCb), and somewhat fewer (34,396) five year trailing straight line observations of OC (OCc). The average (median) OC is 1.90 (1.44) and average industry adjusted OC is 0.40 (0.00). This is somewhat higher than the unadjusted average (median) OC reported by Li et al is 0.97 (0.69). This is in part due to our average firm being much smaller, and a negative and highly significant correlation between OC and firm size (table 2.2). Li also reports a negative and significant pairwise correlation coefficient for OC and firm size.

Table 2.2: Correlation of Key Variables

	Assets	Cash/AT	EC[1]	EC1[2]	TANG[3]	OC[4]	FirmEffic	CUT2[5]	HHI	IMPINT	aqcAT	xrdAT	SGA/AT	capexAT	divdummy	leverage	MTB	ROA	Sales G	Return
Assets	1																			
Cash/AT	-0.0985***	1																		
EC[1]	-0.0711***	0.895***	1																	
EC1[2]	-0.191***	0.663***	0.735***	1																
TANG[3]	-0.137***	-0.487***	-0.531***	-0.416***	1															
OC[4]	-0.169***	0.0928***	0.0931***	0.187***	-0.0191	1														
FirmEffic	0.555***	0.168***	0.212***	0.0653***	-0.228***	0.0348**	1													
CUT2[5]	0.00607	-0.0592***	-0.0849***	-0.103***	0.0197	-0.0450***	-0.00233	1												
HHI	0.231***	0.0265*	0.0249*	-0.0718***	-0.0241*	-0.0583***	0.162***	-0.0176	1											
IMPINT	-0.0234*	0.267***	0.303***	0.324***	-0.166***	0.0825***	0.0236*	-0.0147	0.0881***	1										
aqcAT	-0.00282	-0.124***	-0.00515	-0.0468***	0.171***	0.0041	0.0326**	-0.00366	-0.0358**	0.00937	1									
xrdAT	-0.00853	0.469***	0.559***	0.597***	-0.282***	0.153***	0.263***	-0.0828***	0.00815	0.226***	0.0803***	1								
SGA/AT	-0.203***	0.0719***	0.0812***	0.180***	-0.0172	0.884***	0.0196	-0.0288*	-0.0867***	0.114***	-0.0655***	0.187***	1							
capexAT	0.0047	-0.135***	-0.122***	-0.0868***	0.443***	-0.0344**	0.0256*	0.00303	0.0169	-0.112***	0.0262*	-0.0230*	-0.0502***	1						
divdummy	0.231***	-0.270***	-0.304***	-0.391***	0.0869***	-0.110***	0.0992***	0.0843***	0.0112	-0.197***	-0.015	-0.320***	-0.119***	-0.00686	1					
leverage	0.198***	-0.363***	-0.354***	-0.534***	0.0744***	-0.133***	0.123***	0.0213	0.146***	-0.209***	0.0756***	-0.140***	-0.0904***	-0.0202	0.146***	1				
MTB	0.0780***	0.0859***	0.0794***	0.0446***	-0.0761***	0.0656***	0.191***	0.0034	0.0528***	-0.0464***	0.0203	0.130***	0.0594***	0.0500***	0.0304**	0.118***	1			
ROA	0.0517***	-0.0628***	-0.138***	-0.140***	0.199***	0.0282*	0.187***	0.0333**	-0.0151	-0.0289*	0.0414***	-0.258***	-0.0718***	0.146***	0.216***	-0.122***	0.124***	1		
Sales G	-0.0164	0.0392***	0.0850***	0.0624***	0.223***	-0.0385**	0.0963***	-0.0594***	-0.00805	0.00814	0.268***	0.165***	-0.0730***	0.147***	-0.105***	-0.00127	0.0992***	0.204***	1	
Return	-0.0152	0.0476***	-0.0112	0.0222	0.0627***	-0.00192	0.00281	0.0608***	0.013	0.00616	-0.0297*	0.0204	-0.01	-0.0206	-0.0732***	0.0166	0.103***	0.109***	0.101***	1

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

1. Exogenous cash ("EC") is the predicted value of cash from the panel regression specificaiton cheAT = Bo + B1*TANG + B2*L1.cheAT + B3*L2.cheAT + epsilon, with industry and year fixed effects on: following Fresard (2010).
2. EC1 is exogenous cash predicted following Opler et al (1999).
3. TANG is asset tangibility calculated as: TANG = 0.715*rect/L1.at + 0.547*invt/L1.at + 0.535*ppent/L1.at. This Approach follows Berger, Ofek & Swary (1996).
4. OC is organization capital calculated using perpetual inventory method. OCb is industry median adjusted OC. OCc is calculated using straight line depreciation. MA is managerial ability per Demerjian et al (2012).
5. CUT 2 requals 1 if cash tariff rate declined by two or more times the median change in industry tariff rate, per 109 NAICS industry sectors with US ITC data (https://dataweb.usitc.gov/).

2.3.3 Exogenous Cash

We follow prior literature to calculate three measures of cash as dependent variables in our main regressions. The cash holdings model of Opler, Pinkowitz, Stulz & Williamson is widely used, including in Phan, Simpson & Nguyen (2017) and Huang, Jain & Kini (2019). Instead of modifications to consider tournament-based incentives, we modify the procedure to include OC. The specific procedure it to use a first stage and regress firm cash/assets on the control variables of Opler, obtain predicted values for cash ("EC1"). We winsorize EC1 at the 1% level to ensure results are not unduly influenced by outliers. An alternative formulation of exogenous cash follows Fresard's (2010) use of lags of cash and asset tangibility as instrumental variables. Asset tangibility is calculated as a combination of receivables, inventory and net property, plant & equipment, all standardized by prior period assets (Berger, Ofek & Swary, 1996). We regress firm cash/assets on asset tangibility, and two lags of cash, while also keeping industry and year fixed effects on. Due to the assumed exogenous nature of asset tangibility, the predicted value of cash/assets becomes an alternative formulation of exogenous cash ("EC"). Tangibility is not expected to be associated with product market performance of a firm, but it is considered associated with cash and controls such as leverage. The mean level of EC to assets is 0.18, somewhat lower than total cash/assets of 0.20. We winsorize EC at the 1% level to avoid undue influence from outlier observations. The final cash formulation is cash/assets, used as a robustness check on the exogenous measures of slack.

2.3.4 Product Market stress.

2.3.4.1 Import Intensity & Tariff Cuts

We measure product market stress from the perspectives of trade and industry concentration. We calculate trade-based product market measures to obtain a continuous measure, and a dummy

variable that can deployed for a quasi-natural experiment. Of note, data availability is better for the CUT2 dummy than for IMPINT. For IMPINT manufacturing data only covers 85 of 109 NAICS sectors of the CUT2 variable. In terms of years, we obtain 1997-2016 for imports, but total value, the denominator for IMPINT, is available only from 2002 through 2016. This shrinks the number of observations in import intensity regressions to 19,529, relative to 33,655 for tariff cut regressions. Following prior literature import intensity ("IMPINT") is the value of imports divided by domestic sales plus imports, minus exports. The value of goods shipped covered in the data base is approximately $6 trillion. The mean (median) import intensity is 0.36 (0.34).

We follow Fresard and Huang et al to calculate a product market variable to conduct a quasi-natural experiment. Tariff rates are equal to calculated duties divided by the customs value of imports. Tariff rates lowered by more than two times the median annual change constitute an exogenous product market shock for firms ("CUT2"). Assuming the tariff rate does not rise in the following year, tariff cut shock years are coded as '1'. Tariff data is available at https://dataweb.usitc.gov for 109 NAIC sectors. The resulting data covering 20 years and 109 industries yields 2071 possible ((20-1)*109) industry year CUT dummy variable observations. The customs data and product market strain methodology registers 667 CUT2 dummy variables = 1, using a 2x median standard. Varying the standard of tariff cut shock to 2.5x median yields 623 = 1, and 567 for a 3x median standard.

2.3.4.2 Industry structure.

In prior product market literature market structure and concentration is measured using the Herfindahl-Hirshman Index ("HHI")(Huang et al, 2019)(Fresard, 2010)(Mackay & Phillips,

2005). HHI is relevant to our research design as motivating theory links market structure to predicted effects of organization capital, financial slack, returns and firm value (Atkeson & Kehoe, 1994)(Krugman, 1979)(Bolton & Scharfstein, 1990). We follow Mackay & Phillips (2005) and collect NAIC industry level HHI scores from the United States Census Bureau. The Census Bureau report on industrial manufacturers is produced every five years. The HHI score in the report is paired with firm-years in our data set at t_0 plus and minus two years. This approach to coding is adequate as we observe 9 total changes in industry structure status, out of 172 possible transitions (4% change rate). The mean (median) HHI score in our sample is 382.6 (316.5) with 20,883 total firm year observations.

In addition to using a continuous measure of HHI, we code industries into concentrated or competitive. The industry structure dummy variable coding follows U.S. Department of Justice competition guidelines and prior literature (Fresard, 2010). An industry with a concentrated dummy set at 1 ("CONC") has a HHI score above 1800. For context an industry with three firms at 25% or more market share would have a HHI > 1875 ($3*25_2$). Approximately 2% of the firm-years in our sample are coded with a CONC dummy turned on. A concentrated industry most closely resembles an oligopolistic market structure. The competitive market structure dummy has a HHI below 1000 ("COMP"). The COMP variable is in the direction of monopolistic competition or perfect competition market structures. The concentrated dummy also serves as an empirical indicator to identify the industry structure assumed in Krugman (1979).

2.3.5 Pairwise correlations

We report pairwise correlations for key variables in table 2.2. The significance of ρ is reported by testing if ρ is significantly different from zero using a t-distribution with n-2 degrees of freedom. The three measures of cash are positively and significantly correlated, with asset tangibility and firm size being negatively associated with all measures of cash. In our sample OC is positively associated with R&D spending, not significantly correlated with acquisitions and exhibits a small negative, but significant, correlation with capex. Li et al does not separately report OC correlations with measures of firm investment. OC is positively and significantly correlated with MTB and ROA, but does not have a significant pairwise association with trailing 1-year stock return. The three measures of cash are positively and significantly associated with MTB, and as expected, negatively and significantly associated with ROA.

2.4. Results

Our identification strategy revolves around using multiple formulations of cash, organization capital and product market stress. The objective is to minimize endogeneity issues to bake in as many robustness tests as possible. The endogeneity of cash has been widely dealt with in Finance literature by using multiple measures. This study uses reported cash scaled by assets, as well as two-stage instruments for cash following Opler et al (1999) and Fresard (2010). The endogeneity of OC is handled by using four alternative constructions of OC, and instrumental variables for each of the four constructions to re-estimate all multivariate and firm value equations. Product market stress is an exogenous factor. However, to draw stronger conclusions, and avoid misinterpreting potentially countervailing indications of the product market view and agency theory, we calculate product market stress five ways.

2.4.1 Univariate analysis.

OC is used to denote a perpetual inventory, unadjusted, measure of firm fixed intangible organization capital. The calculation follows formulas (1) and (2). OCb denotes industry adjusted OC. Five-year straight-line depreciation organization capital, denoted by OCc throughout, has 32% fewer observations than OC or OCb. A DEA-based firm efficiency score is shown as either FirmEffic, FE or in the case of an instrument for FirmEffic, FEhat. The univariate analysis is conducted by splitting the sample into first (low) and fourth (high) quartiles of organization capital. The four panels of table 3 correlate to one of the four measures of organization capital. The three cash variables in table 3 (EC, EC1 and Cash/Assets) are dependent variables used in turn in multivariate regressions that follow.

A univariate analysis indicates cash holdings, industry structure, investment policy, financial policy and operating fundamentals of high OC firms is significantly different from low OC firms, and more oriented to investment and future growth. Quartile 4 OC firms hold significantly more cash than low OC firm ($p<0.01$). The difference in cash holdings is between 70% and 258%, depending on the measure of central tendency used. Panel D shows the univariate analysis with Firm Efficiency as the dependent variable. For FE the cash balance measures have different signs, and a much narrower range overall. This is an indication that FE as a general measure has different characteristics than S,G&A specific measures of OC. Across three specific measure of OC, high OC firms are significantly more likely to operate in less concentrated, more competitive, industries (Q4OC HHI = 378.5 versus Q1OC = 477.7). Panel D shows an additional difference with higher efficiency firms operating in less competitive industries. Import intensity is higher with unadjusted measures of OC. However, OCb (Panel B) indicates a somewhat lower

level of import intensity for high OCb firms, once industry conditions are controlled for. High OC firms are shown to invest more heavily in R&D and exhibit higher cash flow and ROA volatility. Industry adjusted capital spending is higher for high OC firm. Acquisition spending does not appear different between high and low OC quartiles. Consistent with prior literature, in terms of financial policy, high OC firms have less leverage, more net working capital and a lower total payout (dividends plus buybacks). Financial policy shows an additional distinction between specific measures of OC and DEA based FE. High efficiency firms have higher leverage, lower net working capital and higher total shareholder payout. While high OC firms are smaller than low OC firms, consistent with prior literature, they are found have higher future growth prospects (Tobin's Q and MTB, $p<0.01$).

Table 2.3 Panel A: Univariate analysis with perpetual inventory method of Organization Capital

	Q4_OC (high) Mean (median)	Q1_OC (low) Mean (median)	Means Difference (p-value)**	Medians Difference (p-value)***
OC	4.413 (3.723)	0.218 (0.2)		
Cash and Product Market Strain				
CUT2	0.341 (0)	0.29 (0)	0.000	0.000
HHI	378.469 (313)	477.703 (364.3)	0.000	0.000
IMPINT	0.375 (0.331)	0.305 (0.297)	0.000	0.000
CONC	0.016 (0)	0.007 (0)	0.001	0.002
COMP	0.936 (1)	0.919 (1)	0.018	0.000
TANG	0.35 (0.337)	0.393 (0.399)	0.000	0.000
EC (Fresard, 2010)	0.234 (0.193)	0.131 (0.07)	0.000	0.000
EC1 (Opler et al, 1999)	0.214 (0.199)	0.113 (0.084)	0.000	0.000
Cash/Assets	0.258 (0.201)	0.152 (0.056)	0.000	0.000
OC_CUT2	1.441 (0)	0.064 (0)	0.000	0.000
OC_HHI	1497.732 (1087.134)	117.9 (81.086)	0.000	0.000
OC_IMPINT	1.452 (1.22)	0.075 (0.051)	0.000	0.000
OC_CONC	0.05 (0)	0.001 (0)	0.000	0.000
OC_COMP	3.715 (3.332)	0.24 (0.261)	0.000	0.000
Investment Policy and Risk Taking				
Capex/TA	0.061 (0.041)	0.097 (0.054)	0.000	0.000
R&D/TA	0.087 (0.033)	0.037 (0)	0.000	0.000
Acquisitions/TA	0.046 (0)	0.048 (0)	0.393	0.022
St Dev ROA	0.215 (0.053)	0.058 (0.031)	0.000	0.000
St Dev EBITDA	0.296 (0.138)	0.139 (0.117)	0.000	0.000
Financial Policy				
Net WorkingCapital/Assets	0.069 (0.113)	-0.039 (-0.007)	0.000	0.000
Leverage	0.453 (0.407)	0.556 (0.567)	0.000	0.000
Dividend/Sales	0.007 (0)	0.03 (0)	0.000	0.000
Dividend+Repurchase/Sales	0.029 (0.001)	0.058 (0.013)	0.000	0.000
Operating Fundamentals and Performance				
Sales Growth	18.304 (9.041)	23.727 (8.506)	0.001	0.045
ROA*	0.002 (0.045)	0.018 (0.034)	0.000	0.000
EBITDA/TA	0.192 (0.13)	0.129 (0.12)	0.099	0.000
MTB	4.545 (2.805)	2.944 (1.952)	0.000	0.000
Tobin's Q	5.609 (3.758)	5.035 (3.586)	0.000	0.000
LnAT	5.063 (4.958)	7.027 (6.997)	0.000	0.000
Trailing 1 Year Return	11.91 (-0.748)	9.521 (2.424)	0.001	0.000

Table 2.3 Panel B: Univariate analysis with quartiles of industry median adjusted organization capital.

	Q4_OCb (high) Mean (median)	Q1_OCb (low) Mean (median)	Means Difference (p-value)**	Medians Difference (p-value)***
OCb	2.667 (1.989)	-1.191 (-1.162)		
Cash and Product Market Strain				
CUT2	0.342 (0)	0.314 (0)	0.002	0.002
HHI	325.854 (262)	458.458 (364.3)	0.000	0.000
IMPINT	0.357 (0.314)	0.384 (0.391)	0.000	0.000
CONC	0.003 (0)	0.028 (0)	0.000	0.000
COMP	0.963 (1)	0.922 (1)	0.000	0.000
TANG	0.367 (0.354)	0.301 (0.284)	0.000	0.000
EC (Fresard, 2010)	0.211 (0.157)	0.201 (0.128)	0.000	0.000
EC1 (Opler et al, 1999)	0.19 (0.168)	0.191 (0.169)	0.475	0.710
Cash/Assets	0.236 (0.164)	0.214 (0.111)	0.000	0.000
OCb_CUT2	0.857 (0)	-0.383 (0)	0.000	0.000
OCb_HHI	764.192 (473.386)	-539.874 (-421.082)	0.000	0.000
OCb_IMPINT	0.791 (0.559)	-0.447 (-0.41)	0.000	0.000
OCb_CONC	0.005 (0)	-0.034 (0)	0.000	0.000
OCb_COMP	2.182 (1.715)	-1.075 (-1.057)	0.000	0.000
Investment Policy and Risk Taking				
Capex/TA	0.065 (0.041)	0.058 (0.033)	0.000	0.000
R&D/TA	0.077 (0.016)	0.054 (0)	0.000	0.000
Acquisitions/TA	0.047 (0)	0.047 (0)	0.889	0.000
St Dev ROA	0.241 (0.049)	0.053 (0.031)	0.000	0.000
St Dev EBITDA	0.322 (0.137)	0.125 (0.109)	0.000	0.000
Financial Policy				
Net WorkingCapital/Assets	0.08 (0.127)	-0.021 (0.006)	0.000	0.000
Leverage	0.466 (0.424)	0.522 (0.522)	0.000	0.000
Dividend/Sales	0.007 (0)	0.015 (0)	0.000	0.000
Dividend+Repurchase/Sales	0.028 (0.001)	0.053 (0.009)	0.000	0.000
Operating Fundamentals and Performance				
Sales Growth	17.745 (8.833)	19.412 (7.905)	0.091	0.000
ROA	0.007 (0.049)	0.011 (0.035)	0.086	0.000
EBITDA/TA	0.245 (0.137)	0.104 (0.115)	0.001	0.000
MTB	4.454 (2.677)	3.073 (2.06)	0.000	0.000
Tobin's Q	5.646 (3.698)	4.83 (3.46)	0.000	0.000
LnAT	5.056 (4.958)	6.8 (6.681)	0.000	0.000
Trailing 1 Year Return	11.881 (0)	9.508 (3.148)	0.004	0.000

Table 2.3 Panel C: Univariate analysis with 5 year straight line depreciation organization capital.

	Q4_OCc (high) Mean (median)	Q1_OCc (low) Mean (median)	Means Difference (p-value)**	Medians Difference (p-value)***
OCc	0.459 (0.406)	0.033 (0.032)		
Cash and Product Market Strain				
CUT2	0.281 (0)	0.245 (0)	0.000	0.000
HHI	354.22 (290.7)	512.83 (425.8)	0.000	0.000
IMPINT	0.395 (0.343)	0.302 (0.288)	0.000	0.000
CONC	0.014 (0)	0.013 (0)	0.757	0.757
COMP	0.952 (1)	0.892 (1)	0.000	0.000
TANG	0.334 (0.332)	0.381 (0.394)	0.000	0.000
EC (Fresard, 2010)	0.214 (0.171)	0.126 (0.073)	0.000	0.000
EC1 (Opler et al, 1999)	0.203 (0.183)	0.116 (0.087)	0.000	0.000
Cash/Assets	0.224 (0.172)	0.122 (0.055)	0.000	0.000
OCc_CUT2	0.126 (0)	0.009 (0)	0.000	0.000
OCc_HHI	156.62 (112.848)	20.423 (13.983)	0.000	0.000
OCc_IMPINT	0.171 (0.141)	0.012 (0.008)	0.000	0.000
OCc_CONC	0.005 (0)	0 (0)	0.000	0.282
OCc_COMP	0.427 (0.382)	0.038 (0.045)	0.000	0.000
Investment Policy and Risk Taking				
Capex/TA	0.049 (0.035)	0.087 (0.05)	0.000	0.000
R&D/TA	0.062 (0)	0.019 (0)	0.000	0.000
Acquisitions/TA	0.035 (0)	0.036 (0)	0.696	0.000
St Dev ROA	0.156 (0.048)	0.056 (0.031)	0.001	0.000
St Dev EBITDA	0.234 (0.133)	0.136 (0.117)	0.001	0.000
Financial Policy				
Net WorkingCapital/Assets	0.099 (0.127)	0.001 (0.001)	0.000	0.000
Leverage	0.456 (0.421)	0.573 (0.575)	0.000	0.000
Dividend/Sales	0.008 (0)	0.028 (0.004)	0.000	0.000
Dividend+Repurchase/Sales	0.036 (0.007)	0.056 (0.018)	0.000	0.000
Operating Fundamentals and Performance				
Sales Growth	7.689 (5.849)	12.626 (6.232)	0.000	0.103
ROA	0.03 (0.05)	0.032 (0.037)	0.408	0.000
EBITDA/TA	0.254 (0.132)	0.141 (0.12)	0.026	0.000
MTB	3.523 (2.34)	2.752 (1.88)	0.000	0.000
Tobin's Q	4.648 (3.322)	4.915 (3.462)	0.051	0.000
LnAT	5.816 (5.725)	7.566 (7.576)	0.000	0.000
Trailing 1 Year Return	13.495 (4.931)	11.065 (5.567)	0.002	0.402

Table 2.3 Panel D: Univariate analysis with managerial ability (Demerjian, 0212) used to measure organization capital construct.

	Q4_FE (high) Mean (median)	Q1_FE (low) Mean (median)	Means Difference (p-value)**	Medians Difference (p-value)***
Firm Efficiency****	0.537 (0.474)	0.195 (0.208)		
Cash and Product Market Strain				
CUT2	0.329 (0)	0.324 (0)	0.541	0.541
HHI	480.377 (364.3)	346.561 (275.1)	0.000	0.000
IMPINT	0.361 (0.336)	0.323 (0.312)	0.000	0.000
CONC	0.027 (0)	0.006 (0)	0.000	0.000
COMP	0.905 (1)	0.947 (1)	0.000	0.000
TANG	0.35 (0.339)	0.382 (0.387)	0.000	0.000
EC (Fresard, 2010)	0.178 (0.12)	0.142 (0.088)	0.000	0.000
EC1 (Opler et al, 1999)	0.149 (0.112)	0.168 (0.153)	0.000	0.000
Cash/Assets	0.181 (0.105)	0.154 (0.077)	0.000	0.000
FE_CUT2	0.176 (0)	0.062 (0)	0.000	0.541
FE_HHI	275.641 (197.876)	70.482 (50.829)	0.000	0.000
FE_IMPINT	0.195 (0.168)	0.065 (0.062)	0.000	0.000
FE_CONC	0.017 (0)	0.001 (0)	0.000	0.000
FE_COMP	0.48 (0.441)	0.193 (0.211)	0.000	0.000
Investment Policy and Risk Taking				
Capex/TA	0.07 (0.042)	0.066 (0.036)	0.007	0.000
R&D/TA	0.052 (0.003)	0.034 (0)	0.000	0.000
Acquisitions/TA	0.049 (0)	0.031 (0)	0.000	0.000
St Dev ROA	0.048 (0.028)	0.069 (0.041)	0.000	0.000
St Dev EBITDA	0.134 (0.119)	0.134 (0.112)	0.974	0.000
Financial Policy				
Net WorkingCapital/Assets	0.043 (0.041)	0.083 (0.093)	0.000	0.000
Leverage	0.536 (0.537)	0.513 (0.485)	0.006	0.000
Dividend/Sales	0.019 (0.003)	0.008 (0)	0.000	0.000
Dividend+Repurchase/Sales	0.064 (0.028)	0.022 (0)	0.000	0.000
Operating Fundamentals and Performance				
Sales Growth	18.344 (7.696)	7.934 (4.612)	0.000	0.000
ROA	0.072 (0.068)	-0.029 (0.012)	0.000	0.000
EBITDA/TA	0.186 (0.167)	0.048 (0.082)	0.000	0.000
MTB	4.05 (2.847)	2.238 (1.475)	0.000	0.000
Tobin's Q	5.75 (4.293)	3.666 (2.621)	0.000	0.000
LnAT	7.75 (7.827)	5.004 (4.846)	0.000	0.000
Trailing 1 Year Return	11.432 (5.014)	7.656 (-1.87)	0.000	0.000

*ROA standard deviation and EBITDA/TA variables calculated with 5 year rolling window.
**equal variance t-test that difference is means not equal to zero.
*** Pearson chi-squared test where the null hypothesis is median of Q4 is not greater than Q1.
****Taken from Demerjian et al. (2012).
Assets, market cap, revenue, s,g&a, mtb, sales growth, 1 year trailing return, roa, Tobin's Q, all winsorized at the 1st,99th percentiles.
S,G&A, R&D, acquisitions, capex, common dividends, interest expense and cash holdings all set to zero if negative.
Note: The pearson chi^2 median test statistic returns the number of firms greater then the median in the given quartile and tests the null hypothesis that the proportion of observations greater than the median is not different between OC quartile 1 and quartile 4.

2.4.2 Multivariate analysis.

In turn, dependent variables in the multivariate regressions are exogenous cash following Fresard (2010) and OPSW (1999). The series of regressions to test hypothesis 1 are given in the set of

formulas (3), (4), (5), (6) and (7). In each random effects, generalized least squares panel regression equation, the PMStress variable is operationalizes as OC, CUT2, IMPINT, HHI, COMP and CONC.

$$EC_{it} = \beta_{0i} + \beta_{1i}OC_{it} + \beta_{2i}Controls_{it} + \text{Industry FE} + \text{Year FE} + \varepsilon_{it} \quad (3)$$

$$EC_{it} = \beta_{0i} + \beta_{1i}PMStress_{it} + \beta_{2i}Controls_{it} + \text{Industry FE} + \text{Year FE} + \varepsilon_{it} \quad (4)$$

$$EC_{it} = \beta_{0i} + \beta_{1i}OC_{it} + \beta_{2i}PMStress_{it} + \beta_{3i}OC_{it} * PMStress_{it} + \beta_{4i}Controls_{it} + \text{Industry FE} + \text{Year FE} + \varepsilon_{it} \quad (5)$$

$$EC_{it} = \beta_{0i} + \beta_{1i}OC_{it} + \beta_{2i}Q1\_PMStress_{it} + \beta_{3i}Q4\_PMStress_{it} + \beta_{4i}Q1PMStress_{it} * OC_{it} * OC_{it} + \beta_{5i}Q4PMStress_{it} * OC_{it} + \beta_{6i}Controls_{it} + \text{Industry FE} + \text{Year FE} + \varepsilon_{it} \quad (6)$$

$$EC_{it} = \beta_{0i} + \beta_{1i}PMStress_{it} + \beta_{2i}Q1\_OC_{it} + \beta_{3i}Q4\_OC_{it} + \beta_{4i}Q1OC_{it} * PMStress_{it} + \beta_{5i}Q4OC_{it} * PMStress_{it} + \beta_{6i}Controls_{it} + \text{Industry FE} + \text{Year FE} + \varepsilon_{it} \quad (7)$$

The main regression results presented in table 4 use industry adjusted OCb as the explanatory variable of interest. Panel A in each case is exogenous cash following Fresard, Panel B follows Opler et al (1999), Panel C follows Fresard (2010) with an instrumental variable for OC, and panel D follows Opler et al (1999) with a 2SLS instrumental variable approach for OC. Appendix tables 2, 3 and 4 included, but not discussed in detail, display results of regressions using three alternative formulations of OC.

Table 2.4 Panel A: Dependent Variable is Exogenous Cash. OCb calculated using industry adjusted perpetual inventory method. Controls include ln(assets), MTB, net working capital/assets, capex/assets, EBITDA/Assets, leverage, cash flow volatility, R&D/sales, as well as distributions and acquisitions dummy variables. Year fixed effects are on. Robust standard errors clustered by firm.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
OCb	0.001						-0.008**	-0.025***	-0.017***	-0.015***	-0.031**	-0.016***	-0.014***					
	(0.002)						(0.004)	(0.005)	(0.005)	(0.004)	(0.015)	(0.004)	(0.005)					
CUT2		-0.003***					-0.004***							-0.002				
		(0.001)					(0.001)							(0.002)				
IMPINT			0.042***					0.047***							0.054***			
			(0.008)					(0.009)							(0.011)			
HHI				0.000***					0.000***							0.000***		
				(0.000)					(0.000)							(0.000)		
COMP					-0.014						-0.015							-0.020
					(0.013)						(0.014)							(0.015)
CONC						0.021*				0.028*							0.032*	
						(0.011)				(0.014)							(0.017)	
OCb_CUT2							0.000											
							(0.001)											
OCb_IMPINT								0.029***										
								(0.010)										
OCb_HHI									0.000									
									(0.000)									
OCb_CONC										0.008								
										(0.011)								
OCb_COMP											0.016							
											(0.014)							
quartileIMPINT_1												-0.029***						
												(0.004)						
quartileIMPINT_4												0.008*						
												(0.004)						
quartileIMPINT_1_OC												-0.003						
												(0.005)						
quartileIMPINT_4_OC												0.009*						
												(0.005)						
quartileHHI_1													-0.012***					
													(0.004)					
quartileHHI_4													0.009					
													(0.006)					
quartileHHI_1_OCb													-0.000					
													(0.004)					
quartileHHI_4_OCb													-0.002					
													(0.003)					
quartileOCb_1														0.012**	0.035***	0.017**	0.015**	0.027
														(0.006)	(0.008)	(0.008)	(0.006)	(0.018)
quartileOCb_4														-0.000	-0.026***	-0.018***	-0.016***	-0.039*
														(0.006)	(0.009)	(0.007)	(0.006)	(0.023)
quartileOCb_1_CUT2														-0.006*				
														(0.004)				
quartileOCb_4_CUT2														-0.003				
														(0.004)				
quartileOCb_1_IMPIN'															-0.051***			
															(0.019)			
quartileOCb_4_IMPIN'															0.039			
															(0.025)			
quartileOCb_1_HHI																-0.000		
																(0.000)		
quartileOCb_4_HHI																0.000		
																(0.000)		
quartileOCb_1_CONC																	-0.024	
																	(0.019)	
quartileOCb_4_CONC																	0.032*	
																	(0.019)	
quartileOCb_1_COMP																		-0.013
																		(0.019)
quartileOCb_4_COMP																		0.024
																		(0.023)
Constant	0.241***	0.359***	0.337***	0.330***	0.351***	0.337***	0.403***	0.375***	0.384***	0.392***	0.408***	0.398***	0.396***	0.391***	0.358***	0.371***	0.379***	0.400***
	(0.012)	(0.015)	(0.015)	(0.016)	(0.021)	(0.016)	(0.015)	(0.017)	(0.017)	(0.017)	(0.022)	(0.017)	(0.017)	(0.015)	(0.017)	(0.016)	(0.016)	(0.023)
Observations	22,707	16,920	13,606	12,395	12,395	12,395	13,587	11,027	10,010	10,010	10,010	11,027	10,010	13,587	11,027	10,010	10,010	10,010
Number of gvkeynum	2,728	1,997	1,682	1,586	1,586	1,586	1,570	1,329	1,246	1,246	1,246	1,329	1,246	1,570	1,329	1,246	1,246	1,246
R-Squared	0.553	0.359	0.369	0.354	0.350	0.353	0.370	0.363	0.351	0.350	0.346	0.379	0.356	0.383	0.385	0.372	0.372	0.367

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 2.4 Panel B: Dependent Variable Cash/Assets. Controls follow Opler et al (1999) and include ln(assets), MTB, net working capital/assets, capex/assets, EBITDA/Assets, leverage, cash flow volatility, R&D/sales, as well as distributions and acquisitions dummy variables. OCb calculated using industry adjusted perpetual inventory method. Year fixed effects are on. Robust standard errors clustered by firm.

OCb	-0.005	-0.022***	-0.012**	-0.011**	-0.031	-0.012**	-0.009*					
	(0.004)	(0.006)	(0.005)	(0.005)	(0.019)	(0.005)	(0.005)					
CUT2	-0.003*							-0.003*				
	(0.002)							(0.002)				
IMPINT		0.042***							0.043***			
		(0.012)							(0.014)			
HHI			0.000***							0.000***		
			(0.000)							(0.000)		
COMP					-0.026*							-0.023
					(0.014)							(0.015)
CONC				0.006							-0.000	
				(0.014)							(0.016)	
OCb_CUT2	-0.001											
	(0.002)											
OCb_IMPINT		0.038***										
		(0.012)										
OCb_HHI			0.000									
			(0.000)									
OCb_CONC				-0.006								
				(0.015)								
OCb_COMP					0.021							
					(0.019)							
quartileIMPINT_1						-0.036***						
						(0.005)						
quartileIMPINT_4						0.009*						
						(0.005)						
quartileIMPINT_1_OCb						-0.003						
						(0.006)						
quartileIMPINT_4_OCb						0.012**						
						(0.006)						
quartileHHI_1							-0.015***					
							(0.006)					
quartileHHI_4							0.007					
							(0.008)					
quartileHHI_1_OCb							-0.002					
							(0.006)					
quartileHHI_4_OCb							-0.002					
							(0.004)					
quartileOCb_1								0.012*	0.033***	0.013	0.016**	0.062***
								(0.007)	(0.010)	(0.009)	(0.008)	(0.024)
quartileOCb_4								0.001	-0.028***	-0.018**	-0.016**	-0.034
								(0.007)	(0.011)	(0.008)	(0.007)	(0.025)
quartileOCb_1_CUT2								0.003				
								(0.005)				
quartileOCb_4_CUT2								-0.001				
								(0.006)				
quartileOCb_1_IMPINT									-0.044*			
									(0.023)			
quartileOCb_4_IMPINT									0.050			
									(0.032)			
quartileOCb_1_HHI										0.000		
										(0.000)		
quartileOCb_4_HHI										0.000		
										(0.000)		
quartileOCb_1_CONC											0.026	
											(0.023)	
quartileOCb_4_CONC											0.043***	
											(0.012)	
quartileOCb_1_COMP												-0.047*
												(0.025)
quartileOCb_4_COMP												0.020
												(0.026)
Constant	0.491***	0.469***	0.471***	0.480***	0.506***	0.490***	0.484***	0.483***	0.460***	0.466***	0.474***	0.496***
	(0.017)	(0.020)	(0.019)	(0.020)	(0.024)	(0.019)	(0.019)	(0.017)	(0.020)	(0.020)	(0.020)	(0.025)
Observations	13,650	11,051	10,030	10,030	10,030	11,051	10,030	13,650	11,051	10,030	10,030	10,030
Number of gvkeynum	1,574	1,331	1,246	1,246	1,246	1,331	1,246	1,574	1,331	1,246	1,246	1,246
R-Squared	0.410	0.409	0.413	0.410	0.408	0.425	0.416	0.417	0.420	0.419	0.417	0.415

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 2.4 Panel C: Dependent Variable is Exogenous Cash. OCbhat is obtained using 2SLS with IDD and UI as instruments for OCb. Controls include ln(assets), MTB, net working capital/assets, capex/assets, EBITDA/Assets, leverage, cash flow volatility, R&D/sales, as well as distributions and acquisitions dummy variables. Year fixed effects are on. Robust standard errors clustered by firm.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
OCbhat	0.076***						-0.094***	-0.115***	-0.098***	-0.100***	-0.123***	-0.108***	-0.097***					
	(0.027)						(0.008)	(0.010)	(0.009)	(0.009)	(0.015)	(0.009)	(0.009)					
CUT2		-0.003***					-0.003**							-0.003				
		(0.001)					(0.001)							(0.002)				
IMPINT			0.042***					0.048***							0.049***			
			(0.008)					(0.009)							(0.011)			
HHI				0.000***					0.000***							0.000***		
				(0.000)					(0.000)							(0.000)		
COMP					-0.014						-0.008							-0.015
					(0.013)						(0.013)							(0.015)
CONC						0.021*				0.030*							0.033**	
						(0.011)				(0.015)							(0.016)	
OCbhat_CUT2							-0.001											
							(0.002)											
OCbhat_IMPINT								0.033**										
								(0.015)										
OCbhat_HHI									0.000									
									(0.000)									
OCbhat_CONC										0.040*								
										(0.023)								
OCbhat_COMP											0.024*							
											(0.012)							
quartileIMPINT_1												-0.025***						
												(0.004)						
quartileIMPINT_4												0.005						
												(0.004)						
quartileIMPINT_1_OCbl												0.011*						
												(0.007)						
quartileIMPINT_4_OCbl												0.008						
												(0.006)						
quartileHHI_1													-0.009***					
													(0.003)					
quartileHHI_4													0.004					
													(0.005)					
quartileHHI_1_OCbhat													0.002					
													(0.007)					
quartileHHI_4_OCbhat													-0.005					
													(0.006)					
quartileOCbhat_1														-0.002	0.004	0.002	-0.001	-0.001
														(0.004)	(0.008)	(0.006)	(0.005)	(0.010)
quartileOCbhat_4														-0.012***	-0.016**	-0.015**	-0.016***	-0.039**
														(0.004)	(0.007)	(0.006)	(0.004)	(0.018)
quartileOCbhat_1_CUT2														-0.001				
														(0.003)				
quartileOCbhat_4_CUT2														-0.003				
														(0.004)				
quartileOCbhat_1_IMPIN															-0.014			
															(0.018)			
quartileOCbhat_4_IMPIN															0.001			
															(0.020)			
quartileOCbhat_1_HHI																-0.000		
																(0.000)		
quartileOCbhat_4_HHI																-0.000		
																(0.000)		
quartileOCbhat_1_CONC																	-0.028	
																	(0.017)	
quartileOCbhat_4_CONC																	0.024**	
																	(0.011)	
quartileOCbhat_1_COMI																		0.000
																		(0.011)
quartileOCbhat_4_COMI																		0.024
																		(0.019)
Constant	0.091*	0.359***	0.337***	0.330***	0.351***	0.337***	0.495***	0.482***	0.468***	0.476***	0.486***	0.501***	0.478***	0.371***	0.348***	0.344***	0.352***	0.367***
	(0.047)	(0.015)	(0.015)	(0.016)	(0.021)	(0.016)	(0.018)	(0.019)	(0.020)	(0.020)	(0.023)	(0.019)	(0.020)	(0.016)	(0.016)	(0.017)	(0.017)	(0.022)
Observations	28,795	16,920	13,606	12,395	12,395	12,395	16,920	13,606	12,395	12,395	12,395	13,606	12,395	16,920	13,606	12,395	12,395	12,395
Number of gvkeynum	3,509	1,997	1,682	1,586	1,586	1,586	1,997	1,682	1,586	1,586	1,586	1,682	1,586	1,997	1,682	1,586	1,586	1,586
R-Squared	0.534	0.359	0.369	0.354	0.350	0.353	0.381	0.377	0.369	0.368	0.366	0.391	0.370	0.363	0.376	0.364	0.362	0.359

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 2.4 Panel D: Dependent Variable Cash/Assets. OCbhat is obtained using 2SLS with IDD and UI as instruments for OCb. Controls follow Opler et al (1999) and include ln(assets), MTB, net working capital/assets, capex/assets, EBITDA/Assets, leverage, cash flow volatility, R&D/sales, as well as distributions and acquisitions dummy variables. OC calculated using perpetual inventory method. Year fixed effects are on. Robust standard errors clustered by firm.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
OCbhat	0.117***						-0.079***	-0.103***	-0.081***	-0.082***	-0.101***	-0.084***	-0.078***					
	(0.032)						(0.009)	(0.012)	(0.010)	(0.009)	(0.019)	(0.010)	(0.010)					
CUT2		-0.003*					-0.003							-0.003				
		(0.002)					(0.002)							(0.002)				
IMPINT			0.042***					0.052***							0.054***			
			(0.010)					(0.011)							(0.014)			
HHI				0.000***					0.000***							0.000***		
				(0.000)					(0.000)							(0.000)		
COMP					-0.025*						-0.019							-0.031*
					(0.014)						(0.015)							(0.018)
CONC						0.007				0.017							0.019	
						(0.014)				(0.020)							(0.020)	
OCbhat_CUT2							-0.000											
							(0.003)											
OCbhat_IMPINT								0.053***										
								(0.019)										
OCbhat_HHI									0.000									
									(0.000)									
OCbhat_CONC										0.043								
										(0.033)								
OCbhat_COMP											0.021							
											(0.016)							
quartileIMPINT_1												-0.029***						
												(0.004)						
quartileIMPINT_4												0.007						
												(0.005)						
quartileIMPINT_1_OCbh												0.002						
												(0.008)						
quartileIMPINT_4_OCbh												0.007						
												(0.009)						
quartileHHI_1													-0.010**					
													(0.005)					
quartileHHI_4													0.005					
													(0.007)					
quartileHHI_1_OCbhat													-0.001					
													(0.009)					
quartileHHI_4_OCbhat													-0.008					
													(0.008)					
quartileOCbhat_1														-0.006	0.005	-0.003	-0.008	-0.017
														(0.005)	(0.010)	(0.008)	(0.006)	(0.016)
quartileOCbhat_4														-0.016***	-0.025***	-0.012	-0.017***	-0.061**
														(0.005)	(0.010)	(0.007)	(0.006)	(0.028)
quartileOCbhat_1_CUT2														-0.000				
														(0.003)				
quartileOCbhat_4_CUT2														-0.000				
														(0.005)				
quartileOCbhat_1_IMPIN															-0.032			
															(0.022)			
quartileOCbhat_4_IMPIN															0.029			
															(0.026)			
quartileOCbhat_1_HHI																-0.000		
																(0.000)		
quartileOCbhat_4_HHI																-0.000		
																(0.000)		
quartileOCbhat_1_CONC																	-0.028	
																	(0.024)	
quartileOCbhat_4_CONC																	0.183***	
																	(0.014)	
quartileOCbhat_1_COMP																		0.009
																		(0.017)
quartileOCbhat_4_COMP																		0.046*
																		(0.028)
Constant	0.120**	0.453***	0.436***	0.421***	0.452***	0.428***	0.566***	0.553***	0.532***	0.541***	0.561***	0.570***	0.543***	0.465***	0.443***	0.430***	0.440***	0.469***
	(0.057)	(0.018)	(0.019)	(0.020)	(0.025)	(0.020)	(0.022)	(0.022)	(0.023)	(0.023)	(0.027)	(0.022)	(0.023)	(0.019)	(0.020)	(0.021)	(0.021)	(0.027)
Observations	29,127	17,004	13,633	12,417	12,417	12,417	17,004	13,633	12,417	12,417	12,417	13,633	12,417	17,004	13,633	12,417	12,417	12,417
Number of gvkeynum	3,534	2,001	1,685	1,586	1,586	1,586	2,001	1,685	1,586	1,586	1,586	1,685	1,586	2,001	1,685	1,586	1,586	1,586
R-Squared	0.477	0.397	0.404	0.401	0.398	0.398	0.412	0.411	0.410	0.408	0.408	0.421	0.409	0.398	0.404	0.402	0.399	0.399

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

The number of observations for each result presented in table 4 varies from 10,010 to 22,707, with R-squared of 34.6% up to 55.3%. Industry adjusted OCb with controls but no product market stress variables does not have a significant influence on exogenous cash. This result follows from the prior theory implication that highly efficient firms would, all else equal, not want to hold excess slack, but at the same time efficient firms may derive a product market benefit from excess cash. We find evidence of a product market motivation for cash with both export measures of product market stress and market structure variables. The CUT2 dummy is negatively associated with cash. Firms do not know about tariff shocks ex ante and excess cash is used to respond to the stress, in line with the indication by Opler et al (1999) that higher than average cash is used to cover operating losses. In conjunction with tariff cut shock effects and confirming a precautionary motive, import intensity is positively associated with cash. In terms of industry structure, firm concentration and HHI are positively and significantly associated with cash. The predictions of Bolton and Scharfstein (1990) are confirmed as firms increase EC to strategically manage potential predation.

Estimating equations (5) and (6) reveals a negative and significant association between OCb and EC. There are no changes to the sign and significance of any PMStress coefficients, compared to those estimated in equation (4). Interaction terms of OC and PMStress are all positively signed, with a significant association with the interaction term OC_IMPINT. The OC_IMPINT coefficient indicates that a 1% increase in OC_IMPINT is associated with a 2.9% increase in the ratio of EC/Assets. Together, estimating equations (5) and (6) indicate product market stress has a positive association with cash, restrained by a negative association with OC. The stock of OC has the expected effect of a force acting to improve firm efficiency.

When estimating equation (5) with the CUT2 dummy variable we may also interpret it with quasi-natural experiment logic. The CUT2 dummy identifies a point in time where an exogenous shock influences financial slack. Including the CUT2 dummy in the equation and the interaction term, causes the coefficient for OCb to represent the influence of organization capital on cash for firms not affected by a cut in tariff rates. The coefficient of OCb is negative and significant in the presence of the interaction terms with CUT2. The coefficient of the interaction term is the incremental effect of OC on the level of firms influenced by a tariff shock. We do not find a significant effect for the interaction term in our industry adjusted regression. OCb is negatively associated with cash, as it the CUT2 tariff shock dummy. However, we do not observe high OC firms incrementally adding to cash due to a tariff shock.

Estimating equation (8) confirms the negative partial influence of OC indicated by results so far. Testing quartiles of OC with our various product market factors indicates low OC firms have significantly higher EC, and high OC firms hold significantly lower EC. Hypothesis 1 is confirmed. OC acts as expected to improve firm efficiency by negatively mediating risk-aversion based product market stress impulses to raise or retain additional financial slack.

2.4.2.2 Robustness tests included in multivariate analysis.

Organization capital is a potentially endogenous variable such that estimating the association with cash may violate the zero conditional mean assumptions of linear regressions. The issue can be mitigated somewhat by avoiding pooled OLS which requires strict exogeneity for consistent estimators. It is possible that high quality managers bring OC with them when they choose to

work for firms with high cash balances, attractive future growth prospects, or strong market positions. Indeed, OC is modeled jointly with output by Atkeson & Kehoe (2005).

We follow prior literature and re-estimate our regressions using instrumental variables for OC. Following Li et al (2018), our study includes IV's state-level variables inevitable disclosure doctrine ("IDD") and unemployment insurance benefits ("UIB"). Firm location is required to merge in state level instruments. Pirinsky & Wang (2006) establish that corporate HQ location can be used to merge state level variables. Pirinsky & Wang use state-level Philadelphia Fed economic indices to explain local co-movement in stock prices. Compustat state HQ is merged with state-level Philadelphia Fed data. Likewise, we merge firm-state UIB and IDD variables into our sample according to Compustat variable state.

IDD and UIB are exogenous to the firm as no firm has direct control over unemployment insurance benefits or state-wide legal precedent. IDD and UIB are relevant to OC. Firms in states with IDD precedent have a greater incentive to invest in OC. Higher UIB reduces employee incentives to voluntarily change jobs to avoid periods of unemployment. The corollary is firms are more incented to invest in the employee and OC.

In Chicago, IL the Uniform Law Commission ("ULC", founded 1982) drafts regulation and legislation to be enacted by individual states. The goal of the ULC is to increase uniformity of legal precedent. The Uniform Trade Secrets Act ("UTSA") was put forward by the ULC in 1979 (https://www.uniformlaws.org). The contained legal theory of inevitable disclosure says departing employees will inevitably disclose trade secrets and intellectual property of the

departed firm. 48 states have adopted the USTA (not NY and NC). However, only 20 have full recognized IDD. California, Virginia and Florida reject all elements of IDD. Adoption of IDD has the practical effect of restricting the inter-firm movement of employees with access to trade and process secrets. Firms operating in states with IDD are likely to invest more aggressively in OC, and its associated risk, as the restrictions on inter-firm worker movement makes earning a return more likely. We code IDD=1 for 20 states in our sample.

Maximum weekly unemployment benefits are obtained from fileunemployment.org. The data is available at the state level to match with the firm state HQ variable in our main sample. UIB and OC are linked in prior literature as the level of unemployment benefits is negatively associated with voluntary job switching. UIB are positively associated with employee training and skill acquisition. If UIB are higher, firm employees would not have as high an incentive to proactively switch jobs to avoid periods of unemployment (Light & Omori, 2004). Employees that are less likely to quit incentivizes firms to invest more in training specifically, and OC in general.

The first stage of the IV procedure regressed IDD and UI_max on each formulations of OC (8). The residuals from estimating equation (8) are saved. In the second stage we include the residuals as an instrument for OC (denoted "OChat" in tables). All regressions are re-estimated with the four formulations of OChat.

$$OC_{it} = \beta_{0i} + \beta_{1i}IDD_{it} + \beta_{2i}UI\_max_{it} + \beta_{2i}Controls_{it} + \text{Industry FE} + \text{Year FE} + \varepsilon_{it} \quad (8)$$

The results of the 2SLS regressions are given in panels C and D. In general the results are highly consistent in terms of sign and significance. The coefficients are also larger. We interpret the increased magnitude of our 2SLS results conservatively. Jiang (2017) review of 225 finance papers notes that IV estimator coefficients are approximately an order of magnitude larger that base model estimates. We observe a similar result with our IV estimation. Regardless, the consistent sign and significance of Table 4 panels C and D with panels A and B do not in any way restrain the conclusion that hypothesis 1 is supported.

2.4.3 Firm value regressions.

With appropriate modifications we follow FF98 to estimate the firm value effects of OC while controlling for product market stress. FF98 has been used in prior literature as it is robust to various specifications. It has been used to estimate the influence of cash on firm value (Pinkowitz, Stulz & Williamson, 2006)(Dittmar & Mahrt-Smith, 2007). The base line firm value regression given in formula (9) includes industry adjusted organization capital (OCb) and a measure of financial slack. Additional specifications of firm value regressions include interaction terms of OC and one of five product market stressors (CUT2, IMPINT, HHI, CONC, COMP). Each product market variable corresponds with table 5 panels A through E.

$$MV_{i,t}/TA_{i,t} = \alpha + \beta_1 OC_{i,t} + \beta_2 OC_{i,t-2} + \beta_3 OC_{i,t+2} + \beta_4 EC_{i,t} + \beta_5 EC_{i,t-2} + \beta_6 EC_{i,t+2} + \beta_7 Earnings_{i,t}/TA_{i,t} + \beta_8 Earnings_{i,t-2}/TA_{i,t} + \beta_9 Earnings_{i,t+2}/TA_{i,t} + \beta_{10} R\&D_{i,t}/TA_{i,t} + \beta_{11} R\&D_{i,t-2}/TA_{i,t} + \beta_{12} R\&D_{i,t+2}/TA_{i,t} + \beta_{13} InterestExpense_{i,t}/TA_{i,t} + \beta_{14} InterestExpense_{i,t-2}/TA_{i,t} + \beta_{15} InterestExpense_{i,t+2}/TA_{i,t} + \beta_{16} Dividends_{i,t}/TA_{i,t} + \beta_{17} Dividends_{i,t-2}/TA_{i,t} +$$

$\beta_{18}Dividends_{i,t+2}/TA_{i,t} + \beta_{19}MV_{i,t+2}/TA_{i,t} + \beta_{20}(TA_{i,t} - TA_{i,t-2})/TA_{i,t} + \beta_{21}(TA_{i,t+2} - TA_{i,t})/TA_{i,t} +$ Industry fixed effects $+ \varepsilon_{i,t}$ (9)

Control variables in equation (9) are standard for FF98. The control variables are intended to empanel investor expectations firm specific cash flow, investment and performance. Each control variable incorporate past, current and future trends with trailing a two-year change, current year value, and forward two-year change variable. Controls include past , current and future measures of earning before extraordinary items plus interest, R&D, dividends, and interest expense. Controls also include future market value, and past and future change in assets. All variables are scaled by total assets. Lev & Radhakrishnan (2005) use an abnormal earnings approach to estimate a market expectation on future abnormal earnings from current OC at 2.4 years. The FF98 technique of two year leads and lags on explanatory variables fits well with this result.

Across all five panels of Table 5, accounting for five product market variables OC is consistently positive and significant. Table 5, panel B results describe the association of OC and firm value controlling for import intensity. In the full sample regression, including controls for exogenous cash, import intensity and the interaction of import intensity and OC, industry adjusted OCb is positively and significantly ($p<0.01$) associated with firm value. A one standard deviation increase in OCb (1 s.d. = 1.82) equates to a 0.27% increase in excess firm value Firm value is defined as the excess of market value over book value, scaled by firm assets. The interaction term OCb_IMPINT is also positive and significant, at a similar magnitude to OCb. Cash is positively associated with firm value, when controlling for OCb and import intensity. On its

Table 2.5 Panel A: Dependent Variable in all regressions is Firm Value defined as the excess of market over book assets, divided by book assets. The procedure and controls follow Fama & French (1998).

	EC (Fresard, 2010)						EC1 (Opler, 1999)						Cash&Equivalents/Assets					
	Full Sample		CUT2 = 1	CUT2 = 0	Low OC	High OC	Full Sample		CUT2 = 1	CUT2 = 0	Low OC	High OC	Full Sample		CUT2 = 1	CUT2 = 0	Low OC	High OC
OCb	0.231***	0.234***	0.171***	0.230***			0.220***	0.223***	0.076	0.219***			0.231***	0.235***	0.198***	0.226***		
	(0.045)	(0.046)	(0.039)	(0.043)			(0.043)	(0.044)	(0.060)	(0.031)			(0.044)	(0.045)	(0.036)	(0.044)		
dOCb	-0.284	-0.286	-0.806**	-0.021			-0.384	-0.384	-0.685	0.063			0.284	0.281	-0.292	0.404**		
	(0.291)	(0.291)	(0.346)	(0.318)			(0.248)	(0.245)	(0.472)	(0.380)			(0.206)	(0.208)	(0.347)	(0.187)		
dOCb2	0.825**	0.838**	1.187**	0.409			0.837**	0.839**	1.056	0.165			0.268	0.272	0.765*	-0.034		
	(0.332)	(0.331)	(0.471)	(0.393)			(0.291)	(0.288)	(0.619)	(0.492)			(0.280)	(0.280)	(0.388)	(0.251)		
EC	1.752***	1.753***	1.326***	1.718***	0.983***	2.351***												
	(0.124)	(0.122)	(0.139)	(0.156)	(0.315)	(0.428)												
dEC	0.079	0.063	-0.135	0.197	0.246	0.698												
	(0.361)	(0.366)	(0.708)	(0.356)	(0.462)	(0.813)												
dEC2	1.313***	1.290***	0.757*	1.217***	0.565**	1.615***												
	(0.309)	(0.303)	(0.414)	(0.360)	(0.262)	(0.538)												
CUT2		-0.066			0.246	-0.695*		-0.042			0.362	-1.112**		-0.038			-0.053	-0.679*
		(0.047)			(0.168)	(0.342)		(0.042)			(0.249)	(0.365)		(0.050)			(0.261)	(0.363)
dCUT2		-0.048**			-0.088	0.175		-0.042*			-0.166	0.138		-0.042*			-0.089	0.242
		(0.020)			(0.153)	(0.163)		(0.022)			(0.235)	(0.252)		(0.023)			(0.134)	(0.169)
dCUT22		-0.087**			0.222	0.005		-0.043			0.115	-0.145		-0.080*			-0.071	-0.199
		(0.038)			(0.240)	(0.194)		(0.028)			(0.235)	(0.164)		(0.039)			(0.272)	(0.283)
OCb_CUT2	-0.120	-0.160	0.000	0.000	0.185	0.232*	-0.207*	-0.233*	0.000	0.000	0.174	0.476**	-0.045	-0.091	0.000	0.000	0.003	0.431**
	(0.087)	(0.113)	(0.000)	(0.000)	(0.116)	(0.119)	(0.107)	(0.121)	(0.000)	(0.000)	(0.135)	(0.176)	(0.076)	(0.088)	(0.000)	(0.000)	(0.164)	(0.171)
dOCb_CUT2	0.011	0.018	-0.059	0.045	0.013	-0.136	0.026	0.025	-0.041	0.058	-0.042	-0.096	-0.031	-0.025	-0.047	-0.001	-0.030	-0.224***
	(0.041)	(0.044)	(0.037)	(0.055)	(0.099)	(0.087)	(0.042)	(0.041)	(0.073)	(0.048)	(0.139)	(0.114)	(0.041)	(0.043)	(0.045)	(0.051)	(0.084)	(0.066)
dOCb_CUT22	-0.081*	-0.120*	0.009	-0.124**	0.155	-0.076	-0.105	-0.136*	-0.039	-0.122	0.030	0.080	-0.053	-0.097*	-0.002	-0.089**	-0.049	0.135
	(0.043)	(0.068)	(0.053)	(0.054)	(0.156)	(0.129)	(0.063)	(0.075)	(0.049)	(0.080)	(0.116)	(0.112)	(0.033)	(0.053)	(0.040)	(0.041)	(0.146)	(0.117)
EC1							1.236***	1.210***	1.040***	1.187***	0.694*	0.963						
							(0.141)	(0.134)	(0.275)	(0.237)	(0.361)	(0.729)						
dEC1							-1.118*	-1.141**	-0.770	-1.507**	-1.705*	-0.046						
							(0.515)	(0.514)	(0.726)	(0.566)	(0.822)	(4.222)						
dEC12							-1.037**	-1.089**	-1.016*	-1.453**	-1.220	-3.568*						
							(0.403)	(0.402)	(0.522)	(0.593)	(1.090)	(1.822)						
cheAT													1.522***	1.509***	1.187***	1.505***	0.826***	1.680***
													(0.130)	(0.129)	(0.126)	(0.139)	(0.218)	(0.426)
dcheAT													-0.269	-0.268	-0.537*	-0.230	-0.033	-0.009
													(0.182)	(0.182)	(0.272)	(0.178)	(0.292)	(0.264)
dcheAT2													0.535***	0.517***	0.335	0.588***	0.259	0.195
													(0.143)	(0.145)	(0.274)	(0.143)	(0.399)	(0.701)
Constant	-0.096***	-0.091***	-0.147*	-0.036	-0.201***	-0.121	-0.117***	-0.108***	-0.218***	-0.048	-0.112	0.132	0.003	0.001	-0.064	0.055	-0.168**	0.106
	(0.026)	(0.025)	(0.070)	(0.039)	(0.060)	(0.201)	(0.026)	(0.021)	(0.067)	(0.033)	(0.082)	(0.115)	(0.032)	(0.033)	(0.065)	(0.040)	(0.067)	(0.158)
Observations	12,068	12,068	3,390	8,678	2,489	1,936	8,058	8,058	2,500	5,558	1,748	970	14,417	14,417	4,138	10,279	2,918	2,582
R-squared	0.514	0.517	0.650	0.526	0.682	0.654	0.509	0.512	0.671	0.515	0.691	0.680	0.521	0.523	0.636	0.539	0.688	0.645
Number of groups	15	15	15	15	15	15	12	12	12	12	12	12	16	16	16	16	16	16

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 2.5 Panel B: Dependent Variable in all regressions is Firm Value defined as the excess of market over book assets, divided by book assets. The procedure and controls follow Fama & French (1998). OCb is industry median adjusted. Cash follows either Fresard (2010) and Berger et al (1996) or Opler (1999).

Cash =	EC (Fresard, 2010)		EC1 (Opler, 1999)		EC		EC1		EC		EC1	
PM Factor =	IMPINT		IMPINT		CUT2		CUT2		HHI		HHI	
OCb	0.125***	0.149***	0.097***	0.111***	0.231***	0.234***	0.220***	0.223***	0.178***	0.177***	0.113***	0.109***
	(0.019)	(0.025)	(0.025)	(0.028)	(0.045)	(0.046)	(0.043)	(0.044)	(0.028)	(0.030)	(0.022)	(0.023)
dOCb	-0.961	-0.795	-0.933	-0.822	-0.284	-0.286	-0.384	-0.384	0.105	0.128	-0.016	-0.015
	(0.530)	(0.502)	(0.538)	(0.511)	(0.291)	(0.291)	(0.248)	(0.245)	(0.290)	(0.305)	(0.197)	(0.219)
dOCb2	0.769	0.982*	0.537	0.662	0.825**	0.838**	0.837**	0.839**	0.631	0.652	0.754**	0.724**
	(0.470)	(0.452)	(0.448)	(0.433)	(0.332)	(0.331)	(0.291)	(0.288)	(0.398)	(0.420)	(0.294)	(0.307)
Cash	1.749***	1.827***	1.312***	1.351***	1.752***	1.753***	1.236***	1.210***	1.638***	1.653***	1.069***	1.098***
	(0.117)	(0.112)	(0.152)	(0.145)	(0.124)	(0.122)	(0.141)	(0.134)	(0.134)	(0.136)	(0.156)	(0.156)
dCash	-0.098	-0.134	-1.010	-1.046	0.079	0.063	-1.118*	-1.141**	-0.371*	-0.370*	-1.598***	-1.612***
	(0.398)	(0.396)	(0.701)	(0.747)	(0.361)	(0.366)	(0.515)	(0.514)	(0.204)	(0.201)	(0.244)	(0.253)
dCash2	1.408**	1.439**	-0.839*	-0.790	1.313***	1.290***	-1.037**	-1.089**	0.780***	0.778***	-1.292**	-1.273**
	(0.507)	(0.503)	(0.451)	(0.466)	(0.309)	(0.303)	(0.403)	(0.402)	(0.241)	(0.244)	(0.521)	(0.513)
PM Factor		-0.466***		-0.254***		-0.066		-0.042		-0.000		0.000
		(0.060)		(0.061)		(0.047)		(0.042)		(0.000)		(0.000)
dPM Factor		-0.297		-0.523		-0.048**		-0.042*		0.000		0.000
		(0.567)		(0.541)		(0.020)		(0.022)		(0.000)		(0.000)
dPM Factor2		-0.154		0.115		-0.087**		-0.043		0.000		0.000
		(0.260)		(0.346)		(0.038)		(0.028)		(0.000)		(0.000)
OCb_PM Factor	0.161***	0.125**	0.084*	0.054	-0.120	-0.160	-0.207*	-0.233*	-0.000	-0.000	0.000**	0.000**
	(0.037)	(0.049)	(0.045)	(0.057)	(0.087)	(0.113)	(0.107)	(0.121)	(0.000)	(0.000)	(0.000)	(0.000)
dOCb_PM Factor	1.047*	0.507	1.084*	0.716	0.011	0.018	0.026	0.025	-0.000	-0.000	-0.000	-0.000
	(0.479)	(0.498)	(0.524)	(0.457)	(0.041)	(0.044)	(0.042)	(0.041)	(0.000)	(0.000)	(0.000)	(0.000)
dOCb_PM Factor	1.275***	0.657**	1.280***	0.883**	-0.081*	-0.120*	-0.105	-0.136*	-0.000	-0.000	-0.001**	-0.001*
	(0.300)	(0.262)	(0.370)	(0.373)	(0.043)	(0.068)	(0.063)	(0.075)	(0.000)	(0.000)	(0.000)	(0.000)
Constant	-0.150***	0.013	-0.172***	-0.075*	-0.096***	-0.091***	-0.117***	-0.108***	-0.128***	-0.123***	-0.134***	-0.150***
	(0.028)	(0.036)	(0.030)	(0.034)	(0.026)	(0.025)	(0.026)	(0.021)	(0.029)	(0.032)	(0.035)	(0.043)
Observations	7,097	7,097	6,296	6,296	12,068	12,068	8,058	8,058	7,955	7,955	5,498	5,498
R-squared	0.538	0.544	0.518	0.522	0.514	0.517	0.509	0.512	0.502	0.504	0.497	0.499
Number of groups	11	11	11	11	15	15	12	12	11	11	9	9

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

own, as expected, the coefficient of IMPINT is negatively associated with firm value ($p<0.01$). The full sample regression explains 54% of the variation and the constant is not significantly different from zero. In splitting the sample into quartiles of OCb, we find the interaction term of OCb_IMPINT is not significant for low the low OCb group, but positive and highly significant in two of the three formulations of cash.

Firm value regressions indicate that OC is positively associated with firm value when controlling for product market stress. H2 is supported. The firm value results follow from results supporting H1. OC has a negative influence on firm cash holdings, ostensibly making the firm more efficient and less subject to agency costs. Firm value is higher due to the efficiency and higher growth prospects, as well as being a reward for the risk incurred by making a difficult to reverse investment in intangible assets.

2.5. Conclusions and implications for academics and practitioners.

Agency oriented costs and benefits are managed and influenced by, among other things, compensation contracts, governance and product market conditions. The net effect of the incentives, endogenous and exogenous, is to induce firms to make specific investment and policy choices. MacKay & Phillips (2005) note that empirical research and theory don't yet reveal the reasons behind intra-industry differences in firm financial and investment policy. In our study, OCb represents an industry median adjusted firm stock of intangible fixed assets driving firm operational efficiency. The findings of this study show that organization capital negatively mediates the significant association between product market conditions and financial slack. Prior studies have shown a linkage between product markets and financial slack, and theory about

product market stress is not new (Benoit, 1984)(Bolton & Scharfstein, 1990). Product market factors acts on firm cash policy through precautionary and rational predation motives. We consider financial policy decisions of risk averse agents dealing with product market stress to be a branch of the agency theory tree, rather than a distinct tree. The new finding of this study is firm drive for efficiency, resulting from a high relative stock of OC, restrains the positive and significant effect of product market stress on cash holdings. The robust, positive and, significant association of OC with firm value is clear. Firms benefit from investment in fixed intangible asset OC. The benefit of OC to a firm is in risk taking, growth potential and efficient use of assets. The return to OC is priced in capital markets, demonstrated in firm value regressions, and following, as predicted, theory of Zhang (2005), Krugman (1979) and Atkeson & Kehoe (2005).

Implication for academics: 1) Evidence in this paper, and other recent finance literature (Li, Qui & Shen, 2018) confirm the significant influence on firms of intangible fixed asset OC. As the body of literature on organization capital grows, it may become a staple control variable in corporate finance and firm value models. The controls of most corporate finance models and firm value models include controls for the intangible asset R&D. In some instances R&D is a proxy for innovativeness, and in others for the risk of financial distress (Opler et al, 1999). There is growing evidence to suggest OC should be treated similarly. 2) The research question in this study considers the influence of OC on financial slack in the context of product market stress. However, our review of literature on financial slack did not find a satisfactory answer to a question we consider relevant. Does it matter where the cash came from? The question has been addressed in part. However, cash may be generated internally (inside equity) or from external capital markets, and in the form of debt, common equity or convertible instruments. The question

may be relevant given the causal link (Fresard, 2010) between cash and product market performance.

Implications for practitioners: Organization capital is a fixed intangible asset of the firm. Investment in OC will improve the product market performance of the firm (Fresard, 2010) and make it a more efficient user of capital, delivering higher returns and future growth prospects. Corporate strategy should be oriented to cutting variable costs and investing in fixed intangible assets. The value of this contrary thinking is demonstrated by the firm value effects of OC in this study, and the improved post-deal bidder performance reported in Li, Qui & Shen (2018).

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Table A1.1 Panel A1 - 2SLS - OC - Risk 1

VARIABLES	(1) capexAT	(2) capexAT	(3) capexAT	(4) capexAT	(5) capexAT	(6) xrdAT	(7) xrdAT	(8) xrdAT	(9) xrdAT	(10) xrdAT	(11) aqcAT	(12) aqcAT	(13) aqcAT	(14) aqcAT	(15) aqcAT
OChat	0.059**		0.021***	0.028***		0.188***		0.010*	0.007		-0.027		-0.011	0.003	
	(0.025)		(0.007)	(0.005)		(0.043)		(0.005)	(0.005)		(0.042)		(0.009)	(0.007)	
lnAT	0.016**	-0.000	0.008***	0.009***	0.001	0.039***	-0.009***	-0.006***	-0.006***	-0.009***	0.007	0.013***	0.013***	0.014***	0.014***
	(0.007)	(0.001)	(0.002)	(0.002)	(0.001)	(0.011)	(0.001)	(0.002)	(0.002)	(0.001)	(0.010)	(0.001)	(0.002)	(0.002)	(0.001)
leverage	-0.015***	-0.004*	-0.009***	-0.009***	-0.004*	-0.037***	-0.000	-0.002	-0.002	-0.000	0.012	0.007	0.007	0.006	0.007
	(0.005)	(0.002)	(0.002)	(0.002)	(0.002)	(0.009)	(0.001)	(0.002)	(0.002)	(0.001)	(0.009)	(0.004)	(0.005)	(0.005)	(0.004)
w_roa	0.019***	0.019***	0.019***	0.019***	0.019***	-0.158***	-0.162***	-0.162***	-0.161***	-0.162***	0.005	0.011	0.011	0.010	0.011
	(0.007)	(0.007)	(0.006)	(0.006)	(0.006)	(0.012)	(0.013)	(0.013)	(0.013)	(0.013)	(0.016)	(0.016)	(0.016)	(0.016)	(0.016)
Wmtb	0.001***	0.001***	0.001***	0.001***	0.001***	0.001***	0.001***	0.001***	0.001***	0.001***	-0.000*	-0.000*	-0.000*	-0.000*	-0.000*
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
cheAT	-0.023***	-0.032***	-0.028***	-0.027***	-0.031***	0.073***	0.064***	0.066***	0.066***	0.065***	-0.158***	-0.159***	-0.159***	-0.159***	-0.158***
	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.007)	(0.007)	(0.007)	(0.007)	(0.007)	(0.008)	(0.008)	(0.008)	(0.008)	(0.008)
w_ret1	-0.000***	-0.000***	-0.000***	-0.000***	-0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000	-0.000	-0.000	-0.000	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
w_salesG	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.001***	0.001***	0.001***	0.001***	0.001***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
lnAge	-0.015***	-0.020***	-0.015***	-0.015***	-0.020***	-0.002	0.001	0.002	0.002	0.001	-0.009***	-0.011***	-0.011***	-0.011***	-0.010***
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.003)	(0.002)	(0.003)	(0.003)	(0.002)
BC_Gov	-0.006*	-0.010***	-0.008***	-0.008***	-0.010***	0.005	-0.011***	-0.010***	-0.010***	-0.011***	0.003	0.006	0.006	0.006*	0.006
	(0.003)	(0.002)	(0.002)	(0.002)	(0.002)	(0.005)	(0.003)	(0.003)	(0.003)	(0.003)	(0.005)	(0.004)	(0.004)	(0.004)	(0.004)
PU		-0.000***	-0.000***		-0.000*		-0.000***	0.000		-0.000		-0.000***	-0.000***		-0.000**
		(0.000)	(0.000)		(0.000)		(0.000)	(0.000)		(0.000)		(0.000)	(0.000)		(0.000)
OChat_PU			0.000**					-0.000**					0.000**		
			(0.000)					(0.000)					(0.000)		
quartilePU_1				0.005***					-0.001					0.007**	
				(0.002)					(0.001)					(0.004)	
quartilePU_4				-0.002**					-0.003***					0.000	
				(0.001)					(0.001)					(0.003)	
quartileOChat_PU1				-0.002					-0.001					0.001	
				(0.002)					(0.002)					(0.004)	
quartileOChat_PU4				0.002					0.000					-0.006	
				(0.002)					(0.002)					(0.004)	
quartileOChat_1					0.018**					-0.004					0.014
					(0.009)					(0.006)					(0.016)
quartileOChat_4					0.010**					0.003					-0.003
					(0.004)					(0.005)					(0.013)
quartileOChat_1_PU					-0.000***					0.000					-0.000
					(0.000)					(0.000)					(0.000)
quartileOChat_4_PU					-0.000					-0.000					0.000
					(0.000)					(0.000)					(0.000)
Constant	0.169**	0.361***	0.261***	0.238***	0.347***	-0.407***	0.055***	0.020	0.021	0.056***	0.134	0.069***	0.092**	0.047	0.061***
	(0.067)	(0.017)	(0.034)	(0.030)	(0.016)	(0.111)	(0.010)	(0.025)	(0.026)	(0.011)	(0.102)	(0.023)	(0.042)	(0.037)	(0.023)
Observations	30,496	30,496	30,496	30,496	30,496	30,695	30,695	30,695	30,695	30,695	29,676	29,676	29,676	29,676	29,676
Number of gvkeynum	4,494	4,494	4,494	4,494	4,494	4,507	4,507	4,507	4,507	4,507	4,456	4,456	4,456	4,456	4,456
R-Squared	0.205	0.194	0.200	0.199	0.195	0.398	0.395	0.395	0.395	0.395	0.0865	0.0830	0.0833	0.0833	0.0831

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table A1.1 Panel A2 - 2SLS - OC - Risk 2

VARIABLES	(1) sdROA5	(2) sdROA5	(3) sdROA5	(4) sdROA5	(5) sdROA5	(6) sdebitdaAT5	(7) sdebitdaAT5	(8) sdebitdaAT5	(9) sdebitdaAT5	(10) sdebitdaAT5
OChat	-0.012		0.015	0.007		0.008		0.065***	0.058***	
	(0.029)		(0.012)	(0.012)		(0.034)		(0.013)	(0.014)	
lnAT	-0.012	-0.010***	-0.006	-0.008**	-0.009***	-0.002	-0.005**	0.013***	0.011**	-0.004*
	(0.008)	(0.002)	(0.004)	(0.004)	(0.002)	(0.009)	(0.002)	(0.005)	(0.005)	(0.002)
leverage	0.014	0.011	0.009	0.010	0.012	0.040***	0.041***	0.030***	0.031***	0.041***
	(0.009)	(0.008)	(0.008)	(0.008)	(0.008)	(0.011)	(0.009)	(0.009)	(0.010)	(0.009)
w_roa	-0.061***	-0.061***	-0.062***	-0.060***	-0.061***	-0.030	-0.031	-0.030	-0.028	-0.030
	(0.019)	(0.019)	(0.019)	(0.019)	(0.019)	(0.021)	(0.021)	(0.021)	(0.021)	(0.021)
Wmtb	0.000	0.000	0.000	0.000	0.000	0.000**	0.000**	0.000**	0.000*	0.000**
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
cheAT	0.057***	0.057***	0.058***	0.057***	0.057***	0.036***	0.033**	0.038***	0.038***	0.033**
	(0.012)	(0.012)	(0.012)	(0.012)	(0.012)	(0.013)	(0.013)	(0.013)	(0.013)	(0.013)
w_ret1	-0.000	0.000	0.000	0.000	0.000	-0.000	-0.000	-0.000	-0.000	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
w_salesG	0.000***	0.000***	0.000***	0.000***	0.000***	0.000*	0.000*	0.000*	0.000*	0.000*
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
lnAge	-0.023***	-0.025***	-0.021***	-0.024***	-0.024***	-0.029***	-0.048***	-0.026***	-0.030***	-0.046***
	(0.006)	(0.004)	(0.005)	(0.005)	(0.004)	(0.006)	(0.005)	(0.006)	(0.006)	(0.005)
BC_Gov	-0.008	-0.006	-0.005	-0.006	-0.007	-0.006	-0.006	-0.001	-0.001	-0.006
	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.006)	(0.005)	(0.005)	(0.005)	(0.005)
PU		0.000***	0.000***		0.000***		0.000***	0.000***		0.000***
		(0.000)	(0.000)		(0.000)		(0.000)	(0.000)		(0.000)
OChat_PU			-0.000					-0.000		
			(0.000)					(0.000)		
quartilePU_1				-0.016***					-0.020***	
				(0.002)					(0.003)	
quartilePU_4				0.002*					0.002	
				(0.001)					(0.001)	
quartileOChat_PU1				0.005**					0.006*	
				(0.003)					(0.003)	
quartileOChat_PU4				-0.001					-0.001	
				(0.003)					(0.004)	
quartileOChat_1					0.001					0.005
					(0.006)					(0.007)
quartileOChat_4					0.020					0.032*
					(0.015)					(0.017)
quartileOChat_1_PU					0.000					-0.000
					(0.000)					(0.000)
quartileOChat_4_PU					-0.000					-0.000
					(0.000)					(0.000)
Constant	0.349***	0.318***	0.254***	0.316***	0.306***	0.395***	0.540***	0.211***	0.280***	0.513***
	(0.081)	(0.032)	(0.061)	(0.063)	(0.030)	(0.093)	(0.037)	(0.070)	(0.071)	(0.034)
Observations	15,821	15,821	15,821	15,821	15,821	15,782	15,782	15,782	15,782	15,782
Number of gvkeynum	2,142	2,142	2,142	2,142	2,142	2,139	2,139	2,139	2,139	2,139
R-Squared	0.152	0.149	0.151	0.151	0.150	0.0762	0.0645	0.0737	0.0753	0.0660

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table A1.1 Panel B1 - 2SLS - OCb - Risk 1

VARIABLES	(1) capexAT	(2) capexAT	(3) capexAT	(4) capexAT	(5) capexAT	(6) xrdAT	(7) xrdAT	(8) xrdAT	(9) xrdAT	(10) xrdAT	(11) aqcAT	(12) aqcAT	(13) aqcAT	(14) aqcAT	(15) aqcAT
OCbhat	0.059**		0.026***	0.030***		0.188***		0.009*	0.006		-0.027		-0.003	-0.002	
	(0.025)		(0.006)	(0.006)		(0.043)		(0.006)	(0.005)		(0.042)		(0.009)	(0.007)	
lnAT	0.016**	-0.000	0.008***	0.009***	0.000	0.039***	-0.009***	-0.006***	-0.006***	-0.008***	0.007	0.013***	0.013***	0.014***	0.014***
	(0.007)	(0.001)	(0.002)	(0.002)	(0.001)	(0.011)	(0.001)	(0.002)	(0.002)	(0.001)	(0.010)	(0.001)	(0.002)	(0.002)	(0.002)
leverage	-0.015***	-0.004*	-0.009***	-0.009***	-0.004*	-0.037***	-0.000	-0.002	-0.001	-0.000	0.012	0.007	0.007	0.007	0.007
	(0.005)	(0.002)	(0.002)	(0.002)	(0.002)	(0.009)	(0.001)	(0.002)	(0.002)	(0.001)	(0.009)	(0.004)	(0.005)	(0.004)	(0.004)
w_roa	0.019***	0.019***	0.019***	0.019***	0.019***	-0.158***	-0.162***	-0.162***	-0.161***	-0.162***	0.005	0.011	0.011	0.011	0.011
	(0.007)	(0.007)	(0.007)	(0.007)	(0.007)	(0.012)	(0.013)	(0.013)	(0.013)	(0.013)	(0.016)	(0.016)	(0.016)	(0.016)	(0.016)
Wmtb	0.001***	0.001***	0.001***	0.001***	0.001***	0.001***	0.001***	0.001***	0.001***	0.001***	-0.000*	-0.000*	-0.000*	-0.000*	-0.000*
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
cheAT	-0.023***	-0.032***	-0.028***	-0.027***	-0.032***	0.073***	0.064***	0.066***	0.066***	0.065***	-0.158***	-0.159***	-0.159***	-0.159***	-0.159***
	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.007)	(0.007)	(0.007)	(0.007)	(0.007)	(0.008)	(0.008)	(0.008)	(0.008)	(0.008)
w_ret1	-0.000***	-0.000***	-0.000***	-0.000***	-0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000	-0.000	-0.000	-0.000	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
w_salesG	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.001***	0.001***	0.001***	0.001***	0.001***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
lnAge	-0.015***	-0.020***	-0.015***	-0.015***	-0.020***	-0.002	0.001	0.002	0.002	0.001	-0.009***	-0.011***	-0.011***	-0.011***	-0.011***
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.003)	(0.002)	(0.003)	(0.003)	(0.002)
BC_Gov	-0.006*	-0.010***	-0.008***	-0.008***	-0.010***	0.005	-0.011***	-0.010***	-0.010***	-0.011***	0.003	0.006	0.006	0.006*	0.006
	(0.003)	(0.002)	(0.002)	(0.002)	(0.002)	(0.005)	(0.003)	(0.003)	(0.003)	(0.003)	(0.005)	(0.004)	(0.004)	(0.004)	(0.004)
PU		-0.000***	-0.000***		-0.000***		-0.000***	-0.000**		-0.000**		-0.000***	-0.000***		-0.000***
		(0.000)	(0.000)		(0.000)		(0.000)	(0.000)		(0.000)		(0.000)	(0.000)		(0.000)
OCbhat_PU			0.000					-0.000					0.000		
			(0.000)					(0.000)					(0.000)		
quartilePU_1				0.004***					-0.001					0.009***	
				(0.002)					(0.001)					(0.003)	
quartilePU_4				-0.002**					-0.003***					-0.001	
				(0.001)					(0.001)					(0.002)	
quartileOCbhat_PU1				0.003					-0.003					-0.007	
				(0.002)					(0.003)					(0.004)	
quartileOCbhat_PU4				0.001					0.001					0.005	
				(0.002)					(0.002)					(0.004)	
quartileOCbhat_1					-0.005					-0.008					-0.016
					(0.006)					(0.006)					(0.013)
quartileOCbhat_4					-0.000					0.005					-0.010
					(0.006)					(0.005)					(0.013)
quartileOCbhat_1_PU					0.000					0.000					0.000
					(0.000)					(0.000)					(0.000)
quartileOCbhat_4_PU					0.000					-0.000					0.000
					(0.000)					(0.000)					(0.000)
Constant	0.185***	0.361***	0.257***	0.243***	0.357***	-0.356***	0.055***	0.027	0.022	0.047***	0.127	0.069***	0.073*	0.050	0.069**
	(0.061)	(0.017)	(0.030)	(0.029)	(0.019)	(0.100)	(0.010)	(0.024)	(0.024)	(0.012)	(0.091)	(0.023)	(0.037)	(0.035)	(0.027)
Observations	30,496	30,496	30,496	30,496	30,496	30,695	30,695	30,695	30,695	30,695	29,676	29,676	29,676	29,676	29,676
Number of gvkeynum	4,494	4,494	4,494	4,494	4,494	4,507	4,507	4,507	4,507	4,507	4,456	4,456	4,456	4,456	4,456
R-Squared	0.205	0.194	0.199	0.199	0.195	0.398	0.395	0.395	0.395	0.395	0.0865	0.0830	0.0831	0.0832	0.0831

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table A1.1 Panel B2 - 2SLS - OCb - Risk 2

VARIABLES	(1) sdROA5	(2) sdROA5	(3) sdROA5	(4) sdROA5	(5) sdROA5	(6) sdebitdaAT5	(7) sdebitdaAT5	(8) sdebitdaAT5	(9) sdebitdaAT5	(10) sdebitdaAT5
OCbhat	-0.012		0.018	0.005		0.008		0.071***	0.055***	
	(0.029)		(0.012)	(0.012)		(0.034)		(0.014)	(0.014)	
lnAT	-0.012	-0.010***	-0.006	-0.008**	-0.008***	-0.002	-0.005**	0.013***	0.011**	-0.004
	(0.008)	(0.002)	(0.004)	(0.004)	(0.002)	(0.009)	(0.002)	(0.005)	(0.005)	(0.002)
leverage	0.014	0.011	0.009	0.010	0.011	0.040***	0.041***	0.029***	0.031***	0.040***
	(0.009)	(0.008)	(0.008)	(0.008)	(0.008)	(0.011)	(0.009)	(0.009)	(0.010)	(0.009)
w_roa	-0.061***	-0.061***	-0.062***	-0.060***	-0.062***	-0.030	-0.031	-0.030	-0.029	-0.031
	(0.019)	(0.019)	(0.019)	(0.019)	(0.019)	(0.021)	(0.021)	(0.021)	(0.021)	(0.021)
Wmtb	0.000	0.000	0.000	0.000	0.000	0.000**	0.000**	0.000**	0.000**	0.000**
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
cheAT	0.057***	0.057***	0.058***	0.058***	0.057***	0.036***	0.033**	0.038***	0.038***	0.034***
	(0.012)	(0.012)	(0.012)	(0.012)	(0.012)	(0.013)	(0.013)	(0.013)	(0.013)	(0.013)
w_ret1	-0.000	0.000	0.000	0.000	0.000	-0.000	-0.000	-0.000	-0.000	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
w_salesG	0.000***	0.000***	0.000***	0.000***	0.000***	0.000*	0.000*	0.000*	0.000*	0.000*
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
lnAge	-0.023***	-0.025***	-0.021***	-0.024***	-0.024***	-0.029***	-0.048***	-0.026***	-0.030***	-0.047***
	(0.006)	(0.004)	(0.005)	(0.005)	(0.004)	(0.006)	(0.005)	(0.006)	(0.006)	(0.005)
BC_Gov	-0.008	-0.006	-0.005	-0.006	-0.006	-0.006	-0.006	-0.001	-0.001	-0.005
	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.006)	(0.005)	(0.005)	(0.005)	(0.005)
PU		0.000***	0.000***		0.000***		0.000***	0.000***		0.000***
		(0.000)	(0.000)		(0.000)		(0.000)	(0.000)		(0.000)
OCbhat_PU			-0.000					-0.000		
			(0.000)					(0.000)		
quartilePU_1				-0.014***					-0.018***	
				(0.002)					(0.002)	
quartilePU_4				0.001					0.001	
				(0.001)					(0.001)	
quartileOCbhat_PU1				0.002					0.001	
				(0.004)					(0.004)	
quartileOCbhat_PU4				0.004					0.004	
				(0.005)					(0.005)	
quartileOCbhat_1					-0.010					-0.010
					(0.006)					(0.007)
quartileOCbhat_4					0.007					0.010
					(0.014)					(0.015)
quartileOCbhat_1_PU					0.000*					0.000
					(0.000)					(0.000)
quartileOCbhat_4_PU					0.000					0.000
					(0.000)					(0.000)
Constant	0.346***	0.318***	0.263***	0.321***	0.304***	0.398***	0.540***	0.228***	0.300***	0.522***
	(0.074)	(0.032)	(0.060)	(0.060)	(0.035)	(0.085)	(0.037)	(0.068)	(0.068)	(0.040)
Observations	15,821	15,821	15,821	15,821	15,821	15,782	15,782	15,782	15,782	15,782
Number of gvkeynum	2,142	2,142	2,142	2,142	2,142	2,139	2,139	2,139	2,139	2,139
R-Squared	0.152	0.149	0.151	0.151	0.152	0.0762	0.0645	0.0740	0.0756	0.0666

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table A1.1 Panel C1 - 2SLS - OCc - Risk 1

VARIABLES	(1) capexAT	(2) capexAT	(3) capexAT	(4) capexAT	(5) capexAT	(6) xrdAT	(7) xrdAT	(8) xrdAT	(9) xrdAT	(10) xrdAT	(11) aqcAT	(12) aqcAT	(13) aqcAT	(14) aqcAT	(15) aqcAT
OCchat	-0.113		0.021	0.073		-1.011		-0.677	-0.649		-0.498		-0.417*	-0.310	
	(0.085)		(0.080)	(0.074)		(0.798)		(0.426)	(0.403)		(0.429)		(0.231)	(0.219)	
lnAT	-0.005	-0.000	0.003	0.004	0.000	-0.061	-0.009***	-0.045**	-0.044**	-0.009***	-0.011	0.013***	-0.005	-0.003	0.011***
	(0.004)	(0.001)	(0.004)	(0.004)	(0.001)	(0.040)	(0.001)	(0.022)	(0.021)	(0.001)	(0.022)	(0.001)	(0.012)	(0.012)	(0.002)
leverage	0.000	-0.004*	-0.006**	-0.006**	-0.004*	0.031	-0.000	0.020*	0.020	-0.000	0.022	0.007	0.017**	0.016**	0.007
	(0.003)	(0.002)	(0.003)	(0.003)	(0.002)	(0.025)	(0.001)	(0.012)	(0.012)	(0.001)	(0.014)	(0.004)	(0.008)	(0.008)	(0.005)
w_roa	0.022***	0.019***	0.017**	0.016**	0.019***	-0.123***	-0.162***	-0.135***	-0.135***	-0.161***	0.025	0.011	0.024	0.023	0.012
	(0.007)	(0.007)	(0.007)	(0.007)	(0.007)	(0.028)	(0.013)	(0.015)	(0.014)	(0.013)	(0.020)	(0.016)	(0.017)	(0.016)	(0.016)
Wmtb	0.001***	0.001***	0.001***	0.001***	0.001***	0.001***	0.001***	0.001***	0.001***	0.001***	-0.000	-0.000*	-0.000	-0.000	-0.000*
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
cheAT	-0.024***	-0.032***	-0.032***	-0.032***	-0.031***	0.071***	0.064***	0.062***	0.062***	0.064***	-0.155***	-0.159***	-0.160***	-0.160***	-0.159***
	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.007)	(0.007)	(0.007)	(0.007)	(0.007)	(0.008)	(0.008)	(0.008)	(0.008)	(0.008)
w_ret1	-0.000***	-0.000***	-0.000***	-0.000***	-0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000	-0.000	-0.000	-0.000	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
w_salesG	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.001***	0.001***	0.001***	0.001***	0.001***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
lnAge	-0.013***	-0.020***	-0.020***	-0.020***	-0.020***	0.003	0.001	-0.005	-0.005	0.001	-0.009***	-0.011***	-0.013***	-0.014***	-0.011***
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.003)	(0.002)	(0.004)	(0.004)	(0.002)	(0.003)	(0.002)	(0.003)	(0.003)	(0.002)
BC_Gov	-0.012***	-0.010***	-0.009***	-0.009***	-0.010***	-0.022**	-0.011***	-0.017***	-0.017***	-0.011***	0.000	0.006	0.003	0.003	0.006
	(0.003)	(0.002)	(0.002)	(0.002)	(0.002)	(0.009)	(0.003)	(0.004)	(0.004)	(0.003)	(0.006)	(0.004)	(0.004)	(0.004)	(0.004)
PU		-0.000***	-0.000***		-0.000		-0.000***	-0.000		-0.000		-0.000***	-0.000***		-0.000
		(0.000)	(0.000)		(0.000)		(0.000)	(0.000)		(0.000)		(0.000)	(0.000)		(0.000)
OCchat_PU			0.000**					0.000					0.000**		
			(0.000)					(0.000)					(0.000)		
quartilePU_1				0.004**					-0.001					0.010***	
				(0.002)					(0.001)					(0.004)	
quartilePU_4				-0.003***					-0.004***					-0.002	
				(0.001)					(0.001)					(0.003)	
quartileOCchat_PU1				-0.001					0.007**					-0.001	
				(0.002)					(0.003)					(0.005)	
quartileOCchat_PU4				0.001					0.002					0.001	
				(0.002)					(0.002)					(0.004)	
quartileOCchat_1					0.022**					0.020**					0.042**
					(0.009)					(0.009)					(0.017)
quartileOCchat_4					0.006					0.008					-0.004
					(0.004)					(0.007)					(0.012)
quartileOCchat_1_PU					-0.000***					-0.000					-0.000**
					(0.000)					(0.000)					(0.000)
quartileOCchat_4_PU					-0.000					-0.000					-0.000
					(0.000)					(0.000)					(0.000)
Constant	0.362***	0.361***	0.338***	0.313***	0.351***	0.475	0.055***	0.392*	0.373*	0.049***	0.276	0.069***	0.253**	0.205*	0.067***
	(0.040)	(0.017)	(0.044)	(0.041)	(0.016)	(0.326)	(0.010)	(0.207)	(0.197)	(0.009)	(0.177)	(0.023)	(0.112)	(0.106)	(0.023)
Observations	30,496	30,496	30,496	30,496	30,496	30,695	30,695	30,695	30,695	30,695	29,676	29,676	29,676	29,676	29,676
Number of gvkeynum	4,494	4,494	4,494	4,494	4,494	4,507	4,507	4,507	4,507	4,507	4,456	4,456	4,456	4,456	4,456
R-Squared	0.205	0.194	0.195	0.195	0.195	0.399	0.395	0.394	0.394	0.395	0.0869	0.0830	0.0842	0.0842	0.0836

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table A1.1 Panel C2 - 2SLS - OCc - Risk 2

VARIABLES	(1) sdROA5	(2) sdROA5	(3) sdROA5	(4) sdROA5	(5) sdROA5	(6) sdebitdaAT5	(7) sdebitdaAT5	(8) sdebitdaAT5	(9) sdebitdaAT5	(10) sdebitdaAT5
OCchat	0.342		0.158	0.113		0.418		0.725***	0.699***	
	(0.416)		(0.160)	(0.160)		(0.443)		(0.178)	(0.178)	
lnAT	0.008	-0.010***	-0.003	-0.003	-0.009***	0.018	-0.005**	0.032***	0.032***	-0.004*
	(0.021)	(0.002)	(0.008)	(0.008)	(0.002)	(0.022)	(0.002)	(0.009)	(0.009)	(0.002)
leverage	0.001	0.011	0.007	0.007	0.011	0.029*	0.041***	0.019*	0.019*	0.041***
	(0.016)	(0.008)	(0.009)	(0.009)	(0.008)	(0.017)	(0.009)	(0.010)	(0.011)	(0.009)
w_roa	-0.072***	-0.061***	-0.066***	-0.064***	-0.062***	-0.044*	-0.031	-0.054**	-0.052**	-0.031
	(0.021)	(0.019)	(0.021)	(0.020)	(0.019)	(0.023)	(0.021)	(0.023)	(0.022)	(0.021)
Wmtb	0.000	0.000	0.000	0.000	0.000	0.000*	0.000**	0.000*	0.000*	0.000*
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
cheAT	0.056***	0.057***	0.057***	0.057***	0.057***	0.035**	0.033**	0.034***	0.034***	0.034**
	(0.013)	(0.012)	(0.012)	(0.012)	(0.012)	(0.014)	(0.013)	(0.013)	(0.013)	(0.013)
w_ret1	0.000	0.000	0.000	0.000	0.000	-0.000	-0.000	-0.000	-0.000	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
w_salesG	0.000**	0.000***	0.000**	0.000***	0.000***	0.000	0.000*	0.000	0.000	0.000*
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
lnAge	-0.023***	-0.025***	-0.023***	-0.024***	-0.025***	-0.029***	-0.048***	-0.036***	-0.037***	-0.048***
	(0.006)	(0.004)	(0.004)	(0.004)	(0.004)	(0.007)	(0.005)	(0.005)	(0.005)	(0.005)
BC_Gov	-0.002	-0.006	-0.005	-0.005	-0.006	-0.001	-0.006	0.003	0.003	-0.005
	(0.006)	(0.005)	(0.005)	(0.005)	(0.005)	(0.007)	(0.005)	(0.006)	(0.006)	(0.005)
PU		0.000***	0.000***		0.000***		0.000***	0.000***		0.000***
		(0.000)	(0.000)		(0.000)		(0.000)	(0.000)		(0.000)
OCchat_PU			-0.000					-0.000		
			(0.000)					(0.000)		
quartilePU_1				-0.014***					-0.019***	
				(0.002)					(0.002)	
quartilePU_4				0.001					0.001	
				(0.001)					(0.001)	
quartileOCchat_PU1				-0.001					-0.001	
				(0.002)					(0.003)	
quartileOCchat_PU4				0.003					0.002	
				(0.004)					(0.004)	
quartileOCchat_1					0.002					0.006
					(0.006)					(0.007)
quartileOCchat_4					0.017					0.023*
					(0.013)					(0.014)
quartileOCchat_1_PU					0.000					-0.000
					(0.000)					(0.000)
quartileOCchat_4_PU					-0.000					-0.000
					(0.000)					(0.000)
Constant	0.179	0.318***	0.237***	0.280***	0.312***	0.239	0.540***	0.134	0.179*	0.528***
	(0.165)	(0.032)	(0.083)	(0.082)	(0.031)	(0.178)	(0.037)	(0.093)	(0.092)	(0.036)
Observations	15,821	15,821	15,821	15,821	15,821	15,782	15,782	15,782	15,782	15,782
Number of gvkeynum	2,142	2,142	2,142	2,142	2,142	2,139	2,139	2,139	2,139	2,139
R-Squared	0.151	0.149	0.150	0.151	0.150	0.0758	0.0645	0.0702	0.0722	0.0650

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table A1.1 Panel D1 - 2SLS - FE- Risk 1

VARIABLES	(1) capexAT	(2) capexAT	(3) capexAT	(4) capexAT	(5) capexAT	(6) xrdAT	(7) xrdAT	(8) xrdAT	(9) xrdAT	(10) xrdAT	(11) aqcAT	(12) aqcAT	(13) aqcAT	(14) aqcAT	(15) aqcAT
FEhat	-0.133*		-0.023	0.015		-1.179**		-0.365	-0.417*		-0.534*		-0.140	-0.174	
	(0.076)		(0.046)	(0.029)		(0.600)		(0.299)	(0.224)		(0.312)		(0.196)	(0.135)	
lnAT	0.006**	-0.000	-0.001	-0.001	-0.001	0.032	-0.009***	0.003	0.005	-0.008***	0.032***	0.013***	0.018***	0.019***	0.014***
	(0.003)	(0.001)	(0.001)	(0.001)	(0.001)	(0.021)	(0.001)	(0.007)	(0.008)	(0.001)	(0.011)	(0.001)	(0.004)	(0.004)	(0.002)
leverage	-0.003	-0.004*	-0.004*	-0.004**	-0.004*	0.003*	-0.000	0.001	0.001	-0.000	0.008*	0.007	0.007	0.007	0.007
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.001)	(0.001)	(0.001)	(0.001)	(0.004)	(0.004)	(0.005)	(0.005)	(0.004)
w_roa	0.041***	0.019***	0.016**	0.016**	0.015**	0.046	-0.162***	-0.108***	-0.100***	-0.157***	0.099*	0.011	0.034	0.034	0.010
	(0.014)	(0.007)	(0.007)	(0.007)	(0.007)	(0.098)	(0.013)	(0.025)	(0.026)	(0.012)	(0.053)	(0.016)	(0.021)	(0.022)	(0.016)
Wmtb	0.001***	0.001***	0.001***	0.001***	0.001***	0.001***	0.001***	0.001***	0.001***	0.001***	-0.000*	-0.000*	-0.000	-0.000	-0.000*
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
cheAT	-0.020***	-0.032***	-0.032***	-0.032***	-0.032***	0.107***	0.064***	0.072***	0.073***	0.065***	-0.139***	-0.159***	-0.156***	-0.156***	-0.159***
	(0.005)	(0.004)	(0.004)	(0.004)	(0.004)	(0.021)	(0.007)	(0.007)	(0.008)	(0.007)	(0.013)	(0.008)	(0.008)	(0.008)	(0.008)
w_ret1	-0.000***	-0.000***	-0.000***	-0.000***	-0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000	-0.000	-0.000	-0.000	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
w_salesG	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.001***	0.001***	0.001***	0.001***	0.001***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
lnAge	-0.012***	-0.020***	-0.021***	-0.021***	-0.021***	0.012*	0.001	0.002	0.002	0.001	-0.005	-0.011***	-0.011***	-0.010***	-0.011***
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.007)	(0.002)	(0.002)	(0.002)	(0.002)	(0.004)	(0.002)	(0.002)	(0.002)	(0.002)
BC_Gov	-0.011***	-0.010***	-0.010***	-0.010***	-0.010***	-0.018***	-0.011***	-0.013***	-0.013***	-0.011***	0.002	0.006	0.005	0.005	0.006
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.004)	(0.003)	(0.003)	(0.003)	(0.003)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)
PU		-0.000***	-0.000***		-0.000**		-0.000***	-0.000		-0.000*		-0.000***	-0.000		-0.000**
		(0.000)	(0.000)		(0.000)		(0.000)	(0.000)		(0.000)		(0.000)	(0.000)		(0.000)
FEhat_PU			0.000*					0.000					-0.000		
			(0.000)					(0.000)					(0.000)		
quartilePU_1				0.004**					-0.003**					0.012***	
				(0.002)					(0.002)					(0.004)	
quartilePU_4				-0.003**					-0.014**					-0.004	
				(0.001)					(0.007)					(0.005)	
quartileFEhat_PU1				0.000					-0.004					-0.011**	
				(0.002)					(0.005)					(0.006)	
quartileFEhat_PU4				0.002					0.013*					-0.001	
				(0.002)					(0.007)					(0.006)	
quartileFEhat_1					0.006					0.011					-0.014
					(0.006)					(0.007)					(0.011)
quartileFEhat_4					0.003					0.012*					-0.002
					(0.005)					(0.007)					(0.013)
quartileFEhat_1_PU					-0.000*					-0.000					0.000
					(0.000)					(0.000)					(0.000)
quartileFEhat_4_PU					0.000					-0.000					-0.000
					(0.000)					(0.000)					(0.000)
Constant	0.319***	0.361***	0.375***	0.352***	0.367***	0.100***	0.055***	0.082*	0.085***	0.047***	0.088***	0.069***	0.073*	0.071***	0.067**
	(0.020)	(0.017)	(0.019)	(0.016)	(0.018)	(0.019)	(0.010)	(0.047)	(0.019)	(0.012)	(0.028)	(0.023)	(0.043)	(0.023)	(0.027)
Observations	30,496	30,496	30,496	30,496	30,496	30,695	30,695	30,695	30,695	30,695	29,676	29,676	29,676	29,676	29,676
Number of gvkeynum	4,494	4,494	4,494	4,494	4,494	4,507	4,507	4,507	4,507	4,507	4,456	4,456	4,456	4,456	4,456
R-Squared	0.205	0.194	0.194	0.194	0.195	0.422	0.395	0.402	0.403	0.394	0.0892	0.0830	0.0837	0.0840	0.0834

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table A1.1 Panel D2 - 2SLS - FE - Risk 2

VARIABLES	(1) sdROA5	(2) sdROA5	(3) sdROA5	(4) sdROA5	(5) sdROA5	(6) sdebitdaAT5	(7) sdebitdaAT5	(8) sdebitdaAT5	(9) sdebitdaAT5	(10) sdebitdaAT5
FEhat	0.400		0.065	0.019		0.454		0.059	0.007	
	(0.624)		(0.051)	(0.035)		(0.634)		(0.052)	(0.035)	
lnAT	-0.023	-0.010***	-0.011***	-0.010***	-0.010***	-0.020	-0.005**	-0.007***	-0.005*	-0.006***
	(0.022)	(0.002)	(0.002)	(0.002)	(0.002)	(0.023)	(0.002)	(0.002)	(0.003)	(0.002)
leverage	0.010	0.011	0.011	0.011	0.011	0.041***	0.041***	0.040***	0.041***	0.041***
	(0.008)	(0.008)	(0.008)	(0.008)	(0.008)	(0.010)	(0.009)	(0.009)	(0.009)	(0.009)
w_roa	-0.120	-0.061***	-0.067***	-0.062***	-0.063***	-0.097	-0.031	-0.038*	-0.029	-0.033
	(0.090)	(0.019)	(0.018)	(0.018)	(0.019)	(0.091)	(0.021)	(0.020)	(0.019)	(0.021)
Wmtb	0.000	0.000	0.000	0.000	0.000	0.000**	0.000**	0.000*	0.000*	0.000*
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
cheAT	0.045*	0.057***	0.056***	0.056***	0.057***	0.022	0.033**	0.032**	0.033**	0.033**
	(0.027)	(0.012)	(0.012)	(0.013)	(0.012)	(0.028)	(0.013)	(0.013)	(0.013)	(0.013)
w_ret1	-0.000	0.000	0.000	0.000	0.000	-0.000	-0.000	-0.000	-0.000	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
w_salesG	0.000	0.000***	0.000***	0.000***	0.000***	0.000	0.000*	0.000**	0.000**	0.000*
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
lnAge	-0.027***	-0.025***	-0.026***	-0.027***	-0.026***	-0.033***	-0.048***	-0.050***	-0.049***	-0.049***
	(0.009)	(0.004)	(0.004)	(0.005)	(0.004)	(0.009)	(0.005)	(0.005)	(0.005)	(0.005)
BC_Gov	-0.004	-0.006	-0.006	-0.006	-0.006	-0.003	-0.006	-0.005	-0.006	-0.006
	(0.006)	(0.005)	(0.005)	(0.005)	(0.005)	(0.007)	(0.005)	(0.005)	(0.005)	(0.005)
PU		0.000***	0.000**		0.000***		0.000***	0.000*		0.000***
		(0.000)	(0.000)		(0.000)		(0.000)	(0.000)		(0.000)
FEhat_PU			-0.000					-0.000		
			(0.000)					(0.000)		
quartilePU_1				-0.014***					-0.019***	
				(0.003)					(0.003)	
quartilePU_4				0.003					0.001	
				(0.002)					(0.002)	
quartileFEhat_PU1				-0.002					-0.001	
				(0.003)					(0.003)	
quartileFEhat_PU4				-0.003					-0.004**	
				(0.002)					(0.002)	
quartileFEhat_1					0.013*					0.010
					(0.007)					(0.008)
quartileFEhat_4					0.019***					0.016**
					(0.006)					(0.007)
quartileFEhat_1_PU					-0.000**					-0.000**
					(0.000)					(0.000)
quartileFEhat_4_PU					-0.000***					-0.000**
					(0.000)					(0.000)
Constant	0.306***	0.318***	0.320***	0.351***	0.319***	0.396***	0.540***	0.549***	0.568***	0.544***
	(0.043)	(0.032)	(0.033)	(0.035)	(0.034)	(0.050)	(0.037)	(0.038)	(0.040)	(0.039)
Observations	15,821	15,821	15,821	15,821	15,821	15,782	15,782	15,782	15,782	15,782
Number of gvkeynum	2,142	2,142	2,142	2,142	2,142	2,139	2,139	2,139	2,139	2,139
R-Squared	0.153	0.149	0.149	0.150	0.149	0.0768	0.0645	0.0642	0.0669	0.0643

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table A1.2 Panel A - 2SLS Financial Policy

VARIABLES	(1) leverage	(2) leverage	(3) leverage	(4) leverage	(5) leverage	(6) cheAT	(7) cheAT	(8) cheAT	(9) cheAT	(10) cheAT
OChat	4.871***		0.875*	0.944*		-0.596***		-0.038***	-0.049***	
	(0.222)		(0.511)	(0.562)		(0.075)		(0.013)	(0.012)	
lnAT	1.223***	0.033***	0.303*	0.301*	0.053***	-0.176***	-0.018***	-0.040***	-0.040***	-0.023***
	(0.056)	(0.002)	(0.158)	(0.155)	(0.004)	(0.019)	(0.002)	(0.004)	(0.004)	(0.002)
Wmtb	-0.000	-0.000	-0.001	-0.001	-0.001	0.001***	0.001***	0.001**	0.001**	0.001**
	(0.000)	(0.001)	(0.001)	(0.001)	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
w_roa	0.106***	-0.186	-0.084	-0.091	-0.142					
	(0.019)	(0.146)	(0.163)	(0.156)	(0.162)					
ppeAT	-0.162***	-0.211	-0.376	-0.359	-0.220					
	(0.025)	(0.275)	(0.356)	(0.342)	(0.296)					
w_ret1	-0.001***	0.000***	0.000***	0.000***	0.000***					
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)					
dpAT	0.242***	3.220	2.935	2.875	3.461					
	(0.064)	(2.730)	(2.205)	(2.147)	(2.954)					
PU		-0.000*	0.000**		-0.000		0.000	0.000		-0.000*
		(0.000)	(0.000)		(0.000)		(0.000)	(0.000)		(0.000)
OChat_PU			0.000					-0.000***		
			(0.000)					(0.000)		
quartilePU_1				-0.060					0.001	
				(0.050)					(0.003)	
quartilePU_4				0.125*					-0.004**	
				(0.071)					(0.002)	
quartileOChat_PU1				0.135					0.003	
				(0.103)					(0.003)	
quartileOChat_PU4				-0.105					-0.007*	
				(0.076)					(0.004)	
quartileOChat_1					-0.074***					-0.018*
					(0.018)					(0.010)
quartileOChat_4					0.134***					0.020
					(0.051)					(0.015)
quartileOChat_1_PU					0.000					0.000**
					(0.000)					(0.000)
quartileOChat_4_PU					-0.000					-0.000
					(0.000)					(0.000)
ebitdaAT						0.070***	0.076***	0.078***	0.078***	0.075***
						(0.015)	(0.012)	(0.015)	(0.015)	(0.015)
w_nwcAT						-0.260***	-0.256***	-0.265***	-0.265***	-0.265***
						(0.014)	(0.011)	(0.014)	(0.014)	(0.014)
capexAT						-0.189***	-0.190***	-0.197***	-0.199***	-0.204***
						(0.024)	(0.023)	(0.023)	(0.024)	(0.024)
leverage						-0.069***	-0.191***	-0.183***	-0.183***	-0.188***
						(0.021)	(0.012)	(0.015)	(0.015)	(0.015)
sdebitdaAT5						0.048***	0.016	0.054***	0.054***	0.042**
						(0.018)	(0.016)	(0.018)	(0.018)	(0.018)
xrdsales						0.023***	0.026***	0.024***	0.024***	0.023***
						(0.007)	(0.007)	(0.008)	(0.008)	(0.008)
distdummy						-0.001	0.002	-0.002	-0.002	0.000
						(0.003)	(0.002)	(0.003)	(0.003)	(0.003)
aqcdummy						-0.026***	-0.024***	-0.025***	-0.025***	-0.026***
						(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Constant	-12.157***	0.258***	-2.058	-2.076	0.162***	1.798***	0.336***	0.500***	0.508***	0.380***
	(0.573)	(0.022)	(1.330)	(1.354)	(0.032)	(0.187)	(0.015)	(0.037)	(0.036)	(0.022)
Observations	30,618	53,760	30,618	30,618	30,618	15,429	29,203	15,429	15,429	15,429
Number of gvkeynum	4,499	7,102	4,499	4,499	4,499	2,101	3,546	2,101	2,101	2,101
R-Squared	0.719	0.114	0.246	0.253	0.121	0.481	0.478	0.504	0.504	0.505

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table A1.2 Panel B - 2SLS Financial Policy

VARIABLES	(1) leverage	(2) leverage	(3) leverage	(4) leverage	(5) leverage	(6) cheAT	(7) cheAT	(8) cheAT	(9) cheAT	(10) cheAT
OCbhat	4.871***		0.853*	1.015*		-0.596***		-0.042***	-0.049***	
	(0.222)		(0.481)	(0.607)		(0.075)		(0.013)	(0.012)	
lnAT	1.223***	0.033***	0.302*	0.299**	0.054***	-0.176***	-0.018***	-0.040***	-0.041***	-0.024***
	(0.056)	(0.002)	(0.158)	(0.150)	(0.004)	(0.019)	(0.002)	(0.004)	(0.004)	(0.003)
Wmtb	-0.000	-0.000	-0.001	-0.001	-0.001	0.001***	0.001***	0.001**	0.001**	0.001**
	(0.000)	(0.001)	(0.001)	(0.001)	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
w_roa	0.106***	-0.186	-0.084	-0.089	-0.146					
	(0.019)	(0.146)	(0.163)	(0.153)	(0.160)					
ppeAT	-0.162***	-0.211	-0.375	-0.361	-0.217					
	(0.025)	(0.275)	(0.355)	(0.337)	(0.293)					
w_ret1	-0.001***	0.000***	0.000***	0.000***	0.000***					
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)					
dpAT	0.242***	3.220	2.929	2.880	3.441					
	(0.064)	(2.730)	(2.198)	(2.108)	(2.949)					
PU		-0.000*	0.000*		-0.000		0.000	-0.000***		-0.000*
		(0.000)	(0.000)		(0.000)		(0.000)	(0.000)		(0.000)
OCbhat_PU			0.000					-0.000		
			(0.000)					(0.000)		
quartilePU_1				-0.026					0.003	
				(0.024)					(0.003)	
quartilePU_4				0.103*					-0.004***	
				(0.054)					(0.002)	
quartileOCbhat_PU1				0.193					0.001	
				(0.147)					(0.005)	
quartileOCbhat_PU4				-0.193					-0.008	
				(0.142)					(0.005)	
quartileOCbhat_1					-0.086***					-0.006
					(0.023)					(0.010)
quartileOCbhat_4					0.098***					0.005
					(0.025)					(0.014)
quartileOCbhat_1_PU					0.000**					0.000
					(0.000)					(0.000)
quartileOCbhat_4_PU					-0.000					-0.000
					(0.000)					(0.000)
ebitdaAT						0.070***	0.076***	0.077***	0.078***	0.074***
						(0.015)	(0.012)	(0.015)	(0.015)	(0.015)
w_nwcAT						-0.260***	-0.256***	-0.265***	-0.265***	-0.265***
						(0.014)	(0.011)	(0.014)	(0.014)	(0.014)
capexAT						-0.189***	-0.190***	-0.199***	-0.199***	-0.205***
						(0.024)	(0.023)	(0.024)	(0.023)	(0.024)
leverage						-0.069***	-0.191***	-0.183***	-0.183***	-0.188***
						(0.021)	(0.012)	(0.015)	(0.015)	(0.015)
sdebitdaAT5						0.048***	0.016	0.054***	0.054***	0.044**
						(0.018)	(0.016)	(0.018)	(0.018)	(0.018)
xrdsales						0.023***	0.026***	0.024***	0.024***	0.023***
						(0.007)	(0.007)	(0.008)	(0.008)	(0.007)
distdummy						-0.001	0.002	-0.002	-0.002	0.000
						(0.003)	(0.002)	(0.003)	(0.003)	(0.003)
aqcdummy						-0.026***	-0.024***	-0.025***	-0.025***	-0.026***
						(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Constant	-10.845***	0.258***	-1.822	-1.727	0.106***	1.637***	0.336***	0.507***	0.498***	0.387***
	(0.514)	(0.022)	(1.198)	(1.113)	(0.033)	(0.167)	(0.015)	(0.033)	(0.033)	(0.023)
Observations	30,618	53,760	30,618	30,618	30,618	15,429	29,203	15,429	15,429	15,429
Number of gvkeynum	4,499	7,102	4,499	4,499	4,499	2,101	3,546	2,101	2,101	2,101
R-Squared	0.719	0.114	0.246	0.261	0.121	0.481	0.478	0.504	0.504	0.506

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table A1.2 Panel C - 2SLS Financial Policy

VARIABLES	(1) leverage	(2) leverage	(3) leverage	(4) leverage	(5) leverage	(6) cheAT	(7) cheAT	(8) cheAT	(9) cheAT	(10) cheAT
OCchat	21.889***		16.948***	16.953***		2.558***		0.302*	0.272	
	(5.949)		(6.137)	(6.194)		(0.254)		(0.170)	(0.167)	
lnAT	1.123***	0.033***	0.939***	0.926***	0.062***	0.105***	-0.018***	-0.012	-0.011	-0.023***
	(0.300)	(0.002)	(0.333)	(0.325)	(0.004)	(0.013)	(0.002)	(0.009)	(0.009)	(0.003)
Wmtb	-0.004***	-0.000	-0.003***	-0.003***	-0.001	0.000*	0.001***	0.001**	0.001**	0.001**
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
w_roa	-0.850***	-0.186	-0.679***	-0.678***	-0.156					
	(0.177)	(0.146)	(0.146)	(0.144)	(0.160)					
ppeAT	-0.154	-0.211	-0.363*	-0.350*	-0.218					
	(0.104)	(0.275)	(0.209)	(0.204)	(0.292)					
w_ret1	0.000***	0.000***	0.000***	0.000***	0.000***					
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)					
dpAT	1.556**	3.220	1.910*	1.888*	3.438					
	(0.734)	(2.730)	(0.987)	(0.976)	(2.934)					
PU		-0.000*	0.000***		-0.000		0.000	0.000***		-0.000***
		(0.000)	(0.000)		(0.000)		(0.000)	(0.000)		(0.000)
OCchat_PU			-0.000					-0.000***		
			(0.000)					(0.000)		
quartilePU_1				-0.063**					-0.003	
				(0.031)					(0.003)	
quartilePU_4				0.092***					0.003*	
				(0.032)					(0.002)	
quartileOCchat_PU1				0.087*					0.007**	
				(0.046)					(0.003)	
quartileOCchat_PU4				-0.063*					-0.014***	
				(0.033)					(0.004)	
quartileOCchat_1					-0.080***					-0.039***
					(0.019)					(0.010)
quartileOCchat_4					0.109***					-0.007
					(0.024)					(0.015)
quartileOCchat_1_PU					0.000					0.000***
					(0.000)					(0.000)
quartileOCchat_4_PU					-0.000					0.000
					(0.000)					(0.000)
ebitdaAT						0.008	0.076***	0.070***	0.067***	0.075***
						(0.016)	(0.012)	(0.016)	(0.016)	(0.015)
w_nwcAT						-0.262***	-0.256***	-0.265***	-0.265***	-0.265***
						(0.014)	(0.011)	(0.014)	(0.014)	(0.014)
capexAT						-0.199***	-0.190***	-0.206***	-0.206***	-0.203***
						(0.024)	(0.023)	(0.024)	(0.024)	(0.024)
leverage						-0.260***	-0.191***	-0.193***	-0.194***	-0.189***
						(0.015)	(0.012)	(0.015)	(0.015)	(0.015)
sdebitdaAT5						0.057***	0.016	0.041**	0.042**	0.043**
						(0.018)	(0.016)	(0.018)	(0.018)	(0.018)
xrdsales						0.026***	0.026***	0.023***	0.023***	0.023***
						(0.008)	(0.007)	(0.007)	(0.007)	(0.007)
distdummy						-0.000	0.002	0.001	0.001	0.001
						(0.003)	(0.002)	(0.003)	(0.003)	(0.003)
aqcdummy						-0.025***	-0.024***	-0.026***	-0.026***	-0.026***
						(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Constant	-9.170***	0.258***	-7.198***	-7.020***	0.106***	-0.742***	0.336***	0.269***	0.268***	0.394***
	(2.577)	(0.022)	(2.708)	(2.643)	(0.032)	(0.110)	(0.015)	(0.073)	(0.072)	(0.022)
Observations	30,618	53,760	30,618	30,618	30,618	15,429	29,203	15,429	15,429	15,429
Number of gvkeynum	4,499	7,102	4,499	4,499	4,499	2,101	3,546	2,101	2,101	2,101
R-Squared	0.630	0.114	0.501	0.505	0.122	0.509	0.478	0.507	0.507	0.505

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table A1.2 Panel D - 2SLS Financial Policy

VARIABLES	(1) leverage	(2) leverage	(3) leverage	(4) leverage	(5) leverage	(6) cheAT	(7) cheAT	(8) cheAT	(9) cheAT	(10) cheAT
FEhat	1.230		0.546	0.489		2.853***		0.319***	0.407***	
	(1.281)		(0.547)	(0.366)		(0.247)		(0.068)	(0.038)	
lnAT	-0.004	0.033***	0.023	0.022	0.033***	-0.125***	-0.018***	-0.035***	-0.040***	-0.027***
	(0.045)	(0.002)	(0.014)	(0.014)	(0.006)	(0.009)	(0.002)	(0.003)	(0.003)	(0.003)
Wmtb	-0.001*	-0.000	-0.001	-0.001	-0.001	0.000**	0.001***	0.001**	0.001**	0.001**
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
w_roa	-0.360***	-0.186	-0.224**	-0.226**	-0.169					
	(0.079)	(0.146)	(0.102)	(0.104)	(0.145)					
ppeAT	-0.202	-0.211	-0.214	-0.213	-0.213					
	(0.285)	(0.275)	(0.297)	(0.297)	(0.296)					
w_ret1	0.000**	0.000***	0.000***	0.000***	0.000***					
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)					
dpAT	3.559	3.220	3.491	3.488	3.479					
	(2.992)	(2.730)	(2.972)	(2.972)	(2.967)					
PU		-0.000*	-0.000		-0.000*		0.000	0.000		-0.000
		(0.000)	(0.000)		(0.000)		(0.000)	(0.000)		(0.000)
FEhat_PU			-0.000					-0.000		
			(0.000)					(0.000)		
quartilePU_1				0.031**					0.011***	
				(0.015)					(0.003)	
quartilePU_4				-0.005					0.014***	
				(0.011)					(0.002)	
quartileFEhat_PU1				-0.010					0.000	
				(0.011)					(0.003)	
quartileFEhat_PU4				0.007					-0.010***	
				(0.007)					(0.002)	
quartileFEhat_1					-0.020					-0.007
					(0.035)					(0.012)
quartileFEhat_4					0.020					0.011
					(0.034)					(0.010)
quartileFEhat_1_PU					0.000					-0.000
					(0.000)					(0.000)
quartileFEhat_4_PU					0.000					-0.000
					(0.000)					(0.000)
ebitdaAT						-0.276***	0.076***	0.048***	0.037**	0.066***
						(0.036)	(0.012)	(0.015)	(0.015)	(0.015)
w_nwcAT						-0.238***	-0.256***	-0.266***	-0.264***	-0.265***
						(0.012)	(0.011)	(0.013)	(0.013)	(0.014)
capexAT						-0.157***	-0.190***	-0.201***	-0.197***	-0.207***
						(0.022)	(0.023)	(0.023)	(0.023)	(0.024)
leverage						-0.144***	-0.191***	-0.189***	-0.190***	-0.188***
						(0.013)	(0.012)	(0.015)	(0.014)	(0.015)
sdebitdaAT5						0.094***	0.016	0.051***	0.058***	0.046***
						(0.021)	(0.016)	(0.018)	(0.018)	(0.017)
xrdsales						0.033***	0.026***	0.025***	0.026***	0.024***
						(0.008)	(0.007)	(0.008)	(0.008)	(0.008)
distdummy						0.001	0.002	-0.001	-0.002	-0.000
						(0.003)	(0.002)	(0.003)	(0.003)	(0.003)
aqcdummy						-0.021***	-0.024***	-0.025***	-0.024***	-0.026***
						(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Constant	0.068	0.258***	0.153*	0.133***	0.252***	0.030	0.336***	0.362***	0.356***	0.408***
	(0.151)	(0.022)	(0.082)	(0.046)	(0.053)	(0.033)	(0.015)	(0.028)	(0.020)	(0.022)
Observations	30,618	53,760	30,618	30,618	30,618	15,429	29,203	15,429	15,429	15,429
Number of gvkeynum	4,499	7,102	4,499	4,499	4,499	2,101	3,546	2,101	2,101	2,101
R-Squared	0.125	0.114	0.120	0.120	0.119	0.589	0.478	0.514	0.516	0.509

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table A1.3 Panel A - 2SLS Payout

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
Dependent Variables	Dividend/Sales					Dividend/Net Income					Dividend+Buyback/Sales						Dividend+Buyback/Net Income			
OChat	-0.015*		-0.019***	-0.020***		-0.014		-0.175***	-0.189***		-0.058**		-0.046***	-0.040***		-0.318		-0.386***	-0.373***	
	(0.009)		(0.002)	(0.002)		(0.123)		(0.036)	(0.035)		(0.024)		(0.007)	(0.007)		(0.340)		(0.112)	(0.105)	
Wmtb	0.000	0.000	0.000	0.000	0.000	-0.001	-0.000	-0.000	-0.000	-0.000	0.000	0.000	0.000	0.000	0.000	0.004	0.004	0.003	0.004	0.004
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)
w_roa	0.003	0.004	0.003	0.003	0.004	0.227***	0.238***	0.230***	0.232***	0.235***	0.068***	0.067***	0.067***	0.066***	0.067***	1.651***	1.654***	1.648***	1.631***	1.655***
	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.038)	(0.037)	(0.038)	(0.038)	(0.037)	(0.013)	(0.013)	(0.013)	(0.013)	(0.013)	(0.133)	(0.131)	(0.131)	(0.131)	(0.131)
ebitdaAT	0.019**	0.017*	0.019*	0.019*	0.018*	0.023	0.002	0.020	0.018	0.005	0.045***	0.045***	0.047***	0.048***	0.044***	-0.130	-0.151	-0.124	-0.111	-0.154
	(0.010)	(0.010)	(0.010)	(0.010)	(0.010)	(0.048)	(0.049)	(0.049)	(0.049)	(0.049)	(0.014)	(0.014)	(0.014)	(0.014)	(0.014)	(0.131)	(0.131)	(0.131)	(0.131)	(0.131)
lnAT	-0.005*	-0.000	-0.006***	-0.006***	-0.000	0.002	0.010*	-0.042***	-0.041***	0.007	-0.009	0.007***	-0.004*	-0.005**	0.006***	-0.013	0.074***	-0.021	-0.024	0.072***
	(0.002)	(0.001)	(0.001)	(0.001)	(0.001)	(0.031)	(0.005)	(0.010)	(0.010)	(0.006)	(0.006)	(0.001)	(0.002)	(0.002)	(0.001)	(0.088)	(0.013)	(0.029)	(0.030)	(0.014)
reSEQ	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	0.000	0.000	0.000	0.000	0.000	-0.000	-0.000	-0.000	-0.000	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
cheAT	0.012***	0.014***	0.012***	0.012***	0.014***	0.045	0.056	0.040	0.041	0.055	0.056***	0.057***	0.054***	0.054***	0.057***	0.140	0.142	0.116	0.119	0.141
	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.035)	(0.035)	(0.035)	(0.035)	(0.035)	(0.010)	(0.010)	(0.010)	(0.010)	(0.010)	(0.106)	(0.106)	(0.106)	(0.106)	(0.106)
leverage	0.014***	0.011***	0.015***	0.015***	0.012***	0.068*	0.073***	0.103***	0.102***	0.075***	0.040***	0.030***	0.036***	0.037***	0.031***	0.360***	0.316***	0.371***	0.375***	0.316***
	(0.005)	(0.004)	(0.004)	(0.004)	(0.004)	(0.035)	(0.028)	(0.029)	(0.029)	(0.028)	(0.009)	(0.008)	(0.008)	(0.008)	(0.008)	(0.092)	(0.069)	(0.071)	(0.071)	(0.069)
lnAge	0.003***	0.009***	0.003***	0.003***	0.009***	0.036***	0.080***	0.042***	0.042***	0.077***	0.007***	0.015***	0.006**	0.007**	0.015***	0.074*	0.132***	0.077**	0.081**	0.130***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.014)	(0.012)	(0.013)	(0.013)	(0.012)	(0.003)	(0.002)	(0.003)	(0.003)	(0.002)	(0.038)	(0.033)	(0.036)	(0.036)	(0.033)
sdret1	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.001	-0.001	-0.001	-0.001	-0.001
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.001)	(0.000)	(0.000)	(0.001)
BC_Gov	-0.002	-0.001	-0.002**	-0.002**	-0.001	0.003	0.003	-0.013	-0.014	0.002	-0.012***	-0.007***	-0.011***	-0.011***	-0.008***	-0.090**	-0.063**	-0.094***	-0.095***	-0.063**
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.018)	(0.012)	(0.013)	(0.013)	(0.012)	(0.003)	(0.003)	(0.002)	(0.003)	(0.003)	(0.045)	(0.032)	(0.033)	(0.033)	(0.032)
PU		0.000*	0.000		0.000		0.000**	0.000		0.000		-0.000***	-0.000***		-0.000***		-0.000**	-0.000**		-0.000
		(0.000)	(0.000)		(0.000)		(0.000)	(0.000)		(0.000)		(0.000)	(0.000)		(0.000)		(0.000)	(0.000)		(0.000)
OChat_PU			-0.000					-0.000					0.000**					0.000		
			(0.000)					(0.000)					(0.000)					(0.000)		
quartilePU_1				0.000					-0.003					0.013***					0.150***	
				(0.001)					(0.010)					(0.002)					(0.039)	
quartilePU_4				0.000					0.003					-0.006***					-0.026	
				(0.001)					(0.010)					(0.001)					(0.032)	
quartileOChat_PU1				0.000					0.004					0.001					-0.018	
				(0.001)					(0.016)					(0.003)					(0.048)	
quartileOChat_PU4				0.001					0.013					0.000					0.016	
				(0.001)					(0.014)					(0.003)					(0.053)	
quartileOChat_1					0.000					-0.016					0.012					0.083
					(0.002)					(0.038)					(0.008)					(0.125)
quartileOChat_4					-0.003					-0.008					-0.014					0.021
					(0.003)					(0.040)					(0.010)					(0.156)
quartileOChat_1_PU					0.000					0.000					-0.000					-0.000
					(0.000)					(0.000)					(0.000)					(0.000)
quartileOChat_4_PU					0.000					-0.000					0.000					-0.000
					(0.000)					(0.000)					(0.000)					(0.000)
Constant	0.012	-0.070***	0.022*	0.023*	-0.066***	-0.324	-0.691***	0.044	0.078	-0.652***	0.037	-0.151***	0.032	-0.010	-0.143***	-0.494	-1.449***	-0.097	-0.357	-1.452***
	(0.023)	(0.009)	(0.012)	(0.012)	(0.009)	(0.302)	(0.112)	(0.162)	(0.164)	(0.112)	(0.063)	(0.022)	(0.034)	(0.034)	(0.022)	(0.859)	(0.300)	(0.468)	(0.470)	(0.305)
Observations	15,313	15,313	15,313	15,313	15,313	15,313	15,313	15,313	15,313	15,313	14,354	14,354	14,354	14,354	14,354	14,354	14,354	14,354	14,354	14,354
Number of gvkeynum	2,072	2,072	2,072	2,072	2,072	2,072	2,072	2,072	2,072	2,072	2,015	2,015	2,015	2,015	2,015	2,015	2,015	2,015	2,015	2,015
R-Squared	0.0807	0.0723	0.0790	0.0792	0.0726	0.0473	0.0418	0.0450	0.0451	0.0419	0.170	0.158	0.163	0.164	0.159	0.0505	0.0457	0.0467	0.0474	0.0457

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table A1.3 Panel B - 2SLS Payout

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
Dependent Variables	Dividend/Sales					Dividend/Net Income					Dividend+Buyback/Sales					Dividend+Buyback/Net Income				
OCbhat	-0.015*		-0.018***	-0.020***		-0.014		-0.158***	-0.205***		-0.058**		-0.052***	-0.042***		-0.318		-0.429***	-0.364***	
	(0.009)		(0.003)	(0.003)		(0.123)		(0.039)	(0.034)		(0.024)		(0.008)	(0.007)		(0.340)		(0.122)	(0.105)	
Wmtb	0.000	0.000	0.000	0.000	0.000	-0.001	-0.000	-0.000	-0.000	-0.000	0.000	0.000	0.000	0.000	0.000	0.004	0.004	0.003	0.004	0.004
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.004)	(0.004)	(0.004)	(0.003)	(0.003)
w_roa	0.003	0.004	0.003	0.003	0.004	0.227***	0.238***	0.230***	0.230***	0.237***	0.068***	0.067***	0.067***	0.065***	0.067***	1.651***	1.654***	1.648***	1.628***	1.657***
	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.038)	(0.037)	(0.038)	(0.038)	(0.037)	(0.013)	(0.013)	(0.013)	(0.013)	(0.013)	(0.133)	(0.131)	(0.132)	(0.131)	(0.131)
ebitdaAT	0.019**	0.017*	0.019*	0.019**	0.017*	0.023	0.002	0.018	0.019	0.003	0.045***	0.045***	0.048***	0.048***	0.045***	-0.130	-0.151	-0.121	-0.112	-0.149
	(0.010)	(0.010)	(0.010)	(0.010)	(0.010)	(0.048)	(0.049)	(0.049)	(0.049)	(0.049)	(0.014)	(0.014)	(0.014)	(0.014)	(0.014)	(0.131)	(0.131)	(0.131)	(0.130)	(0.131)
lnAT	-0.005*	-0.000	-0.006***	-0.006***	-0.000	0.002	0.010*	-0.041***	-0.042***	0.008	-0.009	0.007***	-0.004**	-0.005**	0.006***	-0.013	0.074***	-0.022	-0.024	0.071***
	(0.002)	(0.001)	(0.001)	(0.001)	(0.001)	(0.031)	(0.005)	(0.010)	(0.010)	(0.007)	(0.006)	(0.001)	(0.002)	(0.002)	(0.001)	(0.088)	(0.013)	(0.029)	(0.030)	(0.016)
reSEQ	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	0.000	0.000	0.000	0.000	0.000	-0.000	-0.000	-0.000	-0.000	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
cheAT	0.012***	0.014***	0.012***	0.012***	0.014***	0.045	0.056	0.040	0.042	0.055	0.056***	0.057***	0.053***	0.054***	0.057***	0.140	0.142	0.116	0.119	0.144
	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.035)	(0.035)	(0.035)	(0.035)	(0.035)	(0.010)	(0.010)	(0.010)	(0.010)	(0.010)	(0.106)	(0.106)	(0.106)	(0.106)	(0.106)
leverage	0.014***	0.011***	0.015***	0.015***	0.012***	0.068*	0.073***	0.102***	0.104***	0.075***	0.040***	0.030***	0.037***	0.037***	0.031***	0.360***	0.316***	0.372***	0.376***	0.318***
	(0.005)	(0.004)	(0.004)	(0.004)	(0.004)	(0.035)	(0.028)	(0.029)	(0.029)	(0.028)	(0.009)	(0.008)	(0.008)	(0.008)	(0.008)	(0.092)	(0.069)	(0.071)	(0.071)	(0.070)
lnAge	0.003***	0.009***	0.003***	0.003***	0.009***	0.036***	0.080***	0.042***	0.042***	0.078***	0.007***	0.015***	0.006**	0.007**	0.015***	0.074*	0.132***	0.077**	0.081**	0.131***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.014)	(0.012)	(0.013)	(0.013)	(0.012)	(0.003)	(0.002)	(0.003)	(0.003)	(0.002)	(0.038)	(0.033)	(0.036)	(0.036)	(0.034)
sdret1	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.001	-0.001	-0.001	-0.001	-0.001
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.001)	(0.000)	(0.000)	(0.001)
BC_Gov	-0.002	-0.001	-0.002**	-0.002**	-0.000	0.003	0.003	-0.013	-0.013	0.003	-0.012***	-0.007***	-0.011***	-0.011***	-0.008***	-0.090**	-0.063**	-0.095***	-0.095***	-0.064**
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.018)	(0.012)	(0.013)	(0.013)	(0.012)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.045)	(0.032)	(0.033)	(0.033)	(0.032)
PU		0.000*	0.000		0.000		0.000**	0.000		0.000		-0.000***	-0.000***		-0.000***		-0.000**	-0.000***		-0.000
		(0.000)	(0.000)		(0.000)		(0.000)	(0.000)		(0.000)		(0.000)	(0.000)		(0.000)		(0.000)	(0.000)		(0.000)
OCbhat_PU			-0.000					-0.000					0.000***					0.000		
			(0.000)					(0.000)					(0.000)					(0.000)		
quartilePU_1				0.000					0.003					0.014***					0.149***	
				(0.001)					(0.009)					(0.002)					(0.036)	
quartilePU_4				0.000					0.001					-0.006***					-0.025	
				(0.001)					(0.009)					(0.001)					(0.031)	
quartileOCbhat_PU1				-0.000					0.007					-0.000					0.024	
				(0.001)					(0.016)					(0.003)					(0.043)	
quartileOCbhat_PU4				0.002**					0.065***					0.004					0.041	
				(0.001)					(0.019)					(0.004)					(0.064)	
quartileOCbhat_1					0.000					-0.017					0.022***					0.143
					(0.002)					(0.034)					(0.008)					(0.121)
quartileOCbhat_4					0.005					0.066					-0.006					0.015
					(0.003)					(0.042)					(0.009)					(0.161)
quartileOCbhat_1_PU					0.000					0.000					-0.000***					-0.000
					(0.000)					(0.000)					(0.000)					(0.000)
quartileOCbhat_4_PU					-0.000					-0.000					0.000					0.000
					(0.000)					(0.000)					(0.000)					(0.000)
Constant	0.008	-0.070***	0.017	0.018	-0.071***	-0.327	-0.691***	0.010	0.034	-0.656***	0.021	-0.151***	0.011	-0.020	-0.151***	-0.580	-1.449***	-0.240	-0.477	-1.466***
	(0.020)	(0.009)	(0.011)	(0.012)	(0.010)	(0.272)	(0.112)	(0.155)	(0.154)	(0.121)	(0.057)	(0.022)	(0.032)	(0.033)	(0.023)	(0.776)	(0.300)	(0.442)	(0.440)	(0.331)
Observations	15,313	15,313	15,313	15,313	15,313	15,313	15,313	15,313	15,313	15,313	14,354	14,354	14,354	14,354	14,354	14,354	14,354	14,354	14,354	14,354
Number of gvkeynum	2,072	2,072	2,072	2,072	2,072	2,072	2,072	2,072	2,072	2,072	2,015	2,015	2,015	2,015	2,015	2,015	2,015	2,015	2,015	2,015
R-Squared	0.0807	0.0723	0.0790	0.0803	0.0741	0.0473	0.0418	0.0451	0.0469	0.0434	0.170	0.158	0.163	0.164	0.159	0.0505	0.0457	0.0468	0.0475	0.0458

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table A1.3 Panel C - 2SLS Payout

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
Dependent Variables	Dividend/Sales					Dividend/Net Income					Dividend+Buyback/Sales					Dividend+Buyback/Net Income				
OCchat	-0.039		-0.191***	-0.194***		-0.175		-1.577***	-1.744***		-0.355***		-0.503***	-0.459***		-2.436		-3.858***	-3.731***	
	(0.054)		(0.033)	(0.032)		(0.664)		(0.436)	(0.423)		(0.133)		(0.089)	(0.088)		(1.878)		(1.370)	(1.317)	
Wmtb	0.000	0.000	0.000	0.000	0.000	-0.001	-0.000	-0.000	-0.000	-0.000	0.000	0.000	0.000	0.000	0.000	0.004	0.004	0.004	0.004	0.004
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)
w_roa	0.005	0.004	0.009**	0.009**	0.004	0.232***	0.238***	0.283***	0.281***	0.231***	0.079***	0.067***	0.079***	0.079***	0.067***	1.724***	1.654***	1.749***	1.731***	1.651***
	(0.005)	(0.004)	(0.004)	(0.004)	(0.004)	(0.041)	(0.037)	(0.039)	(0.039)	(0.038)	(0.013)	(0.013)	(0.013)	(0.013)	(0.013)	(0.141)	(0.131)	(0.135)	(0.136)	(0.131)
ebitdaAT	0.019**	0.017*	0.019**	0.019**	0.018*	0.024	0.002	0.020	0.020	0.004	0.047***	0.045***	0.047***	0.049***	0.044***	-0.118	-0.151	-0.125	-0.102	-0.158
	(0.009)	(0.010)	(0.010)	(0.010)	(0.010)	(0.049)	(0.049)	(0.049)	(0.050)	(0.049)	(0.014)	(0.014)	(0.014)	(0.014)	(0.014)	(0.131)	(0.131)	(0.131)	(0.131)	(0.131)
lnAT	-0.003	-0.000	-0.010***	-0.010***	0.000	-0.003	0.010*	-0.079***	-0.076***	0.020***	-0.012*	0.007***	-0.015***	-0.017***	0.008***	-0.057	0.074***	-0.101	-0.109	0.090***
	(0.003)	(0.001)	(0.002)	(0.002)	(0.001)	(0.034)	(0.005)	(0.022)	(0.023)	(0.008)	(0.007)	(0.001)	(0.005)	(0.005)	(0.001)	(0.097)	(0.013)	(0.068)	(0.070)	(0.019)
reSEQ	-0.000	-0.000	-0.000**	-0.000**	-0.000	-0.000	-0.000	-0.000**	-0.000**	-0.000	-0.000	0.000	-0.000	-0.000	0.000	-0.000	-0.000	-0.000	-0.000	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
cheAT	0.013***	0.014***	0.014***	0.014***	0.014***	0.046	0.056	0.056	0.057	0.055	0.059***	0.057***	0.057***	0.057***	0.057***	0.159	0.142	0.146	0.151	0.143
	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.035)	(0.035)	(0.035)	(0.035)	(0.035)	(0.010)	(0.010)	(0.010)	(0.010)	(0.010)	(0.106)	(0.106)	(0.106)	(0.105)	(0.106)
leverage	0.012***	0.011***	0.017***	0.017***	0.011***	0.070**	0.073***	0.123***	0.121***	0.067**	0.040***	0.030***	0.043***	0.044***	0.030***	0.373***	0.316***	0.415***	0.422***	0.307***
	(0.004)	(0.004)	(0.004)	(0.005)	(0.004)	(0.033)	(0.028)	(0.032)	(0.032)	(0.028)	(0.008)	(0.008)	(0.008)	(0.008)	(0.008)	(0.086)	(0.069)	(0.078)	(0.079)	(0.069)
lnAge	0.003***	0.009***	0.006***	0.006***	0.009***	0.036***	0.080***	0.062***	0.061***	0.081***	0.007**	0.015***	0.010***	0.011***	0.016***	0.073*	0.132***	0.106***	0.109***	0.134***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.014)	(0.012)	(0.012)	(0.012)	(0.012)	(0.003)	(0.002)	(0.003)	(0.003)	(0.002)	(0.038)	(0.033)	(0.034)	(0.034)	(0.034)
sdret1	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000*	-0.000	-0.000*	-0.000*	-0.000	-0.001	-0.001	-0.001	-0.001	-0.001
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.001)	(0.000)	(0.000)	(0.001)
BC_Gov	-0.001	-0.001	-0.003**	-0.003**	-0.000	0.002	0.003	-0.018	-0.018	0.005	-0.011***	-0.007***	-0.013***	-0.013***	-0.007***	-0.090**	-0.063**	-0.104***	-0.109***	-0.059*
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.015)	(0.012)	(0.014)	(0.014)	(0.012)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.040)	(0.032)	(0.036)	(0.036)	(0.031)
PU		0.000*	0.000		0.000*		0.000**	0.000		0.000*		-0.000***	-0.000***		-0.000***		-0.000**	-0.000***		-0.000
		(0.000)	(0.000)		(0.000)		(0.000)	(0.000)		(0.000)		(0.000)	(0.000)		(0.000)		(0.000)	(0.000)		(0.000)
OCchat_PU			-0.000					-0.000					0.000***					0.000		
			(0.000)					(0.000)					(0.000)					(0.000)		
quartilePU_1				0.000					0.006					0.015***					0.168***	
				(0.001)					(0.010)					(0.002)					(0.040)	
quartilePU_4				0.000					0.006					-0.006***					-0.024	
				(0.001)					(0.010)					(0.001)					(0.031)	
quartileOCchat_PU1				0.001					-0.003					0.004					0.021	
				(0.001)					(0.014)					(0.003)					(0.045)	
quartileOCchat_PU4				0.001					0.039***					0.009***					0.127**	
				(0.001)					(0.014)					(0.003)					(0.050)	
quartileOCchat_1					0.001					-0.041					0.021**					0.112
					(0.002)					(0.037)					(0.009)					(0.128)
quartileOCchat_4					0.006*					0.102**					0.005					0.210
					(0.003)					(0.043)					(0.009)					(0.150)
quartileOCchat_1_PU					-0.000					0.000					-0.000***					-0.000
					(0.000)					(0.000)					(0.000)					(0.000)
quartileOCchat_4_PU					-0.000					-0.000					0.000					-0.000
					(0.000)					(0.000)					(0.000)					(0.000)
Constant	-0.008	-0.070***	0.035**	0.036**	-0.074***	-0.283	-0.691***	0.152	0.188	-0.754***	0.049	-0.151***	0.087*	0.047	-0.167***	-0.218	-1.449***	0.308	0.036	-1.610***
	(0.024)	(0.009)	(0.017)	(0.018)	(0.009)	(0.292)	(0.112)	(0.225)	(0.222)	(0.117)	(0.061)	(0.022)	(0.049)	(0.049)	(0.022)	(0.837)	(0.300)	(0.694)	(0.680)	(0.317)
Observations	15,313	15,313	15,313	15,313	15,313	15,313	15,313	15,313	15,313	15,313	14,354	14,354	14,354	14,354	14,354	14,354	14,354	14,354	14,354	14,354
Number of gvkeynum	2,072	2,072	2,072	2,072	2,072	2,072	2,072	2,072	2,072	2,072	2,015	2,015	2,015	2,015	2,015	2,015	2,015	2,015	2,015	2,015
R-Squared	0.0812	0.0723	0.0764	0.0773	0.0755	0.0473	0.0418	0.0434	0.0445	0.0433	0.170	0.158	0.162	0.163	0.159	0.0506	0.0457	0.0463	0.0476	0.0460

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table A1.3 Panel D - 2SLS Payout

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
Dependent Variables	Dividend/Sales					Dividend/Net Income					Dividend+Buyback/Sales					Dividend+Buyback/Net Income				
FEhat	-0.142***		-0.013	0.024**		-1.712***		-0.242	0.257		-1.052***		0.173***	0.038		-8.398***		0.957	0.960*	
	(0.048)		(0.015)	(0.011)		(0.501)		(0.226)	(0.165)		(0.258)		(0.050)	(0.029)		(2.614)		(0.929)	(0.545)	
Wmtb	0.000	0.000	0.000	0.000	0.000	-0.001	-0.000	-0.000	-0.000	-0.000	0.000	0.000	0.000	0.000	0.000	0.004	0.004	0.004	0.004	0.004
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.004)	(0.004)	(0.004)	(0.003)	(0.004)
w_roa	0.023***	0.004	0.003	0.001	0.004	0.463***	0.238***	0.232***	0.206***	0.230***	0.213***	0.067***	0.064***	0.061***	0.068***	2.812***	1.654***	1.647***	1.547***	1.661***
	(0.008)	(0.004)	(0.004)	(0.004)	(0.004)	(0.084)	(0.037)	(0.040)	(0.041)	(0.040)	(0.039)	(0.013)	(0.013)	(0.013)	(0.013)	(0.407)	(0.131)	(0.140)	(0.141)	(0.136)
ebitdaAT	0.022**	0.017*	0.017*	0.017*	0.017*	0.057	0.002	0.000	0.001	0.004	0.068***	0.045***	0.045***	0.045***	0.045***	0.019	-0.151	-0.149	-0.150	-0.143
	(0.009)	(0.010)	(0.010)	(0.010)	(0.010)	(0.052)	(0.049)	(0.049)	(0.049)	(0.049)	(0.016)	(0.014)	(0.014)	(0.014)	(0.014)	(0.145)	(0.131)	(0.131)	(0.133)	(0.131)
lnAT	0.004**	-0.000	-0.000	-0.001	-0.000	0.066***	0.010*	0.008	0.001	0.008	0.043***	0.007***	0.006***	0.005***	0.007***	0.363***	0.074***	0.073***	0.049**	0.076***
	(0.002)	(0.001)	(0.001)	(0.001)	(0.001)	(0.017)	(0.005)	(0.007)	(0.007)	(0.007)	(0.009)	(0.001)	(0.001)	(0.002)	(0.001)	(0.091)	(0.013)	(0.020)	(0.021)	(0.017)
reSEQ	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	0.000	0.000	0.000	0.000	0.000	-0.000	-0.000	-0.000	-0.000	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
cheAT	0.017***	0.014***	0.014***	0.013***	0.014***	0.101**	0.056	0.054	0.048	0.054	0.091***	0.057***	0.056***	0.056***	0.057***	0.421***	0.142	0.141	0.120	0.149
	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.040)	(0.035)	(0.036)	(0.036)	(0.035)	(0.013)	(0.010)	(0.010)	(0.010)	(0.010)	(0.141)	(0.106)	(0.108)	(0.108)	(0.106)
leverage	0.011***	0.011***	0.011***	0.011***	0.011***	0.069**	0.073***	0.072***	0.069**	0.072***	0.031***	0.030***	0.030***	0.030***	0.030***	0.317***	0.316***	0.316***	0.311***	0.316***
	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.028)	(0.028)	(0.028)	(0.027)	(0.028)	(0.008)	(0.008)	(0.008)	(0.008)	(0.008)	(0.069)	(0.069)	(0.069)	(0.069)	(0.069)
lnAge	0.004***	0.009***	0.009***	0.008***	0.009***	0.052***	0.080***	0.078***	0.069***	0.077***	0.016***	0.015***	0.015***	0.015***	0.015***	0.147***	0.132***	0.132***	0.114***	0.131***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.014)	(0.012)	(0.013)	(0.013)	(0.012)	(0.004)	(0.002)	(0.002)	(0.002)	(0.002)	(0.045)	(0.033)	(0.035)	(0.036)	(0.034)
sdret1	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000*	-0.000	-0.001	-0.001	-0.001	-0.001	-0.001
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.001)	(0.001)	(0.000)	(0.001)
BC_Gov	-0.001	-0.001	-0.000	-0.000	-0.001	-0.008	0.003	0.003	0.005	0.003	-0.014***	-0.007***	-0.007***	-0.007***	-0.007***	-0.119***	-0.063**	-0.063**	-0.057*	-0.064**
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.013)	(0.012)	(0.012)	(0.012)	(0.012)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.037)	(0.032)	(0.032)	(0.032)	(0.032)
PU		0.000*	-0.000		0.000		0.000**	-0.000		-0.000		-0.000***	0.000***		-0.000***		-0.000**	0.000		-0.000**
		(0.000)	(0.000)		(0.000)		(0.000)	(0.000)		(0.000)		(0.000)	(0.000)		(0.000)		(0.000)	(0.000)		(0.000)
FEhat_PU			0.000*					0.000*					-0.000***					-0.001		
			(0.000)					(0.000)					(0.000)					(0.001)		
quartilePU_1				0.000					-0.014					0.015***					0.116**	
				(0.001)					(0.013)					(0.003)					(0.052)	
quartilePU_4				0.002***					0.027**					-0.002					0.058	
				(0.001)					(0.011)					(0.002)					(0.036)	
quartileFEhat_PU1				0.001					0.023					-0.003					0.041	
				(0.001)					(0.015)					(0.003)					(0.054)	
quartileFEhat_PU4				0.000					0.007					-0.002					-0.062	
				(0.001)					(0.011)					(0.002)					(0.041)	
quartileFEhat_1					-0.001					-0.025					-0.009					-0.137
					(0.002)					(0.037)					(0.006)					(0.114)
quartileFEhat_4					-0.005**					-0.070**					0.019**					0.038
					(0.003)					(0.034)					(0.009)					(0.150)
quartileFEhat_1_PU					0.000					0.000					0.000**					0.000*
					(0.000)					(0.000)					(0.000)					(0.000)
quartileFEhat_4_PU					0.000**					0.000***					-0.000**					-0.000
					(0.000)					(0.000)					(0.000)					(0.000)
Constant	-0.018*	-0.070***	-0.062***	-0.061***	-0.069***	-0.290**	-0.691***	-0.579***	-0.602***	-0.628***	-0.058**	-0.151***	-0.201***	-0.172***	-0.156***	-0.913**	-1.449***	-1.760***	-1.598***	-1.434***
	(0.010)	(0.009)	(0.009)	(0.009)	(0.009)	(0.126)	(0.112)	(0.121)	(0.118)	(0.120)	(0.027)	(0.022)	(0.025)	(0.022)	(0.023)	(0.362)	(0.300)	(0.380)	(0.320)	(0.338)
Observations	15,313	15,313	15,313	15,313	15,313	15,313	15,313	15,313	15,313	15,313	14,354	14,354	14,354	14,354	14,354	14,354	14,354	14,354	14,354	14,354
Number of gvkeynum	2,072	2,072	2,072	2,072	2,072	2,072	2,072	2,072	2,072	2,072	2,015	2,015	2,015	2,015	2,015	2,015	2,015	2,015	2,015	2,015
R-Squared	0.0836	0.0723	0.0728	0.0743	0.0722	0.0484	0.0418	0.0420	0.0428	0.0427	0.177	0.158	0.159	0.160	0.160	0.0519	0.0457	0.0458	0.0467	0.0462

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table A1.4: Firm Value regression with dependent variable and controls following Fama & French (1998), and four variants of 2SLS instrumental variables for organization capital.

OC =	Perpetual Inventory		Industry Adj Perp Inventory		5 Year Str Line Dep.		Firm Effic (Demerjian, 2012)	
VARIABLES	wFVlevel	wFVlevel	wFVlevel	wFVlevel	wFVlevel	wFVlevel	wFVlevel	wFVlevel
OChat	0.3762***	0.2131***	0.2334	0.0940	2.6554***	1.6996***	1.8895	1.1543**
	(0.1174)	(0.0682)	(0.1453)	(0.0683)	(0.8574)	(0.4398)	(1.3633)	(0.5574)
dOChat	-0.1115	-0.0528	-0.0885	-0.0425	-0.9168	-0.9103	-0.7420	-0.0400
	(0.1090)	(0.0651)	(0.1231)	(0.0577)	(0.9157)	(0.6687)	(0.6769)	(0.3113)
dOChat2	-0.5671**	-0.3973	-0.6315**	-0.3737	-1.2615	-1.4371	-0.4396	0.1332
	(0.2573)	(0.2573)	(0.2604)	(0.2571)	(1.7105)	(1.2624)	(0.6476)	(0.5295)
quartilePU_1		-0.2981***		-0.1484***		-0.3079***		0.2356
		(0.0976)		(0.0489)		(0.0901)		(0.2442)
dquartilePU_1		0.2161***		0.1452***		0.1511***		0.0729
		(0.0406)		(0.0204)		(0.0380)		(0.0980)
dquartilePU_12		-0.1202**		0.0051		-0.1389***		0.1881
		(0.0475)		(0.0229)		(0.0422)		(0.1182)
quartilePU_4		-0.1645***		-0.1258***		-0.2210***		-0.2547*
		(0.0501)		(0.0275)		(0.0510)		(0.1503)
dquartilePU_42		0.0147		-0.0583***		-0.0397		-0.2959***
		(0.0334)		(0.0177)		(0.0327)		(0.1046)
OChat_quartilePU_1		0.1526***		0.2789***		1.2860***		-0.4589
		(0.0480)		(0.0649)		(0.3612)		(0.7611)
dOChat_quartilePU_1		-0.0615***		-0.0711***		-0.2609*		-0.1158
		(0.0194)		(0.0269)		(0.1531)		(0.3018)
dOChat_quartilePU_12		0.0777***		0.1157***		0.7571***		-0.2457
		(0.0243)		(0.0324)		(0.1725)		(0.3760)
OChat_quartilePU_4		0.1438***		0.3267***		1.3429***		0.4542
		(0.0339)		(0.0655)		(0.2749)		(0.4498)
dOChat_quartilePU_4		-0.0689***		-0.0913***		-0.5587***		-0.1740***
		(0.0102)		(0.0265)		(0.0897)		(0.0608)
dOChat_quartilePU_42		-0.0208		0.0547*		-0.0111		0.4500
		(0.0199)		(0.0322)		(0.1551)		(0.3032)
PU	0.0003**		0.0003***		0.0002*		0.0004	
	(0.0001)		(0.0001)		(0.0001)		(0.0003)	
dPU	-0.0004***		-0.0004***		-0.0003***		-0.0004***	
	(0.0001)		(0.0000)		(0.0001)		(0.0001)	
dPU2	0.0002***		0.0001***		0.0001***		-0.0001	
	(0.0001)		(0.0000)		(0.0001)		(0.0001)	
OChat_PU	-0.0000		0.0001		0.0000		-0.0012	
	(0.0001)		(0.0001)		(0.0005)		(0.0010)	
dOChat_PU	0.0000		0.0000		-0.0001		0.0007*	
	(0.0000)		(0.0000)		(0.0002)		(0.0004)	
dOChat_PU2	-0.0000		0.0000		-0.0004*		0.0002	
	(0.0000)		(0.0000)		(0.0002)		(0.0005)	
Constant	-0.4958**	0.1152*	-0.3506***	0.1714***	-0.3316*	0.1256*	-0.4575	-0.2392
	(0.2105)	(0.0675)	(0.1224)	(0.0664)	(0.1940)	(0.0675)	(0.4437)	(0.2042)
Observations	16,183	16,183	16,183	16,183	16,183	16,183	16,183	16,183
Number of gvkeynum	2,267	2,267	2,267	2,267	2,267	2,267	2,267	2,267
R-Squared	0.337	0.337	0.338	0.338	0.331	0.333	0.341	0.340

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table A1.5 Panel A: Regression of firm value on OC, PU and controls following Fama & French 1998. Explanatory variable of interests are 2SLS OC, and 2SLS OC interacted with policy uncertainty.

OC Variables =	OC= Perpetual inventory method.					OC=Inventory adjusted perpetual inventory method.				
OC	0.2273***		0.3762***	0.2131***		0.2273***		0.2334	0.0940	
	(0.0675)		(0.1174)	(0.0682)		(0.0675)		(0.1453)	(0.0683)	
dOC	-0.0570		-0.1115	-0.0528		-0.0570		-0.0885	-0.0425	
	(0.0629)		(0.1090)	(0.0651)		(0.0629)		(0.1231)	(0.0577)	
dOC2	-0.4428*		-0.5671**	-0.3973		-0.4428*		-0.6315**	-0.3737	
	(0.2545)		(0.2573)	(0.2573)		(0.2545)		(0.2604)	(0.2571)	
quartilePU_1				-0.2981***					-0.1484***	
				(0.0976)					(0.0489)	
dquartilePU_1				0.2161***					0.1452***	
				(0.0406)					(0.0204)	
dquartilePU_12				-0.1202**					0.0051	
				(0.0475)					(0.0229)	
quartilePU_4				-0.1645***					-0.1258***	
				(0.0501)					(0.0275)	
dquartilePU_42				0.0147					-0.0583***	
				(0.0334)					(0.0177)	
OC_quartilePU_1				0.1526***					0.2789***	
				(0.0480)					(0.0649)	
dOC_quartilePU_1				-0.0615***					-0.0711***	
				(0.0194)					(0.0269)	
dOC_quartilePU_12				0.0777***					0.1157***	
				(0.0243)					(0.0324)	
OC_quartilePU_4				0.1438***					0.3267***	
				(0.0339)					(0.0655)	
dOC_quartilePU_4				-0.0689***					-0.0913***	
				(0.0102)					(0.0265)	
dOC_quartilePU_42				-0.0208					0.0547*	
				(0.0199)					(0.0322)	
PU		-0.0002***	0.0003**		0.0000		-0.0002***	0.0003***		0.0001*
		(0.0000)	(0.0001)		(0.0001)		(0.0000)	(0.0001)		(0.0001)
dPU		-0.0001***	-0.0004***		-0.0002***		-0.0001***	-0.0004***		-0.0002***
		(0.0000)	(0.0001)		(0.0000)		(0.0000)	(0.0000)		(0.0000)
dPU2		-0.0000*	0.0002***		-0.0000		-0.0000*	0.0001***		0.0000
		(0.0000)	(0.0001)		(0.0000)		(0.0000)	(0.0000)		(0.0000)
OC_PU			-0.0000					0.0001		
			(0.0001)					(0.0001)		
dOC_PU			0.0000					0.0000		
			(0.0000)					(0.0000)		
dOC_PU2			-0.0000					0.0000		
			(0.0000)					(0.0000)		
quartileOC_1					-0.2152					-0.0478
					(0.1798)					(0.1933)
dquartileOC_1					0.0136					0.1751*
					(0.0886)					(0.1026)
dquartileOC_12					-0.2168**					-0.0295
					(0.0980)					(0.0912)
quartileOC_4					0.0071					0.0956
					(0.2736)					(0.2783)
dquartileOC_4					-0.0268					-0.1085
					(0.1436)					(0.1145)
dquartileOC_42					-0.0181					-0.0321
					(0.1439)					(0.1489)
quartileOC_1_PU					0.0000					-0.0001
					(0.0001)					(0.0001)
dquartileOC_1_PU					-0.0000					-0.0000
					(0.0001)					(0.0001)
dquartileOC_1_PU2					0.0000					-0.0000
					(0.0001)					(0.0001)
quartileOC_4_PU					0.0002					0.0001
					(0.0002)					(0.0002)
dquartileOC_4_PU					-0.0001					-0.0000
					(0.0001)					(0.0001)
dquartileOC_4_PU2					0.0000					-0.0000
					(0.0001)					(0.0001)
Constant	0.0263	0.5117***	-0.4958**	0.1152*	0.3056*	0.0875	0.5117***	-0.3506***	0.1714***	-0.0123
	(0.0662)	(0.1004)	(0.2105)	(0.0675)	(0.1597)	(0.0673)	(0.1004)	(0.1224)	(0.0664)	(0.1271)
Observations	16,183	37,854	16,183	16,183	16,183	16,183	37,854	16,183	16,183	16,183
Number of gvkeynum	2,267	4,469	2,267	2,267	2,267	2,267	4,469	2,267	2,267	2,267
R-Squared	0.334	0.374	0.337	0.337	0.341	0.334	0.374	0.338	0.338	0.342

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table A1.5 Panel B: Regression of firm value on OC, PU and controls following Fama & French 1998. Explanatory variable of interests are 2SLS OC, and 2SLS OC interacted with policy uncertainty.

OC Variables =	OCc = 5-Year Straight Line Depreciation					FE = Firm Efficiency (Demerjian et al., 2012)				
OC	2.1567***		2.6554***	1.6996***		0.2190		1.8895	1.1543**	
	(0.4450)		(0.8574)	(0.4398)		(0.5007)		(1.3633)	(0.5574)	
dOC	-0.7934		-0.9168	-0.9103		0.3681*		-0.7420	-0.0400	
	(0.5759)		(0.9157)	(0.6687)		(0.2121)		(0.6769)	(0.3113)	
dOC2	-0.8569		-1.2615	-1.4371		0.8149***		-0.4396	0.1332	
	(1.2396)		(1.7105)	(1.2624)		(0.2927)		(0.6476)	(0.5295)	
quartilePU_1				-0.3079***					0.2356	
				(0.0901)					(0.2442)	
dquartilePU_1				0.1511***					0.0729	
				(0.0380)					(0.0980)	
dquartilePU_12				-0.1389***					0.1881	
				(0.0422)					(0.1182)	
quartilePU_4				-0.2210***					-0.2547*	
				(0.0510)					(0.1503)	
dquartilePU_42				-0.0397					-0.2959***	
				(0.0327)					(0.1046)	
OC_quartilePU_1				1.2860***					-0.4589	
				(0.3612)					(0.7611)	
dOC_quartilePU_1				-0.2609*					-0.1158	
				(0.1531)					(0.3018)	
dOC_quartilePU_12				0.7571***					-0.2457	
				(0.1725)					(0.3760)	
OC_quartilePU_4				1.3429***					0.4542	
				(0.2749)					(0.4498)	
dOC_quartilePU_4				-0.5587***					-0.1740***	
				(0.0897)					(0.0608)	
dOC_quartilePU_42				-0.0111					0.4500	
				(0.1551)					(0.3032)	
PU		-0.0002***	0.0002*		0.0001		-0.0002***	0.0004		0.0000
		(0.0000)	(0.0001)		(0.0001)		(0.0000)	(0.0003)		(0.0001)
dPU		-0.0001***	-0.0003***		-0.0003***		-0.0001***	-0.0004***		-0.0002***
		(0.0000)	(0.0001)		(0.0000)		(0.0000)	(0.0001)		(0.0000)
dPU2		-0.0000*	0.0001***		-0.0000		-0.0000*	-0.0001		-0.0001
		(0.0000)	(0.0001)		(0.0000)		(0.0000)	(0.0001)		(0.0000)
OC_PU			0.0000					-0.0012		
			(0.0005)					(0.0010)		
dOC_PU			-0.0001					0.0007*		
			(0.0002)					(0.0004)		
dOC_PU2			-0.0004*					0.0002		
			(0.0002)					(0.0005)		
quartileOC_1					-0.0784					0.0538
					(0.1753)					(0.1772)
dquartileOC_1					-0.0761					0.0676
					(0.0843)					(0.0840)
dquartileOC_12					-0.2618***					0.1479*
					(0.0953)					(0.0835)
quartileOC_4					0.3174					0.8010***
					(0.2652)					(0.2070)
dquartileOC_4					-0.0982					-0.2896***
					(0.1227)					(0.0878)
dquartileOC_42					0.1103					0.1858*
					(0.1437)					(0.1061)
quartileOC_1_PU					-0.0001					-0.0001
					(0.0001)					(0.0001)
dquartileOC_1_PU					0.0001					-0.0001
					(0.0001)					(0.0001)
dquartileOC_1_PU2					0.0000					-0.0001**
					(0.0001)					(0.0001)
quartileOC_4_PU					-0.0001					-0.0004***
					(0.0002)					(0.0001)
dquartileOC_4_PU					-0.0000					0.0001**
					(0.0001)					(0.0001)
dquartileOC_4_PU2					-0.0001					-0.0001
					(0.0001)					(0.0001)
Constant	0.0108	0.5117***	-0.3316*	0.1256*	0.2147	0.0334	0.5117***	-0.4575	-0.2392	0.0649
	(0.0652)	(0.1004)	(0.1940)	(0.0675)	(0.1697)	(0.1907)	(0.1004)	(0.4437)	(0.2042)	(0.1406)
Observations	16,183	37,854	16,183	16,183	16,183	16,183	37,854	16,183	16,183	16,183
Number of gvkeynum	2,267	4,469	2,267	2,267	2,267	2,267	4,469	2,267	2,267	2,267
R-Squared	0.329	0.374	0.331	0.333	0.340	0.337	0.374	0.341	0.340	0.342

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table A1.6: Instrumental variable pairwise correlations.

	OC	IDD	UI_max	OChat	OCb	OCbhat	OCc	OCchat	FE	FEhat	OChat_PU	OCbhat_PU	OCchat_PU	FEhat_PU
OC	1													
IDD	0.0714***	1												
UI_max	0.133***	0.407***	1											
OChat	0.588***	-0.0211	0.0652***	1										
OCb	0.915***	0.0697***	0.0940***	0.340***	1									
OCbhat	0.506***	-0.0401**	-0.0013	0.810***	0.495***	1								
OCc	0.933***	0.0733***	0.123***	0.558***	0.865***	0.505***	1							
OCchat	0.562***	-0.00865	0.0718***	0.890***	0.406***	0.833***	0.588***	1						
FE	0.0686***	-0.0442***	0.0270*	-0.105***	0.0329**	-0.213***	0.0759***	-0.204***	1					
FEhat	-0.0774***	-0.0483***	0.0316*	-0.106***	-0.167***	-0.295***	-0.105***	-0.329***	0.629***	1				
OChat_PU	0.516***	-0.00963	0.0627***	0.891***	0.298***	0.728***	0.500***	0.789***	-0.0660***	-0.0515***	1			
OCbhat_PU	0.486***	-0.0368**	-0.00111	0.785***	0.477***	0.970***	0.490***	0.806***	-0.200***	-0.277***	0.760***	1		
OCchat_PU	0.491***	0.00363	0.0698***	0.793***	0.354***	0.748***	0.524***	0.887***	-0.152***	-0.247***	0.908***	0.780***	1	
FEhat_PU	-0.0652***	-0.00981	0.0293*	-0.0809***	-0.119***	-0.197***	-0.0732***	-0.228***	0.448***	0.712***	0.224***	-0.176***	0.0928***	1

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table A2.1 Panel A: Dependent Variable is Exogenous Cash. OC calculated using perpetual inventory method. Controls include ln(assets), MTB, net working capital/assets, capex/assets, EBITDA/Assets, leverage, cash flow volatility, R&D/sales, as well as distributions and acquisitions dummy variables. Year fixed effects are on. Robust standard errors clustered by firm.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
OC	0.001						0.005*	-0.015***	-0.006	-0.004	-0.001	-0.004	-0.002					
	(0.002)						(0.003)	(0.005)	(0.005)	(0.004)	(0.014)	(0.004)	(0.004)					
CUT2		-0.003***					-0.003							-0.005***				
		(0.001)					(0.002)							(0.002)				
IMPINT			0.042***					-0.010							0.039***			
			(0.008)					(0.017)							(0.012)			
HHI				0.000***					0.000*							0.000***		
				(0.000)					(0.000)							(0.000)		
COMP					-0.014						-0.015							-0.016
					(0.013)						(0.023)							(0.015)
CONC						0.021*				-0.002							0.023	
						(0.011)				(0.024)							(0.016)	
OC_CUT2							-0.001											
							(0.001)											
OC_IMPINT								0.036***										
								(0.010)										
OC_HHI									0.000									
									(0.000)									
OC_CONC										0.015								
										(0.012)								
OC_COMP											-0.004							
											(0.014)							
quartileIMPINT_1												-0.020***						
												(0.007)						
quartileIMPINT_4												-0.019**						
												(0.009)						
quartileIMPINT_1_OC												-0.007*						
												(0.004)						
quartileIMPINT_4_OC												0.016***						
												(0.004)						
quartileHHI_1													-0.015**					
													(0.008)					
quartileHHI_4													0.015**					
													(0.007)					
quartileHHI_1_OC													0.001					
													(0.004)					
quartileHHI_4_OC													-0.004*					
													(0.002)					
quartileOC_1														0.004	0.022***	0.019**	0.025***	0.043*
														(0.006)	(0.007)	(0.009)	(0.007)	(0.025)
quartileOC_4														0.010	-0.021**	-0.008	-0.002	0.011
														(0.006)	(0.010)	(0.007)	(0.005)	(0.027)
quartileOC_1_CUT2														0.005				
														(0.003)				
quartileOC_4_CUT2														-0.002				
														(0.005)				
quartileOC_1_IMPINT															-0.013			
															(0.020)			
quartileOC_4_IMPINT															0.054**			
															(0.023)			
quartileOC_1_HHI																0.000		
																(0.000)		
quartileOC_4_HHI																0.000		
																(0.000)		
quartileOC_1_CONC																	0.061***	
																	(0.014)	
quartileOC_4_CONC																	0.009	
																	(0.026)	
quartileOC_1_COMP																		-0.019
																		(0.025)
quartileOC_4_COMP																		-0.014
																		(0.028)
Constant	0.241***	0.359***	0.337***	0.330***	0.351***	0.337***	0.374***	0.381***	0.380***	0.384***	0.399***	0.388***	0.384***	0.387***	0.360***	0.367***	0.373***	0.389***
	(0.012)	(0.015)	(0.015)	(0.016)	(0.021)	(0.016)	(0.018)	(0.020)	(0.020)	(0.020)	(0.030)	(0.019)	(0.020)	(0.015)	(0.018)	(0.016)	(0.017)	(0.023)
Observations	22,707	16,920	13,606	12,395	12,395	12,395	13,587	11,027	10,010	10,010	10,010	11,027	10,010	13,587	11,027	10,010	10,010	10,010
Firms	2,728	1,997	1,682	1,586	1,586	1,586	1,570	1,329	1,246	1,246	1,246	1,329	1,246	1,570	1,329	1,246	1,246	1,246
R-Squared	0.553	0.359	0.369	0.354	0.350	0.353	0.380	0.362	0.350	0.347	0.344	0.378	0.355	0.370	0.365	0.347	0.348	0.343

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table A2.1 Panel B: Dependent Variable Cash/Assets. Controls follow Opler et al (1999) and include ln(assets), MTB, net working capital/assets, capex/assets, EBITDA/Assets, leverage, cash flow volatility, R&D/sales, as well as distributions and acquisitions dummy variables. OC calculated using perpetual inventory method. Year fixed effects are on. Robust standard errors clustered by firm.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
OC	0.004*						0.008**	-0.012**	-0.002	-0.000	0.001	-0.001	0.002					
	(0.003)						(0.004)	(0.005)	(0.005)	(0.004)	(0.015)	(0.005)	(0.004)					
CUT2		-0.003*					-0.000							-0.003				
		(0.002)					(0.003)							(0.002)				
IMPINT			0.042***					-0.020							0.027*			
			(0.010)					(0.020)							(0.015)			
HHI				0.000***					0.000							0.000***		
				(0.000)					(0.000)							(0.000)		
COMP					-0.025*						-0.030							-0.024
					(0.014)						(0.031)							(0.016)
CONC						0.007				-0.004							0.010	
						(0.014)				(0.036)							(0.016)	
OC_CUT2							-0.002											
							(0.002)											
OC_IMPINT								0.038***										
								(0.011)										
OC_HHI									0.000									
									(0.000)									
OC_CONC										0.007								
										(0.016)								
OC_COMP											-0.001							
											(0.015)							
quartileIMPINT_1												-0.028***						
												(0.008)						
quartileIMPINT_4												-0.022*						
												(0.012)						
quartileIMPINT_1_OC												-0.007						
												(0.005)						
quartileIMPINT_4_OC												0.018***						
												(0.007)						
quartileHHI_1													-0.015					
													(0.010)					
quartileHHI_4													0.014					
													(0.010)					
quartileHHI_1_OC													-0.001					
													(0.005)					
quartileHHI_4_OC													-0.004					
													(0.003)					
quartileOC_1														0.004	0.019*	0.023**	0.029***	0.044
														(0.007)	(0.010)	(0.011)	(0.009)	(0.029)
quartileOC_4														0.013*	-0.023*	-0.006	0.001	0.040
														(0.008)	(0.012)	(0.009)	(0.007)	(0.031)
quartileOC_1_CUT2														0.003				
														(0.004)				
quartileOC_4_CUT2														-0.006				
														(0.006)				
quartileOC_1_IMPINT															0.008			
															(0.026)			
quartileOC_4_IMPINT															0.069**			
															(0.030)			
quartileOC_1_HHI																0.000		
																(0.000)		
quartileOC_4_HHI																0.000		
																(0.000)		
quartileOC_1_CONC																	0.058***	
																	(0.015)	
quartileOC_4_CONC																	-0.008	
																	(0.028)	
quartileOC_1_COMP																		-0.016
																		(0.029)
quartileOC_4_COMP																		-0.040
																		(0.031)
Constant	0.335***	0.453***	0.436***	0.421***	0.452***	0.428***	0.458***	0.472***	0.460***	0.466***	0.495***	0.476***	0.466***	0.478***	0.462***	0.460***	0.466***	0.489***
	(0.016)	(0.018)	(0.019)	(0.020)	(0.025)	(0.020)	(0.021)	(0.024)	(0.023)	(0.023)	(0.039)	(0.023)	(0.022)	(0.017)	(0.021)	(0.020)	(0.020)	(0.026)
Observations	22,955	17,004	13,633	12,417	12,417	12,417	13,650	11,051	10,030	10,030	10,030	11,051	10,030	13,650	11,051	10,030	10,030	10,030
Firms	2,748	2,001	1,685	1,586	1,586	1,586	1,574	1,331	1,246	1,246	1,246	1,331	1,246	1,574	1,331	1,246	1,246	1,246
R-Squared	0.491	0.397	0.404	0.401	0.398	0.398	0.417	0.412	0.415	0.411	0.410	0.428	0.417	0.411	0.410	0.409	0.407	0.407

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table A2.1 Panel C: Dependent Variable is Exogenous Cash. OChat is obtained using 2SLS with IDD and UI as instruments for OC. Controls include ln(assets), MTB, net working capital/assets, capex/assets, EBITDA/Assets, leverage, cash flow volatility, R&D/sales, as well as distributions and acquisitions dummy variables. Year fixed effects are on. Robust standard errors clustered by firm.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
OChat	0.076***						0.082***	0.048***	0.048***	0.053***	0.062***	0.059***	0.055***					
	(0.027)						(0.005)	(0.007)	(0.007)	(0.006)	(0.017)	(0.006)	(0.007)					
CUT2		-0.003***					0.003							-0.005***				
		(0.001)					(0.002)							(0.002)				
IMPINT			0.042***					-0.004							0.046***			
			(0.008)					(0.019)							(0.010)			
HHI				0.000***					0.000							0.000***		
				(0.000)					(0.000)							(0.000)		
COMP					-0.014						0.004							-0.008
					(0.013)						(0.021)							(0.012)
CONC						0.021*				-0.072**							0.009	
						(0.011)				(0.035)							(0.011)	
OChat_CUT2							-0.004**											
							(0.002)											
OChat_IMPINT								0.028**										
								(0.012)										
OChat_HHI									0.000									
									(0.000)									
OChat_CONC										0.048**								
										(0.020)								
OChat_COMP											-0.010							
											(0.016)							
quartileIMPINT_1												-0.014**						
												(0.007)						
quartileIMPINT_4												-0.006						
												(0.009)						
quartileIMPINT_1_OChat												-0.007						
												(0.005)						
quartileIMPINT_4_OChat												0.007						
												(0.005)						
quartileHHI_1													-0.013					
													(0.009)					
quartileHHI_4													0.013					
													(0.009)					
quartileHHI_1_OChat													0.001					
													(0.006)					
quartileHHI_4_OChat													-0.006					
													(0.005)					
quartileOChat_1														-0.013***	-0.002	-0.005	-0.006	0.005
														(0.004)	(0.005)	(0.005)	(0.004)	(0.009)
quartileOChat_4														0.014***	0.002	-0.001	0.002	0.027
														(0.005)	(0.009)	(0.007)	(0.005)	(0.022)
quartileOChat_1_CUT2														0.007***				
														(0.002)				
quartileOChat_4_CUT2														-0.001				
														(0.004)				
quartileOChat_1_IMPINT															-0.016			
															(0.016)			
quartileOChat_4_IMPINT															0.008			
															(0.019)			
quartileOChat_1_HHI																-0.000		
																(0.000)		
quartileOChat_4_HHI																0.000		
																(0.000)		
quartileOChat_1_CONC																	-0.011	
																	(0.008)	
quartileOChat_4_CONC																	0.041	
																	(0.027)	
quartileOChat_1_COMP																		-0.012
																		(0.010)
quartileOChat_4_COMP																		-0.025
																		(0.023)
Constant	0.071	0.359***	0.337***	0.330***	0.351***	0.337***	0.092***	0.169***	0.171***	0.168***	0.163***	0.168***	0.167***	0.344***	0.329***	0.326***	0.333***	0.340***
	(0.054)	(0.015)	(0.015)	(0.016)	(0.021)	(0.016)	(0.024)	(0.027)	(0.027)	(0.027)	(0.036)	(0.026)	(0.027)	(0.016)	(0.016)	(0.017)	(0.017)	(0.021)
Observations	28,795	16,920	13,606	12,395	12,395	12,395	16,920	13,606	12,395	12,395	12,395	13,606	12,395	16,920	13,606	12,395	12,395	12,395
Firms	3,509	1,997	1,682	1,586	1,586	1,586	1,997	1,682	1,586	1,586	1,586	1,682	1,586	1,997	1,682	1,586	1,586	1,586
R-Squared	0.534	0.359	0.369	0.354	0.350	0.353	0.366	0.352	0.356	0.352	0.351	0.371	0.362	0.375	0.376	0.361	0.358	0.357

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table A2.1 Panel D: Dependent Variable Cash/Assets. OChat is obtained using 2SLS with IDD and UI as instruments for OC. Controls follow Opler et al (1999) and include ln(assets), MTB, net working capital/assets, capex/assets, EBITDA/Assets, leverage, cash flow volatility, R&D/sales, as well as distributions and acquisitions dummy variables. OC calculated using perpetual inventory method. Year fixed effects are on. Robust standard errors clustered by firm.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
OChat	0.117***						0.068***	0.029***	0.038***	0.043***	0.063***	0.046***	0.046***					
	(0.032)						(0.006)	(0.009)	(0.008)	(0.007)	(0.021)	(0.008)	(0.008)					
CUT2		-0.003*					0.004							-0.004				
		(0.002)					(0.003)							(0.002)				
IMPINT			0.042***					-0.016							0.046***			
			(0.010)					(0.023)							(0.012)			
HHI				0.000***					0.000							0.000***		
				(0.000)					(0.000)							(0.000)		
COMP					-0.025*						0.013							-0.011
					(0.014)						(0.028)							(0.012)
CONC						0.007				-0.105**							-0.009	
						(0.014)				(0.052)							(0.014)	
OChat_CUT2							-0.004**											
							(0.002)											
OChat_IMPINT								0.036**										
								(0.015)										
OChat_HHI									0.000									
									(0.000)									
OChat_CONC										0.058**								
										(0.029)								
OChat_COMP											-0.021							
											(0.021)							
quartileIMPINT_1												-0.011						
												(0.008)						
quartileIMPINT_4												-0.001						
												(0.013)						
quartileIMPINT_1_OChat												-0.013**						
												(0.006)						
quartileIMPINT_4_OChat												0.005						
												(0.007)						
quartileHHI_1													-0.011					
													(0.011)					
quartileHHI_4													0.015					
													(0.012)					
quartileHHI_1_OChat													-0.002					
													(0.007)					
quartileHHI_4_OChat													-0.007					
													(0.007)					
quartileOChat_1														-0.014***	0.003	-0.004	-0.005	0.007
														(0.005)	(0.007)	(0.006)	(0.005)	(0.015)
quartileOChat_4														0.020***	-0.001	0.001	0.008	0.060**
														(0.006)	(0.011)	(0.008)	(0.006)	(0.028)
quartileOChat_1_CUT2														0.005				
														(0.003)				
quartileOChat_4_CUT2														-0.005				
														(0.005)				
quartileOChat_1_IMPINT															-0.027			
															(0.021)			
quartileOChat_4_IMPINT															0.025			
															(0.025)			
quartileOChat_1_HHI																-0.000		
																(0.000)		
quartileOChat_4_HHI																0.000		
																(0.000)		
quartileOChat_1_CONC																	-0.027	
																	(0.019)	
quartileOChat_4_CONC																	0.055*	
																	(0.032)	
quartileOChat_1_COMP																		-0.014
																		(0.015)
quartileOChat_4_COMP																		-0.053*
																		(0.028)
Constant	0.089	0.453***	0.436***	0.421***	0.452***	0.428***	0.230***	0.322***	0.293***	0.288***	0.276***	0.312***	0.286***	0.430***	0.425***	0.411***	0.417***	0.427***
	(0.065)	(0.018)	(0.019)	(0.020)	(0.025)	(0.020)	(0.029)	(0.032)	(0.032)	(0.032)	(0.043)	(0.031)	(0.032)	(0.019)	(0.019)	(0.021)	(0.021)	(0.024)
Observations	29,127	17,004	13,633	12,417	12,417	12,417	17,004	13,633	12,417	12,417	12,417	13,633	12,417	17,004	13,633	12,417	12,417	12,417
Firms	3,534	2,001	1,685	1,586	1,586	1,586	2,001	1,685	1,586	1,586	1,586	1,685	1,586	2,001	1,685	1,586	1,586	1,586
R-Squared	0.477	0.397	0.404	0.401	0.398	0.398	0.405	0.403	0.405	0.401	0.402	0.417	0.407	0.405	0.407	0.404	0.400	0.402

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table A2.2 Panel A: Dependent Variable is Exogenous Cash. OCc calculated using 5-year straight line depreciation. Controls include ln(assets), MTB, net working capital/assets, capex/assets, EBITDA/Assets, leverage, cash flow volatility, R&D/sales, as well as distributions and acquisitions dummy variables. Year fixed effects are on. Robust standard errors clustered by firm.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
OCc	-0.033**						-0.009	-0.079**	-0.084***	-0.070***	-0.055	-0.071***	-0.071***					
	(0.014)						(0.020)	(0.036)	(0.031)	(0.023)	(0.099)	(0.023)	(0.025)					
CUT2		-0.003***					-0.000							-0.004**				
		(0.001)					(0.002)							(0.002)				
IMPINT			0.042***					0.035**							0.041***			
			(0.008)					(0.016)							(0.010)			
HHI				0.000***					0.000							0.000***		
				(0.000)					(0.000)							(0.000)		
COMP					-0.014						-0.011							-0.014
					(0.013)						(0.020)							(0.013)
CONC						0.021*				-0.030							0.008	
						(0.011)				(0.023)							(0.011)	
OCc_CUT2							-0.015											
							(0.010)											
OCc_IMPINT								0.042										
								(0.073)										
OCc_HHI									0.000									
									(0.000)									
OCc_CONC										0.217**								
										(0.109)								
OCc_COMP											-0.014							
											(0.099)							
quartileIMPINT_1												-0.026***						
												(0.007)						
quartileIMPINT_4												-0.000						
												(0.008)						
quartileIMPINT_1_OCc												0.009						
												(0.034)						
quartileIMPINT_4_OCc												0.038						
												(0.033)						
quartileHHI_1													-0.018**					
													(0.007)					
quartileHHI_4													0.002					
													(0.007)					
quartileHHI_1_OCc													0.026					
													(0.027)					
quartileHHI_4_OCc													-0.000					
													(0.020)					
quartileOCc_1														0.004	0.024***	0.020***	0.019***	0.013
														(0.005)	(0.006)	(0.007)	(0.005)	(0.012)
quartileOCc_4														0.006	-0.017**	-0.007	-0.003	0.005
														(0.005)	(0.008)	(0.007)	(0.005)	(0.026)
quartileOCc_1_CUT2														0.005*				
														(0.003)				
quartileOCc_4_CUT2														-0.003				
														(0.004)				
quartileOCc_1_IMPINT															-0.025			
															(0.019)			
quartileOCc_4_IMPINT															0.043**			
															(0.018)			
quartileOCc_1_HHI																-0.000		
																(0.000)		
quartileOCc_4_HHI																0.000		
																(0.000)		
quartileOCc_1_CONC																	-0.018	
																	(0.015)	
quartileOCc_4_CONC																	0.052*	
																	(0.028)	
quartileOCc_1_COMP																		0.006
																		(0.013)
quartileOCc_4_COMP																		-0.008
																		(0.026)
Constant	0.235***	0.359***	0.337***	0.330***	0.351***	0.337***	0.365***	0.368***	0.366***	0.370***	0.380***	0.385***	0.375***	0.356***	0.340***	0.336***	0.342***	0.355***
	(0.012)	(0.015)	(0.015)	(0.016)	(0.021)	(0.016)	(0.018)	(0.019)	(0.019)	(0.019)	(0.027)	(0.018)	(0.019)	(0.015)	(0.016)	(0.016)	(0.016)	(0.020)
Observations	28,795	16,920	13,606	12,395	12,395	12,395	16,920	13,606	12,395	12,395	12,395	13,606	12,395	16,920	13,606	12,395	12,395	12,395
Number of gvkeynum	3,509	1,997	1,682	1,586	1,586	1,586	1,997	1,682	1,586	1,586	1,586	1,682	1,586	1,997	1,682	1,586	1,586	1,586
R-Squared	0.529	0.359	0.369	0.354	0.350	0.353	0.355	0.343	0.329	0.323	0.320	0.356	0.337	0.360	0.358	0.345	0.342	0.340

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table A2.2 Panel B: Dependent Variable Cash/Assets. Controls follow Opler et al (1999) and include ln(assets), MTB, net working capital/assets, capex/assets, EBITDA/Assets, leverage, cash flow volatility, R&D/sales, as well as distributions and acquisitions dummy variables. OCc calculated using 5 year straight line depreciation. Year fixed effects are on. Robust standard errors clustered by firm.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
OCc	0.005						0.032	-0.040	-0.045	-0.023	0.037	-0.028	-0.026					
	(0.017)						(0.025)	(0.041)	(0.034)	(0.027)	(0.113)	(0.030)	(0.029)					
CUT2		-0.003*					-0.000							-0.003				
		(0.002)					(0.003)							(0.002)				
IMPINT			0.042***					0.031*							0.039***			
			(0.010)					(0.018)							(0.013)			
HHI				0.000***					0.000							0.000***		
				(0.000)					(0.000)							(0.000)		
COMP					-0.025*						-0.013							-0.018
					(0.014)						(0.026)							(0.014)
CONC						0.007				-0.038							-0.006	
						(0.014)				(0.036)							(0.014)	
OCc_CUT2							-0.013											
							(0.014)											
OCc_IMPINT								0.060										
								(0.083)										
OCc_HHI									0.000									
									(0.000)									
OCc_CONC										0.193								
										(0.161)								
OCc_COMP											-0.060							
											(0.112)							
quartileIMPINT_1												-0.032***						
												(0.008)						
quartileIMPINT_4												-0.001						
												(0.010)						
quartileIMPINT_1_OCc												0.011						
												(0.039)						
quartileIMPINT_4_OCc												0.043						
												(0.044)						
quartileHHI_1													-0.017*					
													(0.009)					
quartileHHI_4													-0.000					
													(0.010)					
quartileHHI_1_OCc													0.010					
													(0.035)					
quartileHHI_4_OCc													0.012					
													(0.028)					
quartileOCc_1														-0.006	0.019**	0.013	0.012*	0.013
														(0.006)	(0.008)	(0.008)	(0.007)	(0.020)
quartileOCc_4														0.014**	-0.012	-0.002	0.005	0.041*
														(0.006)	(0.010)	(0.008)	(0.006)	(0.023)
quartileOCc_1_CUT2														0.005				
														(0.004)				
quartileOCc_4_CUT2														-0.006				
														(0.005)				
quartileOCc_1_IMPINT															-0.028			
															(0.025)			
quartileOCc_4_IMPINT															0.053**			
															(0.023)			
quartileOCc_1_HHI																-0.000		
																(0.000)		
quartileOCc_4_HHI																0.000		
																(0.000)		
quartileOCc_1_CONC																	-0.000	
																	(0.035)	
quartileOCc_4_CONC																	0.055*	
																	(0.031)	
quartileOCc_1_COMP																		-0.001
																		(0.020)
quartileOCc_4_COMP																		-0.037
																		(0.023)
Constant	0.320***	0.453***	0.436***	0.421***	0.452***	0.428***	0.438***	0.448***	0.437***	0.439***	0.450***	0.465***	0.444***	0.441***	0.432***	0.420***	0.425***	0.442***
	(0.016)	(0.018)	(0.019)	(0.020)	(0.025)	(0.020)	(0.022)	(0.023)	(0.023)	(0.022)	(0.035)	(0.021)	(0.022)	(0.019)	(0.019)	(0.020)	(0.020)	(0.025)
Observations	29,127	17,004	13,633	12,417	12,417	12,417	17,004	13,633	12,417	12,417	12,417	13,633	12,417	17,004	13,633	12,417	12,417	12,417
Number of gvkeynum	3,534	2,001	1,685	1,586	1,586	1,586	2,001	1,685	1,586	1,586	1,586	1,685	1,586	2,001	1,685	1,586	1,586	1,586
R-Squared	0.476	0.397	0.404	0.401	0.398	0.398	0.403	0.401	0.400	0.395	0.396	0.413	0.403	0.405	0.404	0.403	0.399	0.400

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table A2.2 Panel C: Dependent Variable is Exogenous Cash. OCchat is obtained using 2SLS with IDD and UI as instruments for OCc. Controls include ln(assets), MTB, net working capital/assets, capex/assets, EBITDA/Assets, leverage, cash flow volatility, R&D/sales, as well as distributions and acquisitions dummy variables. OCc calculated using 5 year straight line depreciation. Year fixed effects are on. Robust standard errors clustered by firm.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
OCchat	0.514***						0.598***	0.327***	0.300***	0.334***	0.359***	0.401***	0.353***					
	(0.185)						(0.045)	(0.056)	(0.054)	(0.049)	(0.122)	(0.052)	(0.052)					
CUT2		-0.003***					0.001							-0.005***				
		(0.001)					(0.002)							(0.002)				
IMPINT			0.042***					0.011							0.035***			
			(0.008)					(0.017)							(0.011)			
HHI				0.000***					0.000							0.000***		
				(0.000)					(0.000)							(0.000)		
COMP					-0.014						-0.010							-0.015
					(0.013)						(0.018)							(0.014)
CONC						0.021*				-0.033							0.008	
						(0.011)				(0.024)							(0.013)	
OCchat_CUT2							-0.024*											
							(0.012)											
OCchat_IMPINT								0.150*										
								(0.085)										
OCchat_HHI									0.000									
									(0.000)									
OCchat_CONC										0.261**								
										(0.128)								
OCchat_COMP											-0.023							
											(0.113)							
quartileIMPINT_1												-0.016**						
												(0.006)						
quartileIMPINT_4												0.002						
												(0.009)						
quartileIMPINT_1_OCc												-0.045						
												(0.033)						
quartileIMPINT_4_OCc												0.025						
												(0.037)						
quartileHHI_1													-0.015**					
													(0.008)					
quartileHHI_4													0.012					
													(0.008)					
quartileHHI_1_OCchat													0.012					
													(0.037)					
quartileHHI_4_OCchat													-0.043					
													(0.032)					
quartileOCchat_1														-0.011**	-0.008	0.000	-0.006	-0.001
														(0.004)	(0.006)	(0.006)	(0.005)	(0.012)
quartileOCchat_4														0.006	-0.014	-0.000	-0.001	-0.016
														(0.005)	(0.010)	(0.007)	(0.006)	(0.032)
quartileOCchat_1_CUT2														0.006**				
														(0.002)				
quartileOCchat_4_CUT2														-0.002				
														(0.004)				
quartileOCchat_1_IMPI															0.004			
															(0.017)			
quartileOCchat_4_IMPI															0.035			
															(0.021)			
quartileOCchat_1_HHI																-0.000*		
																(0.000)		
quartileOCchat_4_HHI																0.000		
																(0.000)		
quartileOCchat_1_CON																	-0.001	
																	(0.016)	
quartileOCchat_4_CON																	0.064*	
																	(0.035)	
quartileOCchat_1_COM																		-0.006
																		(0.013)
quartileOCchat_4_COM																		0.016
																		(0.032)
Constant	0.039	0.359***	0.337***	0.330***	0.351***	0.337***	0.055*	0.160***	0.168***	0.167***	0.177***	0.161***	0.166***	0.347***	0.336***	0.326***	0.334***	0.349***
	(0.067)	(0.015)	(0.015)	(0.016)	(0.021)	(0.016)	(0.029)	(0.030)	(0.031)	(0.031)	(0.037)	(0.030)	(0.031)	(0.016)	(0.017)	(0.017)	(0.017)	(0.022)
Observations	28,795	16,920	13,606	12,395	12,395	12,395	16,920	13,606	12,395	12,395	12,395	13,606	12,395	16,920	13,606	12,395	12,395	12,395
Number of gvkeynum	3,509	1,997	1,682	1,586	1,586	1,586	1,997	1,682	1,586	1,586	1,586	1,682	1,586	1,997	1,682	1,586	1,586	1,586
R-Squared	0.534	0.359	0.369	0.354	0.350	0.353	0.356	0.350	0.355	0.351	0.348	0.369	0.361	0.370	0.369	0.361	0.355	0.353

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table A2.2 Panel D: Dependent Variable Cash/Assets. OCchat is obtained using 2SLS with IDD and UI as instruments for OCc. Controls follow Opler et al (1999) and include ln(assets), MTB, net working capital/assets, capex/assets, EBITDA/Assets, leverage, cash flow volatility, R&D/sales, as well as distributions and acquisitions dummy variables. OCc calculated using 5 year straight line depreciation. Year fixed effects are on. Robust standard errors clustered by firm.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
OCchat	0.796***						0.497***	0.201***	0.224***	0.268***	0.373***	0.304***	0.289***					
	(0.222)						(0.049)	(0.064)	(0.060)	(0.053)	(0.142)	(0.058)	(0.059)					
CUT2		-0.003*					0.001							-0.004				
		(0.002)					(0.003)							(0.002)				
IMPINT			0.042***					0.004							0.029**			
			(0.010)					(0.021)							(0.013)			
HHI				0.000***					0.000							0.000***		
				(0.000)					(0.000)							(0.000)		
COMP					-0.025*						-0.005							-0.022
					(0.014)						(0.020)							(0.016)
CONC						0.007				-0.058*							-0.009	
						(0.014)				(0.034)							(0.015)	
OCchat_CUT2							-0.024											
							(0.015)											
OCchat_IMPINT								0.190*										
								(0.104)										
OCchat_HHI									0.000									
									(0.000)									
OCchat_CONC										0.316*								
										(0.177)								
OCchat_COMP											-0.106							
											(0.134)							
quartileIMPINT_1												-0.014*						
												(0.007)						
quartileIMPINT_4												0.004						
												(0.011)						
quartileIMPINT_1_OCchat												-0.079**						
												(0.038)						
quartileIMPINT_4_OCchat												0.017						
												(0.052)						
quartileHHI_1													-0.015					
													(0.010)					
quartileHHI_4													0.012					
													(0.010)					
quartileHHI_1_OCchat													0.001					
													(0.047)					
quartileHHI_4_OCchat													-0.044					
													(0.043)					
quartileOCchat_1														-0.011**	-0.008	-0.001	-0.007	-0.002
														(0.005)	(0.008)	(0.007)	(0.006)	(0.016)
quartileOCchat_4														0.005	-0.023*	-0.003	-0.001	0.012
														(0.007)	(0.012)	(0.009)	(0.007)	(0.034)
quartileOCchat_1_CUT2														0.004				
														(0.003)				
quartileOCchat_4_CUT2														-0.001				
														(0.005)				
quartileOCchat_1_IMPINT															0.008			
															(0.020)			
quartileOCchat_4_IMPINT															0.059**			
															(0.026)			
quartileOCchat_1_HHI																-0.000		
																(0.000)		
quartileOCchat_4_HHI																0.000		
																(0.000)		
quartileOCchat_1_CONC																	0.004	
																	(0.029)	
quartileOCchat_4_CONC																	0.076*	
																	(0.042)	
quartileOCchat_1_COMP																		-0.004
																		(0.017)
quartileOCchat_4_COMP																		-0.013
																		(0.034)
Constant	0.038	0.453***	0.436***	0.421***	0.452***	0.428***	0.198***	0.316***	0.294***	0.291***	0.294***	0.311***	0.289***	0.442***	0.439***	0.417***	0.424***	0.445***
	(0.080)	(0.018)	(0.019)	(0.020)	(0.025)	(0.020)	(0.033)	(0.034)	(0.035)	(0.035)	(0.042)	(0.034)	(0.036)	(0.020)	(0.021)	(0.022)	(0.022)	(0.027)
Observations	29,127	17,004	13,633	12,417	12,417	12,417	17,004	13,633	12,417	12,417	12,417	13,633	12,417	17,004	13,633	12,417	12,417	12,417
Number of gvkeynum	3,534	2,001	1,685	1,586	1,586	1,586	2,001	1,685	1,586	1,586	1,586	1,685	1,586	2,001	1,685	1,586	1,586	1,586
R-Squared	0.476	0.397	0.404	0.401	0.398	0.398	0.401	0.402	0.404	0.400	0.401	0.415	0.406	0.401	0.402	0.404	0.399	0.400

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table A2.3 Panel A: Dependent Variable is Exogenous Cash. Firm Efficiency taken from Demerjian et. al, (2012). Controls include ln(assets), MTB, net working capital/assets, capex/assets, EBITDA/Assets, leverage, cash flow volatility, R&D/sales, as well as distributions and acquisitions dummy variables. Year fixed effects are on. Robust standard errors clustered by firm.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
FirmEffic	0.056***						0.106***	0.138***	0.144***	0.115***	0.067**	0.122***	0.110***					
	(0.008)						(0.014)	(0.024)	(0.020)	(0.016)	(0.026)	(0.018)	(0.018)					
CUT2		-0.003***					0.002							-0.002				
		(0.001)					(0.003)							(0.002)				
IMPINT			0.042***					0.071***							0.054***			
			(0.008)					(0.023)							(0.011)			
HHI				0.000***					0.000***							0.000***		
				(0.000)					(0.000)							(0.000)		
COMP					-0.014						-0.028*							-0.011
					(0.013)						(0.016)							(0.013)
CONC						0.021*				0.033*							0.009	
						(0.011)				(0.017)							(0.012)	
FE_CUT2							-0.018*											
							(0.010)											
FE_IMPINT								-0.059										
								(0.061)										
FE_HHI									-0.000***									
									(0.000)									
FE_CONC										-0.063*								
										(0.032)								
FE_COMP											0.052*							
											(0.029)							
quartileIMPINT_1												-0.023***						
												(0.008)						
quartileIMPINT_4												0.016						
												(0.010)						
quartileIMPINT_1_FE												-0.008						
												(0.024)						
quartileIMPINT_4_FE												-0.012						
												(0.030)						
quartileHHI_1													-0.022**					
													(0.009)					
quartileHHI_4													0.002					
													(0.009)					
quartileHHI_1_FE													0.047*					
													(0.029)					
quartileHHI_4_FE													0.002					
													(0.021)					
quartileFE_1														-0.014***	-0.016***	-0.016***	-0.016***	-0.013**
														(0.003)	(0.005)	(0.003)	(0.003)	(0.006)
quartileFE_4														0.024***	0.028***	0.026***	0.024***	0.020*
														(0.003)	(0.006)	(0.004)	(0.003)	(0.011)
quartileFE_1_CUT2														0.000				
														(0.003)				
quartileFE_4_CUT2														-0.007**				
														(0.003)				
quartileFE_1_IMPINT															0.000			
															(0.012)			
quartileFE_4_IMPINT															-0.008			
															(0.014)			
quartileFE_1_HHI																0.000		
																(0.000)		
quartileFE_4_HHI																-0.000		
																(0.000)		
quartileFE_1_CONC																	0.042***	
																	(0.012)	
quartileFE_4_CONC																	-0.014	
																	(0.014)	
quartileFE_1_COMP																		-0.003
																		(0.006)
quartileFE_4_COMP																		0.004
																		(0.011)
Constant	0.208***	0.359***	0.337***	0.330***	0.351***	0.337***	0.298***	0.275***	0.265***	0.278***	0.305***	0.303***	0.285***	0.325***	0.313***	0.305***	0.310***	0.320***
	(0.014)	(0.015)	(0.015)	(0.016)	(0.021)	(0.016)	(0.017)	(0.017)	(0.019)	(0.018)	(0.022)	(0.017)	(0.018)	(0.016)	(0.017)	(0.017)	(0.017)	(0.021)
Observations	18,786	16,920	13,606	12,395	12,395	12,395	12,079	10,489	9,760	9,760	9,760	10,489	9,760	12,079	10,489	9,760	9,760	9,760
Number of gvkeynum	2,045	1,997	1,682	1,586	1,586	1,586	1,311	1,177	1,136	1,136	1,136	1,177	1,136	1,311	1,177	1,136	1,136	1,136
R-Squared	0.520	0.359	0.369	0.354	0.350	0.353	0.421	0.447	0.422	0.416	0.416	0.461	0.423	0.407	0.433	0.407	0.403	0.402

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table A2.3 Panel B: Dependent Variable Cash/Assets. Controls follow Opler et al (1999) and include ln(assets), MTB, net working capital/assets, capex/assets, EBITDA/Assets, leverage, cash flow volatility, R&D/sales, as well as distributions and acquisitions dummy variables. Firm Efficiency taken from Demerjian et. al, (2012). Year fixed effects are on. Robust standard errors clustered by firm.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
FirmEffic	0.034***						0.074***	0.101***	0.114***	0.086***	0.039	0.078***	0.078***					
	(0.010)						(0.018)	(0.029)	(0.027)	(0.021)	(0.037)	(0.025)	(0.025)					
CUT2		-0.003*					0.003							-0.002				
		(0.002)					(0.004)							(0.003)				
IMPINT			0.042***					0.067**							0.052***			
			(0.010)					(0.027)							(0.015)			
HHI				0.000***					0.000***							0.000***		
				(0.000)					(0.000)							(0.000)		
COMP					-0.025*						-0.039*							-0.025
					(0.014)						(0.022)							(0.016)
CONC						0.007				0.018							0.002	
						(0.014)				(0.029)							(0.021)	
FE_CUT2							-0.015											
							(0.013)											
FE_IMPINT								-0.046										
								(0.070)										
FE_HHI									-0.000**									
									(0.000)									
FE_CONC										-0.053								
										(0.053)								
FE_COMP											0.050							
											(0.039)							
quartileIMPINT_1												-0.038***						
												(0.010)						
quartileIMPINT_4												0.008						
												(0.013)						
quartileIMPINT_1_FE												0.023						
												(0.029)						
quartileIMPINT_4_FE												0.008						
												(0.038)						
quartileHHI_1													-0.028**					
													(0.012)					
quartileHHI_4													0.002					
													(0.012)					
quartileHHI_1_FE													0.059					
													(0.038)					
quartileHHI_4_FE													0.003					
													(0.029)					
quartileFE_1														-0.018***	-0.019***	-0.019***	-0.020***	-0.021**
														(0.003)	(0.006)	(0.004)	(0.003)	(0.010)
quartileFE_4														0.020***	0.025***	0.029***	0.025***	0.018
														(0.004)	(0.007)	(0.005)	(0.004)	(0.013)
quartileFE_1_CUT2														0.004				
														(0.005)				
quartileFE_4_CUT2														-0.003				
														(0.004)				
quartileFE_1_IMPINT															-0.005			
															(0.016)			
quartileFE_4_IMPINT															-0.002			
															(0.017)			
quartileFE_1_HHI																-0.000		
																(0.000)		
quartileFE_4_HHI																-0.000		
																(0.000)		
quartileFE_1_CONC																	0.030	
																	(0.022)	
quartileFE_4_CONC																	-0.019	
																	(0.023)	
quartileFE_1_COMP																		0.001
																		(0.010)
quartileFE_4_COMP																		0.007
																		(0.014)
Constant	0.304***	0.453***	0.436***	0.421***	0.452***	0.428***	0.390***	0.369***	0.359***	0.373***	0.411***	0.401***	0.381***	0.416***	0.406***	0.398***	0.404***	0.429***
	(0.020)	(0.018)	(0.019)	(0.020)	(0.025)	(0.020)	(0.021)	(0.020)	(0.023)	(0.022)	(0.029)	(0.020)	(0.023)	(0.021)	(0.020)	(0.021)	(0.021)	(0.026)
Observations	18,930	17,004	13,633	12,417	12,417	12,417	12,128	10,504	9,773	9,773	9,773	10,504	9,773	12,128	10,504	9,773	9,773	9,773
Number of gvkeynum	2,053	2,001	1,685	1,586	1,586	1,586	1,311	1,179	1,136	1,136	1,136	1,179	1,136	1,311	1,179	1,136	1,136	1,136
R-Squared	0.441	0.397	0.404	0.401	0.398	0.398	0.397	0.414	0.402	0.396	0.397	0.422	0.402	0.399	0.417	0.405	0.400	0.402

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table A2.3 Panel C: Dependent Variable is Exogenous Cash. FEhat is obtained using 2SLS with IDD and UI as instruments for FE. Controls include ln(assets), MTB, net working capital/assets, capex/assets, EBITDA/Assets, leverage, cash flow volatility, R&D/sales, as well as distributions and acquisitions dummy variables. Firm Efficiency taken from Demerjian et. al, (2012). Year fixed effects are on. Robust standard errors clustered by firm.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
FEhat	2.545***						1.450***	1.513***	1.499***	1.480***	1.440***	1.276***	1.303***					
	(0.749)						(0.053)	(0.062)	(0.064)	(0.062)	(0.095)	(0.071)	(0.075)					
CUT2		-0.003***					-0.006							-0.001				
		(0.001)					(0.005)							(0.002)				
IMPINT			0.042***					0.082***							0.047***			
			(0.008)					(0.026)							(0.009)			
HHI				0.000***					0.000***							0.000***		
				(0.000)					(0.000)							(0.000)		
COMP					-0.014						-0.037							-0.021
					(0.013)						(0.031)							(0.014)
CONC						0.021*				0.101***							0.009	
						(0.011)				(0.037)							(0.012)	
FEhat_CUT2							0.007											
							(0.014)											
FEhat_IMPINT								-0.135*										
								(0.070)										
FEhat_HHI									-0.000									
									(0.000)									
FEhat_CONC										-0.228**								
										(0.097)								
FEhat_COMP											0.046							
											(0.074)							
quartileIMPINT_1												-0.036***						
												(0.007)						
quartileIMPINT_4												-0.008						
												(0.009)						
quartileIMPINT_1_FEhat												0.060***						
												(0.020)						
quartileIMPINT_4_FEhat												0.066**						
												(0.028)						
quartileHHI_1													-0.030***					
													(0.009)					
quartileHHI_4													-0.020***					
													(0.008)					
quartileHHI_1_FEhat													0.086***					
													(0.027)					
quartileHHI_4_FEhat													0.059***					
													(0.016)					
quartileFEhat_1														-0.011***	-0.019***	-0.015***	-0.013***	-0.015
														(0.004)	(0.005)	(0.004)	(0.003)	(0.011)
quartileFEhat_4														0.014***	0.026***	0.022***	0.015***	-0.003
														(0.003)	(0.005)	(0.004)	(0.003)	(0.010)
quartileFEhat_1_CUT2														-0.005				
														(0.003)				
quartileFEhat_4_CUT2														-0.002				
														(0.003)				
quartileFEhat_1_IMPINT															0.020*			
															(0.011)			
quartileFEhat_4_IMPINT															-0.028**			
															(0.012)			
quartileFEhat_1_HHI																0.000		
																(0.000)		
quartileFEhat_4_HHI																-0.000**		
																(0.000)		
quartileFEhat_1_CONC																	0.065**	
																	(0.025)	
quartileFEhat_4_CONC																	-0.015	
																	(0.017)	
quartileFEhat_1_COMP																		0.003
																		(0.011)
quartileFEhat_4_COMP																		0.020*
																		(0.010)
Constant	0.060	0.359***	0.337***	0.330***	0.351***	0.337***	0.238***	0.207***	0.207***	0.221***	0.258***	0.235***	0.213***	0.381***	0.358***	0.353***	0.361***	0.381***
	(0.049)	(0.015)	(0.015)	(0.016)	(0.021)	(0.016)	(0.015)	(0.016)	(0.017)	(0.015)	(0.033)	(0.016)	(0.017)	(0.016)	(0.016)	(0.016)	(0.016)	(0.021)
Observations	28,795	16,920	13,606	12,395	12,395	12,395	16,920	13,606	12,395	12,395	12,395	10,489	9,760	16,920	13,606	12,395	12,395	12,395
Number of gvkeynum	3,509	1,997	1,682	1,586	1,586	1,586	1,997	1,682	1,586	1,586	1,586	1,177	1,136	1,997	1,682	1,586	1,586	1,586
R-Squared	0.534	0.359	0.369	0.354	0.350	0.353	0.479	0.479	0.474	0.471	0.471	0.472	0.447	0.388	0.403	0.385	0.384	0.382

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table A2.3 Panel D: Dependent Variable Cash/Assets. FEhat is obtained using 2SLS with IDD and UI as instruments for FE. Controls follow Opler et al (1999) and include ln(assets), MTB, net working capital/assets, capex/assets, EBITDA/Assets, leverage, cash flow volatility, R&D/sales, as well as distributions and acquisitions dummy variables. Firm Efficiency taken from Demerjian et. al, (2012). Year fixed effects are on. Robust standard errors clustered by firm.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
FEhat	3.682***						1.192***	1.270***	1.239***	1.239***	1.289***	1.012***	1.037***					
	(0.916)						(0.070)	(0.081)	(0.082)	(0.080)	(0.120)	(0.090)	(0.093)					
CUT2		-0.003*					0.003							-0.000				
		(0.002)					(0.007)							(0.002)				
IMPINT			0.042***					0.075**							0.047***			
			(0.010)					(0.033)							(0.011)			
HHI				0.000***					0.000							0.000***		
				(0.000)					(0.000)							(0.000)		
COMP					-0.025*						-0.017							-0.035**
					(0.014)						(0.037)							(0.016)
CONC						0.007				0.046							-0.011	
						(0.014)				(0.051)							(0.019)	
FEhat_CUT2							-0.016											
							(0.022)											
FEhat_IMPINT								-0.121										
								(0.089)										
FEhat_HHI									-0.000									
									(0.000)									
FEhat_CONC										-0.111								
										(0.129)								
FEhat_COMP											-0.042							
											(0.090)							
quartileIMPINT_1												-0.041***						
												(0.009)						
quartileIMPINT_4												-0.007						
												(0.012)						
quartileIMPINT_1_FEhat												0.060***						
												(0.023)						
quartileIMPINT_4_FEhat												0.055						
												(0.034)						
quartileHHI_1													-0.030***					
													(0.011)					
quartileHHI_4													-0.011					
													(0.011)					
quartileHHI_1_FEhat													0.080**					
													(0.034)					
quartileHHI_4_FEhat													0.040*					
													(0.023)					
quartileFEhat_1														-0.016***	-0.024***	-0.019***	-0.021***	-0.038***
														(0.004)	(0.006)	(0.005)	(0.004)	(0.015)
quartileFEhat_4														0.016***	0.024***	0.021***	0.016***	-0.002
														(0.004)	(0.007)	(0.005)	(0.004)	(0.011)
quartileFEhat_1_CUT2														-0.005				
														(0.004)				
quartileFEhat_4_CUT2														-0.006				
														(0.004)				
quartileFEhat_1_IMPINT															0.012			
															(0.014)			
quartileFEhat_4_IMPINT															-0.026*			
															(0.016)			
quartileFEhat_1_HHI																-0.000		
																(0.000)		
quartileFEhat_4_HHI																-0.000		
																(0.000)		
quartileFEhat_1_CONC																	0.058*	
																	(0.034)	
quartileFEhat_4_CONC																	0.010	
																	(0.021)	
quartileFEhat_1_COMP																		0.019
																		(0.015)
quartileFEhat_4_COMP																		0.020*
																		(0.012)
Constant	0.086	0.453***	0.436***	0.421***	0.452***	0.428***	0.347***	0.324***	0.320***	0.327***	0.344***	0.341***	0.318***	0.478***	0.464***	0.453***	0.461***	0.495***
	(0.060)	(0.018)	(0.019)	(0.020)	(0.025)	(0.020)	(0.019)	(0.021)	(0.022)	(0.020)	(0.040)	(0.021)	(0.022)	(0.019)	(0.019)	(0.020)	(0.020)	(0.026)
Observations	29,127	17,004	13,633	12,417	12,417	12,417	17,004	13,633	12,417	12,417	12,417	10,504	9,773	17,004	13,633	12,417	12,417	12,417
Number of gvkeynum	3,534	2,001	1,685	1,586	1,586	1,586	2,001	1,685	1,586	1,586	1,586	1,179	1,136	2,001	1,685	1,586	1,586	1,586
R-Squared	0.477	0.397	0.404	0.401	0.398	0.398	0.448	0.448	0.447	0.444	0.446	0.425	0.411	0.411	0.422	0.419	0.416	0.416

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table A2.4 Panel A: Dependent Variable in all regressions is Firm Value defined as the excess of market over book assets, divided by book assets. The procedure and controls follow Fama & French (1998).

	EC (Fresard, 2010)						EC1 (Opler, 1999)						Cash&Equivalents/Assets					
	Full Sample		CUT2 = 1	CUT2 = 0	Low OC	High OC	Full Sample		CUT2 = 1	CUT2 = 0	Low OC	High OC	Full Sample		CUT2 = 1	CUT2 = 0	High OC	Low OC
OC	0.225***	0.239***	0.146***	0.262***			0.194***	0.219***	0.152***	0.245***			0.243***	0.251***	0.225***	0.275***		
	(0.033)	(0.042)	(0.047)	(0.052)			(0.029)	(0.042)	(0.041)	(0.044)			(0.036)	(0.041)	(0.038)	(0.058)		
dOC	-0.205	-0.167	-0.767*	0.225			-0.304	-0.269	-0.687	0.234			0.386*	0.411**	-0.184	0.597***		
	(0.281)	(0.273)	(0.389)	(0.300)			(0.257)	(0.244)	(0.518)	(0.375)			(0.198)	(0.192)	(0.346)	(0.189)		
dOC2	0.941**	0.924**	1.261**	0.455			0.907**	0.909**	1.128*	0.250			0.363	0.350	0.834**	0.088		
	(0.346)	(0.338)	(0.458)	(0.407)			(0.307)	(0.301)	(0.611)	(0.510)			(0.297)	(0.291)	(0.370)	(0.263)		
EC	1.383***	1.394***	1.080***	1.332***	0.581**	2.673***												
	(0.145)	(0.137)	(0.162)	(0.190)	(0.200)	(0.585)												
dEC	0.215	0.207	-0.008	0.311	0.581	-0.273												
	(0.383)	(0.369)	(0.668)	(0.372)	(0.336)	(0.317)												
dEC2	1.169***	1.165***	0.547	0.987**	0.371	0.088												
	(0.317)	(0.306)	(0.397)	(0.337)	(0.345)	(0.750)												
CUT2		0.060			0.208	-1.722**		0.134			0.369*	-0.546		0.005			0.169	-1.239**
		(0.099)			(0.197)	(0.637)		(0.125)			(0.192)	(0.768)		(0.066)			(0.201)	(0.509)
dCUT2		0.000			-0.268*	0.369		0.014			-0.334*	-0.298		0.046			-0.245	0.401
		(0.045)			(0.127)	(0.294)		(0.056)			(0.154)	(0.462)		(0.042)			(0.149)	(0.347)
dCUT22		0.049			-0.071	-1.055*		0.093			0.000	0.042		0.030			-0.048	-0.534
		(0.057)			(0.160)	(0.529)		(0.063)			(0.158)	(0.317)		(0.052)			(0.159)	(0.401)
OC_CUT2	-0.054	-0.091	0.000	0.000	-0.228	0.389***	-0.046*	-0.122	0.000	0.000	-0.720*	0.039	-0.031	-0.043	0.000	0.000	-0.275	0.351**
	(0.033)	(0.082)	(0.000)	(0.000)	(0.381)	(0.125)	(0.024)	(0.084)	(0.000)	(0.000)	(0.358)	(0.187)	(0.031)	(0.056)	(0.000)	(0.000)	(0.440)	(0.132)
dOC_CUT2	-0.018	-0.016	-0.071	0.031	0.526*	-0.121	-0.022	-0.025	-0.118**	0.028	0.655*	0.029	-0.032**	-0.046	-0.058	0.006	0.544*	-0.163**
	(0.012)	(0.028)	(0.047)	(0.033)	(0.278)	(0.081)	(0.013)	(0.030)	(0.041)	(0.025)	(0.336)	(0.152)	(0.015)	(0.027)	(0.041)	(0.034)	(0.303)	(0.073)
dOC_CUT22	-0.047*	-0.078	-0.037	-0.076	0.234	0.184*	-0.023	-0.079*	0.012	-0.061	-0.052	-0.110	-0.043**	-0.059	-0.003	-0.075	0.007	0.109
	(0.022)	(0.048)	(0.052)	(0.048)	(0.419)	(0.092)	(0.021)	(0.043)	(0.043)	(0.050)	(0.436)	(0.119)	(0.018)	(0.037)	(0.042)	(0.048)	(0.395)	(0.112)
EC1							0.546***	0.605***	0.669**	0.421*	0.231	0.092						
							(0.159)	(0.146)	(0.225)	(0.231)	(0.290)	(0.732)						
dEC1							-0.713	-0.712	-0.762	-0.989	-1.234**	-4.071						
							(0.542)	(0.550)	(0.743)	(0.573)	(0.545)	(3.268)						
dEC12							-1.130**	-1.118**	-1.073*	-1.502**	-2.012**	-3.096						
							(0.437)	(0.442)	(0.562)	(0.614)	(0.822)	(3.186)						
cheAT													1.273***	1.279***	1.000***	1.254***	0.111	2.078***
													(0.113)	(0.113)	(0.142)	(0.128)	(0.259)	(0.384)
dcheAT													-0.155	-0.147	-0.498*	-0.139	0.002	-0.726
													(0.193)	(0.194)	(0.262)	(0.180)	(0.283)	(0.717)
dcheAT2													0.451***	0.460***	0.235	0.512***	-0.572	0.207
													(0.146)	(0.145)	(0.261)	(0.146)	(0.363)	(0.469)
Constant	-0.341***	-0.345***	-0.331***	-0.283***	0.020	-0.323	-0.269***	-0.297***	-0.311***	-0.209***	0.118*	0.061	-0.282***	-0.284***	-0.320***	-0.226***	0.137**	-0.221
	(0.036)	(0.047)	(0.064)	(0.043)	(0.044)	(0.233)	(0.033)	(0.047)	(0.076)	(0.030)	(0.061)	(0.204)	(0.047)	(0.049)	(0.061)	(0.055)	(0.053)	(0.178)
Observations	12,068	12,068	3,390	8,678	2,299	1,910	8,058	8,058	2,500	5,558	1,536	922	14,417	14,417	4,138	10,279	2,852	2,582
R-squared	0.511	0.514	0.653	0.529	0.745	0.642	0.506	0.510	0.671	0.516	0.819	0.679	0.519	0.522	0.640	0.543	0.754	0.637
Number of groups	15	15	15	15	15	15	12	12	12	12	12	12	16	16	16	16	16	16

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 2.4 Panel B: Dependent Variable in all regressions is Firm Value defined as the excess of market over book assets, divided by book assets. The procedure and controls follow Fama & French (1998).

	EC (Fresard, 2010)						EC1 (Opler, 1999)						Cash&Equivalents/Assets					
	Full Sample		Low IMPINT	High IMPINT	Low OC	High OC	Full Sample		Low IMPINT	High IMPINT	Low OC	High OC	Full Sample		Low IMPINT	High IMPINT	Low OC	High OC
OC	0.396***	0.351***	0.221***	0.169			0.312***	0.309***	0.166***	0.202**			0.422***	0.380***	0.258***	0.248		
	(0.048)	(0.050)	(0.037)	(0.107)			(0.041)	(0.036)	(0.020)	(0.079)			(0.056)	(0.059)	(0.048)	(0.139)		
dOC	-0.299	-0.331	-0.220	-0.368			-0.323	-0.392	-0.529	-0.738*			0.150	0.215	0.177	-0.321		
	(0.404)	(0.446)	(0.352)	(0.558)			(0.348)	(0.437)	(0.413)	(0.394)			(0.330)	(0.379)	(0.374)	(0.540)		
dOC2	1.629***	1.534**	0.752**	1.697**			1.291**	1.186**	1.006	2.066***			1.142*	0.973	0.200	2.013***		
	(0.491)	(0.492)	(0.275)	(0.740)			(0.423)	(0.418)	(0.557)	(0.478)			(0.514)	(0.550)	(0.367)	(0.591)		
EC	1.400***	1.461***	1.861***	1.626***	0.793***	25.956												
	(0.114)	(0.108)	(0.315)	(0.188)	(0.223)	(23.670)												
dEC	-0.004	0.005	-1.746**	-0.127	0.945	12.692												
	(0.394)	(0.401)	(0.710)	(0.300)	(0.558)	(13.533)												
dEC2	1.292**	1.332**	0.118	1.456***	0.041	-16.305												
	(0.502)	(0.499)	(0.380)	(0.341)	(0.592)	(16.613)												
IMPINT		-0.283***			-0.127	-9.454		0.089			0.087	-0.506		-0.279***			0.241	-1.259**
		(0.072)			(0.616)	(8.594)		(0.074)			(0.277)	(1.122)		(0.084)			(0.732)	(0.454)
dIMPINT		-0.355			-0.165	87.342		-0.841			-1.558	-6.354		0.280			-0.716	-1.824
		(0.545)			(2.141)	(89.788)		(0.693)			(1.171)	(6.264)		(0.515)			(1.381)	(2.958)
dIMPINT2		-0.348			-1.391	-23.264		-0.406			-0.938	-3.888		-0.631			-1.724	-10.060**
		(0.554)			(1.319)	(13.019)		(0.508)			(0.911)	(4.587)		(0.613)			(1.405)	(3.880)
OC_IMPINT	-0.394***	-0.247**	0.378	0.024	-0.760	-0.786	-0.324***	-0.322***	0.680**	-0.013	-0.602	0.246	-0.399***	-0.265**	0.227	-0.089	-0.805	0.343
	(0.085)	(0.093)	(0.230)	(0.088)	(0.923)	(1.099)	(0.068)	(0.054)	(0.260)	(0.081)	(0.528)	(0.335)	(0.082)	(0.090)	(0.227)	(0.145)	(1.072)	(0.221)
dOC_IMPINT	-0.684	-0.532	-0.304	-0.565	-3.170	-15.360	-0.476*	-0.236	-0.652	-0.303	0.758	0.365	-0.959*	-1.128	-1.081	-0.741	-0.810	-0.707
	(0.401)	(0.463)	(1.038)	(0.573)	(4.494)	(14.771)	(0.260)	(0.325)	(1.054)	(0.312)	(1.746)	(1.077)	(0.485)	(0.630)	(1.200)	(0.688)	(2.248)	(0.831)
dOC_IMPINT2	-0.553**	-0.320	-1.017	-0.322	2.301	4.448*	-0.265	-0.083	-0.932	-0.248	1.461	1.587	-0.630	-0.191	-1.041	-0.697	2.120	2.225*
	(0.229)	(0.302)	(0.947)	(0.469)	(2.191)	(2.195)	(0.255)	(0.273)	(1.075)	(0.439)	(1.925)	(1.162)	(0.366)	(0.534)	(1.054)	(0.560)	(1.324)	(1.018)
EC1							0.726***	0.783***	1.272***	0.954***	0.329	-3.720						
							(0.153)	(0.132)	(0.332)	(0.284)	(0.278)	(2.156)						
dEC1							-0.747	-0.715	-2.736***	-1.615**	-2.592**	4.270						
							(0.765)	(0.806)	(0.813)	(0.633)	(0.955)	(9.525)						
dEC12							-0.910*	-0.839	-2.141**	-1.817**	-3.077***	7.832						
							(0.486)	(0.502)	(0.951)	(0.732)	(0.820)	(7.783)						
cheAT													1.317***	1.337***	1.233***	1.557***	0.155	2.891***
													(0.141)	(0.136)	(0.187)	(0.167)	(0.408)	(0.717)
dcheAT													-0.153	-0.160	-0.954**	-0.063	-0.309	-0.889*
													(0.305)	(0.302)	(0.355)	(0.206)	(0.473)	(0.466)
dcheAT2													0.211	0.231	-0.341	0.840***	-1.688**	1.259
													(0.159)	(0.159)	(0.303)	(0.213)	(0.616)	(0.987)
Constant	-0.391***	-0.309***	-0.593***	-0.425***	0.049	-1.822	-0.311***	-0.330***	-0.603***	-0.330***	-0.007	0.409	-0.334***	-0.262***	-0.518***	-0.422***	0.156	0.116
	(0.029)	(0.033)	(0.061)	(0.093)	(0.082)	(1.907)	(0.027)	(0.034)	(0.074)	(0.074)	(0.100)	(0.238)	(0.046)	(0.046)	(0.048)	(0.086)	(0.111)	(0.219)
Observations	7,097	7,097	1,837	1,655	1,068	858	6,296	6,296	1,667	1,459	857	710	7,591	7,591	1,950	1,768	1,192	968
R-squared	0.545	0.548	0.701	0.620	0.842	0.702	0.523	0.525	0.702	0.639	0.896	0.720	0.544	0.546	0.701	0.615	0.839	0.700
Number of groups	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 2.4 Panel C: Dependent Variable is Firm Value defined as the excess of market over book assets, divided by book assets. The procedure and controls follow Fama & French (1998).

	EC (Fresard, 2010)						EC1 (Opler, 1999)						Cash&Equivalents/Assets					
	Full Sample		Low HHI	High HHI	Low OC	High OC	Full Sample		Low HHI	High HHI	Low OC	High OC	Full Sample		Low HHI	High HHI	Low OC	High OC
OC	0.154***	0.119***	0.015	0.158**			0.104***	0.043*	-0.046	0.128*			0.166***	0.148***	0.028	0.202***		
	(0.022)	(0.026)	(0.027)	(0.051)			(0.016)	(0.022)	(0.033)	(0.067)			(0.023)	(0.027)	(0.029)	(0.061)		
dOC	0.097	0.104	0.203	-0.855			-0.054	-0.054	-0.341	-1.075			0.330	0.338	0.155	-0.783		
	(0.297)	(0.295)	(0.300)	(0.479)			(0.215)	(0.209)	(0.240)	(0.881)			(0.218)	(0.215)	(0.438)	(0.489)		
dOC2	0.617	0.572	-0.315	0.140			0.628**	0.586**	-0.447	-0.477			0.055	0.012	-0.404	0.445		
	(0.367)	(0.373)	(0.419)	(0.431)			(0.244)	(0.245)	(0.371)	(1.056)			(0.248)	(0.248)	(0.432)	(0.402)		
EC	1.375***	1.375***	1.227***	0.805**	0.724**	1.512***												
	(0.136)	(0.137)	(0.244)	(0.358)	(0.236)	(0.361)												
dEC	-0.248	-0.249	0.258	0.267	0.682	-0.477												
	(0.207)	(0.206)	(0.348)	(0.430)	(0.442)	(0.501)												
dEC2	0.705**	0.699**	1.000***	-0.053	0.120	0.549												
	(0.261)	(0.259)	(0.269)	(0.326)	(0.480)	(0.489)												
HHI		-0.000***			0.000	0.001		-0.000***			0.000	0.001**		-0.000**			-0.000	-0.000
		(0.000)			(0.000)	(0.000)		(0.000)			(0.000)	(0.000)		(0.000)			(0.000)	(0.000)
dHHI		-0.000			-0.000	0.001		-0.000			-0.000	0.001		-0.000			-0.000	0.000
		(0.000)			(0.000)	(0.001)		(0.000)			(0.000)	(0.002)		(0.000)			(0.000)	(0.001)
dHHI2		-0.000			-0.000	0.001		-0.000			-0.000	0.000		-0.000			-0.000	0.001
		(0.000)			(0.000)	(0.001)		(0.000)			(0.000)	(0.001)		(0.000)			(0.000)	(0.001)
OC_HHI	0.000**	0.000***	0.001***	0.000	-0.000	0.000*	0.000***	0.000***	0.001**	0.000	-0.000	0.000	0.000**	0.000***	0.001***	-0.000	-0.000	0.000***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
dOC_HHI	-0.000	-0.000	-0.002	0.001	-0.001	0.001	0.000	0.000	0.002	0.000	0.000	-0.002	0.000	0.000	0.001	0.000	0.000	0.001
	(0.000)	(0.000)	(0.002)	(0.001)	(0.001)	(0.001)	(0.000)	(0.000)	(0.002)	(0.001)	(0.002)	(0.001)	(0.000)	(0.000)	(0.003)	(0.000)	(0.001)	(0.001)
dOC_HHI2	0.000	0.000**	0.006*	0.000	0.001	0.002	0.000*	0.000***	0.007*	0.002*	0.001	0.003*	0.001**	0.001**	0.006**	0.001*	0.001	0.001
	(0.000)	(0.000)	(0.003)	(0.001)	(0.001)	(0.001)	(0.000)	(0.000)	(0.003)	(0.001)	(0.001)	(0.001)	(0.000)	(0.000)	(0.002)	(0.000)	(0.001)	(0.001)
EC1							0.744***	0.671***	0.225	-0.955*	0.235	-0.952						
							(0.180)	(0.183)	(0.276)	(0.472)	(0.441)	(1.113)						
dEC1							-1.440***	-1.429***	-2.549***	-3.565**	-2.431**	-3.569						
							(0.250)	(0.258)	(0.451)	(1.143)	(1.002)	(3.362)						
dEC12							-1.376**	-1.423**	-1.555	-3.712**	-3.256***	-2.253						
							(0.526)	(0.526)	(1.061)	(1.348)	(0.907)	(2.081)						
cheAT													1.156***	1.158***	1.332***	0.502**	0.393*	1.808***
													(0.148)	(0.149)	(0.256)	(0.201)	(0.194)	(0.349)
dcheAT													-0.354*	-0.358*	-0.661	-0.150	-0.163	-0.848***
													(0.173)	(0.173)	(0.403)	(0.217)	(0.416)	(0.258)
dcheAT2													0.252	0.256	0.581**	-0.292	-1.212**	0.556
													(0.147)	(0.146)	(0.237)	(0.307)	(0.505)	(0.388)
Constant	-0.348***	-0.282***	-0.303***	-0.267***	-0.002	-0.169**	-0.290***	-0.167***	-0.156*	-0.193**	-0.004	0.111	-0.298***	-0.262***	-0.317***	-0.250***	0.145	-0.213*
	(0.039)	(0.043)	(0.063)	(0.064)	(0.078)	(0.076)	(0.033)	(0.043)	(0.075)	(0.075)	(0.116)	(0.169)	(0.044)	(0.050)	(0.068)	(0.064)	(0.084)	(0.105)
Observations	7,955	7,955	2,162	1,858	1,067	1,231	5,498	5,498	1,590	1,141	673	676	8,611	8,611	2,295	2,012	1,206	1,406
R-Squared	0.504	0.506	0.585	0.675	0.786	0.604	0.501	0.504	0.572	0.721	0.885	0.655	0.505	0.507	0.577	0.666	0.786	0.616
Number of groups	11	11	11	11	11	11	9	9	9	9	9	9	11	11	11	11	11	11

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 2.4 Panel D: Dependent Variable in all regressions is Firm Value defined as the excess of market over book assets, divided by book assets. The procedure and controls follow Fama & French (1998).

	EC (Fresard, 2010)						EC1 (Opler, 1999)						Cash&Equivalents/Assets					
	Full Sample		CONC=1	CONC=0	Low OC	High OC	Full Sample		CONC=1	CONC=0	Low OC	High OC	Full Sample		CONC=1	CONC=0	High OC	Low OC
OC	0.189***	0.187***	1.188	0.187***			0.155***	0.154***	0.228	0.155***			0.202***	0.200***	2.455**	0.200***		
	(0.021)	(0.021)	(0.973)	(0.021)			(0.016)	(0.016)	(0.269)	(0.016)			(0.018)	(0.018)	(1.038)	(0.018)		
dOC	0.091	0.092	4.651**	0.088			0.008	0.004	5.414	-0.009			0.388*	0.390*	2.986	0.391*		
	(0.266)	(0.265)	(1.888)	(0.266)			(0.203)	(0.202)	(4.257)	(0.204)			(0.185)	(0.184)	(3.861)	(0.186)		
dOC2	0.664*	0.670*	-3.481	0.673*			0.639**	0.651**	-4.217	0.670**			0.181	0.186	-3.211	0.184		
	(0.345)	(0.344)	(2.304)	(0.346)			(0.250)	(0.247)	(4.111)	(0.247)			(0.251)	(0.251)	(3.103)	(0.253)		
EC	1.353***	1.365***	-2.021	1.365***	0.788***	1.700***												
	(0.139)	(0.140)	(1.442)	(0.143)	(0.249)	(0.364)												
dEC	-0.258	-0.272	-0.517	-0.296	0.647	-0.317												
	(0.206)	(0.205)	(1.794)	(0.211)	(0.431)	(0.543)												
dEC2	0.692**	0.697**	-0.444	0.631**	0.271	0.848												
	(0.248)	(0.247)	(1.088)	(0.248)	(0.497)	(0.570)												
CONC		-2.464**			-0.179*	-0.084		-1.853**			-0.102	-0.269		-2.055**			-0.303*	-0.369
		(0.800)			(0.087)	(0.468)		(0.797)			(0.059)	(0.605)		(0.762)			(0.145)	(0.780)
dCONC		0.096			0.019	0.000		0.215*			0.000	0.000		0.179			0.009	-0.115
		(0.060)			(0.013)	(0.000)		(0.115)			(0.000)	(0.000)		(0.101)			(0.010)	(0.115)
dCONC2		-1.207			-0.045	-0.531		-1.206			-0.097	0.130		-1.255			-0.179	-0.599
		(0.761)			(0.054)	(0.359)		(0.811)			(0.097)	(0.130)		(0.783)			(0.122)	(0.402)
OC_CONC	0.526*	3.245**	0.000	0.000	-0.275	0.185	0.019	2.084*	0.000	0.000	0.000	0.149	0.514*	2.659**	0.000	0.000	-0.103	0.325
	(0.237)	(1.100)	(0.000)	(0.000)	(0.185)	(0.171)	(0.141)	(0.982)	(0.000)	(0.000)	(0.000)	(0.171)	(0.235)	(0.947)	(0.000)	(0.000)	(0.103)	(0.207)
dOC_CONC	1.875	0.514	-0.071	0.034	-0.405	-0.055	-0.008	-0.414*	0.493	0.042	0.000	-0.256	1.612	0.391	0.226	0.036	-0.507	0.396
	(2.237)	(0.917)	(0.096)	(0.034)	(0.396)	(0.155)	(0.345)	(0.205)	(0.456)	(0.031)	(0.000)	(0.275)	(2.484)	(1.272)	(0.392)	(0.033)	(0.465)	(0.338)
dOC_CONC2	-0.465	2.727	-0.859	-0.001	-0.608	1.197	-0.457	1.905*	-0.022	0.012	0.000	0.630	-0.564	2.089	2.359	-0.016	-0.107	0.124
	(2.336)	(1.654)	(1.111)	(0.005)	(0.496)	(0.895)	(0.792)	(1.001)	(0.127)	(0.012)	(0.000)	(0.630)	(2.609)	(1.751)	(2.298)	(0.011)	(0.350)	(1.599)
EC1							0.641**	0.641**	-3.743	0.633***	0.276	-1.363						
							(0.195)	(0.193)	(2.433)	(0.188)	(0.397)	(1.155)						
dEC1							-1.428***	-1.422***	3.312	-1.443***	-2.614*	-3.424						
							(0.266)	(0.265)	(2.184)	(0.246)	(1.195)	(3.473)						
dEC12							-1.455**	-1.458**	-5.904	-1.457**	-2.931***	-2.559						
							(0.545)	(0.548)	(5.127)	(0.549)	(0.748)	(2.170)						
cheAT													1.151***	1.156***	-1.580	1.158***	0.417*	2.051***
													(0.149)	(0.149)	(1.733)	(0.152)	(0.205)	(0.314)
dcheAT													-0.346*	-0.349*	0.746	-0.371*	-0.195	-0.653
													(0.176)	(0.175)	(2.396)	(0.180)	(0.384)	(0.387)
dcheAT2													0.250	0.254	-0.200	0.220	-1.173**	0.695*
													(0.144)	(0.144)	(1.365)	(0.142)	(0.469)	(0.338)
Constant	-0.349***	-0.343***	0.178	-0.348***	-0.075	0.042	-0.283***	-0.278***	0.388	-0.286***	-0.048	0.399**	-0.296***	-0.288***	-1.046	-0.290***	0.064	-0.015
	(0.039)	(0.038)	(0.786)	(0.039)	(0.065)	(0.071)	(0.031)	(0.032)	(0.533)	(0.029)	(0.111)	(0.150)	(0.045)	(0.044)	(0.748)	(0.045)	(0.079)	(0.084)
Observations	7,955	7,955	137	7,818	1,067	1,231	5,498	5,498	97	5,401	673	676	8,611	8,611	146	8,465	1,206	1,406
R-squared	0.501	0.502	0.996	0.500	0.773	0.562	0.496	0.497	1.000	0.497	0.872	0.611	0.503	0.504	0.998	0.502	0.776	0.578
Number of grou	11	11	11	11	11	11	9	9	9	9	9	9	11	11	11	11	11	11

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 2.4 Panel E: Dependent Variable in all regressions is Firm Value defined as the excess of market over book assets, divided by book assets. The procedure and controls follow Fama & French (1998).

	EC (Fresard, 2010)						EC1 (Opler, 1999)						Cash&Equivalents/Assets					
	Full Sample		COMP=1	COMP=0	Low OC	High OC	Full Sample		COMP=1	COMP=0	Low OC	High OC	Full Sample		COMP=1	COMP=0	High OC	Low OC
OC	0.180***	0.135*	0.187***	0.118			0.130**	0.088	0.155***	-0.144			0.187***	0.152**	0.200***	0.150*		
	(0.047)	(0.067)	(0.021)	(0.085)			(0.043)	(0.083)	(0.016)	(0.112)			(0.053)	(0.061)	(0.019)	(0.082)		
dOC	-0.061	-0.025	0.164	-0.118			-0.062	0.111	0.068	2.040			-0.262	-0.323	0.433**	-0.187		
	(0.245)	(0.257)	(0.260)	(0.581)			(0.232)	(0.292)	(0.191)	(3.527)			(0.385)	(0.375)	(0.191)	(0.520)		
dOC2	1.111**	1.037**	0.739*	1.047			1.165**	1.046*	0.741**	-0.952			1.214	1.272*	0.234	1.115*		
	(0.412)	(0.416)	(0.335)	(0.719)			(0.485)	(0.519)	(0.225)	(3.435)			(0.718)	(0.702)	(0.248)	(0.551)		
EC	1.348***	1.346***	1.403***	-0.289	0.747***	1.854***												
	(0.139)	(0.139)	(0.146)	(0.419)	(0.204)	(0.355)												
dEC	-0.240	-0.241	-0.280	-0.274	0.879	-0.260												
	(0.209)	(0.210)	(0.207)	(0.489)	(0.504)	(0.510)												
dEC2	0.693**	0.688**	0.660**	-0.104	0.094	1.053												
	(0.250)	(0.252)	(0.247)	(0.385)	(0.450)	(0.606)												
COMP		-0.025			-0.035	0.573		-0.012			-0.097	-0.255*		-0.031			-0.063	-0.032
		(0.050)			(0.097)	(0.811)		(0.070)			(0.059)	(0.117)		(0.040)			(0.094)	(0.364)
dCOMP		0.022			-0.030	0.216		0.251			0.099	-0.135		-0.097			-0.120	-0.065
		(0.076)			(0.131)	(0.477)		(0.199)			(0.068)	(0.602)		(0.081)			(0.183)	(0.045)
dCOMP2		0.001			-0.209	0.027		0.058			0.029	-0.159		0.025			-0.117	-0.235
		(0.057)			(0.153)	(0.027)		(0.087)			(0.049)	(0.159)		(0.027)			(0.070)	(0.431)
OC_COMP	0.008	0.053	0.000	0.000	-0.046	0.157***	0.024	0.066	0.000	0.000	0.090	0.024	0.014	0.049	0.000	0.000	0.148	0.228***
	(0.037)	(0.067)	(0.000)	(0.000)	(0.194)	(0.026)	(0.044)	(0.086)	(0.000)	(0.000)	(0.185)	(0.061)	(0.052)	(0.062)	(0.000)	(0.000)	(0.260)	(0.041)
dOC_COMP	0.165	0.126	-0.075**	-0.071	-0.333	-0.467	0.064	-0.122	-0.078**	-0.178	0.553	-0.843**	0.639*	0.700**	-0.066*	-0.070	0.849	0.012
	(0.317)	(0.326)	(0.033)	(0.048)	(1.119)	(0.270)	(0.179)	(0.263)	(0.033)	(0.163)	(0.452)	(0.341)	(0.310)	(0.305)	(0.035)	(0.047)	(0.710)	(0.208)
dOC_COMP2	-0.455*	-0.378	-0.047	-0.009	0.982	1.730***	-0.520	-0.386	-0.042	-0.008	1.275	1.620*	-1.031	-1.089*	-0.021	-0.078	0.417	1.124**
	(0.245)	(0.270)	(0.033)	(0.070)	(0.709)	(0.504)	(0.341)	(0.378)	(0.030)	(0.031)	(0.749)	(0.706)	(0.582)	(0.565)	(0.028)	(0.059)	(0.442)	(0.402)
EC1							0.615**	0.613**	0.626***	1.510	0.180	-0.901						
							(0.195)	(0.194)	(0.174)	(1.320)	(0.401)	(0.886)						
dEC1							-1.439***	-1.431***	-1.436***	3.470	-2.230**	-2.754						
							(0.263)	(0.258)	(0.263)	(3.284)	(0.921)	(2.871)						
dEC12							-1.477**	-1.485**	-1.484**	4.583	-3.455***	-1.019						
							(0.543)	(0.542)	(0.565)	(5.895)	(0.727)	(2.127)						
cheAT													1.137***	1.135***	1.190***	0.042	0.508**	2.107***
													(0.148)	(0.149)	(0.156)	(0.141)	(0.172)	(0.398)
dcheAT													-0.345*	-0.346*	-0.383*	0.528	-0.170	-0.743**
													(0.176)	(0.176)	(0.180)	(0.367)	(0.406)	(0.312)
dcheAT2													0.253	0.251	0.238	0.382	-1.151**	0.734**
													(0.146)	(0.146)	(0.153)	(0.361)	(0.481)	(0.326)
Constant	-0.348***	-0.323***	-0.363***	0.029	-0.052	-0.928	-0.275***	-0.262***	-0.287***	0.035	-0.022	0.597**	-0.296***	-0.266***	-0.304***	-0.077	0.050	-0.615
	(0.040)	(0.051)	(0.042)	(0.093)	(0.052)	(0.813)	(0.033)	(0.062)	(0.032)	(0.194)	(0.084)	(0.232)	(0.047)	(0.058)	(0.047)	(0.084)	(0.058)	(0.388)
Observations	7,955	7,955	7,426	529	1,067	1,231	5,498	5,498	5,195	303	673	676	8,611	8,611	8,052	559	1,206	1,406
R-squared	0.501	0.501	0.503	0.828	0.787	0.587	0.496	0.497	0.500	0.900	0.885	0.635	0.503	0.503	0.504	0.805	0.787	0.602
Number of groups	11	11	11	11	11	11	9	9	9	9	9	9	11	11	11	11	11	11

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table A2.5 Panel A: Dependent Variable in all regressions is Firm Value defined as the excess of market over book assets, divided by book assets. The procedure and controls follow Fama & French (1998).

	EC (Fresard, 2010)						EC1 (Opler, 1999)						Cash&Equivalents/Assets				
	Full Sample		CUT2 = 1	CUT2 = 0	Low OC	High OC	Full Sample		CUT2 = 1	CUT2 = 0	Low OC	High OC	Full Sample		CUT2 = 1	CUT2 = 0	High OC	Low OC
OCc	1.299***	1.310***	1.197**	1.488***			1.053***	1.143***	1.584**	1.256***			1.257***	1.261***	0.905*	1.472***		
	(0.242)	(0.235)	(0.409)	(0.343)			(0.174)	(0.172)	(0.594)	(0.313)			(0.225)	(0.217)	(0.490)	(0.338)		
dOCc	0.181	0.178	-0.825	0.046			0.134	0.078	-0.178	-0.305			0.442	0.403	-0.552	0.201		
	(0.414)	(0.426)	(0.783)	(0.800)			(0.674)	(0.681)	(0.750)	(0.965)			(0.559)	(0.585)	(0.953)	(0.822)		
dOCc2	2.933***	2.899***	4.021***	2.710**			2.132**	2.113**	7.721	1.809			2.468**	2.448**	3.479**	2.591**		
	(0.860)	(0.873)	(1.237)	(1.102)			(0.777)	(0.785)	(4.820)	(1.171)			(0.942)	(0.966)	(1.292)	(1.115)		
EC	1.210***	1.235***	1.283***	1.038***	0.243	2.275***												
	(0.126)	(0.123)	(0.219)	(0.163)	(0.243)	(0.628)												
dEC	0.442	0.437	0.328	0.502	0.415	0.389												
	(0.346)	(0.342)	(0.636)	(0.332)	(0.237)	(0.511)												
dEC2	1.226***	1.248***	0.737	0.893***	0.574	2.053**												
	(0.345)	(0.352)	(0.475)	(0.264)	(0.538)	(0.834)												
CUT2		0.065			0.352	-1.011*		0.194			0.240	-0.438		0.050			0.322	-1.267*
		(0.049)			(0.201)	(0.546)		(0.138)			(0.224)	(0.944)		(0.056)			(0.213)	(0.682)
dCUT2		-0.014			-0.171*	-0.201		-0.046			-0.020	-0.206		-0.008			-0.117	-0.213
		(0.042)			(0.089)	(0.148)		(0.061)			(0.171)	(0.194)		(0.044)			(0.093)	(0.172)
dCUT22		0.021			0.075	-0.497***		0.052			0.147	-0.368*		0.014			0.068	-0.643**
		(0.036)			(0.144)	(0.161)		(0.046)			(0.170)	(0.174)		(0.040)			(0.156)	(0.261)
OCc_CUT2	-0.164	-0.383	-0.172	0.000	-5.069	1.654*	-0.049	-0.636	0.000	0.000	-4.952	0.108	-0.112	-0.275	0.000	0.000	-4.735	2.133*
	(0.177)	(0.300)	(0.172)	(0.000)	(3.785)	(0.760)	(0.181)	(0.455)	(0.000)	(0.000)	(2.846)	(2.061)	(0.163)	(0.288)	(0.000)	(0.000)	(3.869)	(1.157)
dOCc_CUT2	-0.085	-0.061	-0.482	0.248	3.018*	0.513	-0.121	-0.022	-1.500*	0.194	2.603*	0.400	-0.091	-0.090	-0.461	0.228	2.081	0.520
	(0.120)	(0.183)	(0.389)	(0.258)	(1.449)	(0.413)	(0.123)	(0.242)	(0.821)	(0.203)	(1.456)	(0.288)	(0.119)	(0.193)	(0.463)	(0.253)	(1.659)	(0.504)
dOCc_CUT22	-0.090	-0.197	-0.135	-0.496	-1.031	0.938**	0.009	-0.173	0.208	-0.370	-0.358	0.830*	-0.040	-0.129	-0.145	-0.449	-1.065	1.213*
	(0.097)	(0.191)	(0.446)	(0.297)	(3.047)	(0.337)	(0.119)	(0.182)	(0.310)	(0.288)	(2.457)	(0.461)	(0.097)	(0.185)	(0.471)	(0.303)	(3.126)	(0.657)
EC1							0.408***	0.502***	2.726	0.277	0.411*	1.229						
							(0.121)	(0.123)	(1.840)	(0.182)	(0.216)	(0.970)						
dEC1							-0.655	-0.736*	-8.349	-0.424	-0.697	-2.507						
							(0.399)	(0.401)	(6.259)	(0.508)	(0.471)	(1.776)						
dEC12							-1.319***	-1.339***	-5.012	-1.436**	-1.357**	-5.543***						
							(0.354)	(0.360)	(3.414)	(0.471)	(0.499)	(1.484)						
cheAT													1.111***	1.123***	1.060***	1.060***	0.026	1.874***
													(0.085)	(0.084)	(0.168)	(0.091)	(0.197)	(0.411)
dcheAT													0.012	0.019	-0.331	-0.011	0.238	0.054
													(0.194)	(0.204)	(0.231)	(0.182)	(0.228)	(0.385)
dcheAT2													0.408**	0.416**	-0.068	0.520***	-0.574*	0.838*
													(0.151)	(0.155)	(0.301)	(0.146)	(0.321)	(0.452)
Constant	-0.278***	-0.283***	-0.298***	-0.229***	0.066	-0.269**	-0.161***	-0.210***	-0.445**	-0.114***	0.128	-0.057	-0.265***	-0.266***	-0.253***	-0.237***	0.084**	-0.168
	(0.030)	(0.032)	(0.049)	(0.035)	(0.046)	(0.118)	(0.032)	(0.036)	(0.148)	(0.034)	(0.085)	(0.208)	(0.027)	(0.031)	(0.042)	(0.030)	(0.038)	(0.108)
Observations	11,229	11,229	3,318	7,911	2,190	2,047	9,778	9,778	3,041	6,737	1,871	1,677	11,308	11,308	3,335	7,973	2,241	2,066
R-squared	0.498	0.500	0.631	0.509	0.752	0.561	0.497	0.500	0.661	0.509	0.796	0.580	0.496	0.498	0.622	0.508	0.753	0.552
Number of groups	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table A2.5 Panel B: Dependent Variable in all regressions is Firm Value defined as the excess of market over book assets, divided by book assets. The procedure and controls follow Fama & French (1998).

	EC (Fresard, 2010)						EC1 (Opler, 1999)						Cash&Equivalents/Assets					
	Full Sample		CUT2 = 1	CUT2 = 0	Low OC	High OC	Full Sample		CUT2 = 1	CUT2 = 0	Low OC	High OC	Full Sample		CUT2 = 1	CUT2 = 0	High OC	Low OC
OCc	2.087***	1.616***	1.297***	0.486			1.830***	1.579***	1.150***	-0.018			2.067***	1.637***	1.332***	0.566		
	(0.293)	(0.193)	(0.290)	(0.687)			(0.288)	(0.209)	(0.275)	(0.384)			(0.291)	(0.186)	(0.311)	(0.679)		
dOCc	0.696	0.384	-0.290	0.234			0.631	0.366	-0.850	-1.402			0.717	0.438	-0.235	0.487		
	(0.970)	(0.867)	(1.556)	(1.776)			(1.164)	(1.118)	(1.393)	(1.704)			(0.967)	(0.846)	(1.488)	(1.732)		
dOCc2	4.204***	3.460***	4.522***	4.037**			3.660***	3.035**	5.631***	3.393*			3.937***	3.279***	5.019**	3.684**		
	(1.217)	(1.012)	(1.260)	(1.330)			(1.126)	(0.980)	(1.373)	(1.666)			(1.164)	(0.927)	(1.605)	(1.264)		
EC	1.297***	1.457***	1.423***	1.116***	0.298	1.712***												
	(0.126)	(0.138)	(0.188)	(0.132)	(0.415)	(0.384)												
dEC	0.182	0.135	-1.436*	-0.171	0.575*	0.227												
	(0.283)	(0.278)	(0.721)	(0.234)	(0.265)	(0.490)												
dEC2	1.263***	1.315***	-0.255	0.941***	0.623	2.145**												
	(0.398)	(0.411)	(0.436)	(0.231)	(0.712)	(0.845)												
IMPINT		-0.367***			0.215	-1.137***		-0.156			0.039	-0.861**		-0.331**			0.279	-1.127***
		(0.108)			(0.323)	(0.346)		(0.099)			(0.309)	(0.359)		(0.114)			(0.323)	(0.331)
dIMPINT		-0.954			1.195	-4.459**		-0.896			0.418	-2.171		-0.854			1.228	-3.982**
		(0.583)			(1.369)	(1.558)		(0.648)			(1.477)	(1.578)		(0.515)			(1.434)	(1.402)
dIMPINT2		-0.707			0.248	-5.445**		-0.493			0.679*	-6.003**		-0.618			0.461	-4.539**
		(0.533)			(0.251)	(2.114)		(0.529)			(0.360)	(2.241)		(0.523)			(0.259)	(1.474)
OCc_IMPINT	-2.279***	-0.802***	3.736	0.708	-7.043	1.843**	-2.052***	-1.277***	5.489**	1.118**	-4.314	1.091	-2.316***	-0.965***	4.350	0.484	-5.978	1.692**
	(0.435)	(0.186)	(2.452)	(0.712)	(3.944)	(0.590)	(0.461)	(0.196)	(2.320)	(0.438)	(4.369)	(0.661)	(0.437)	(0.181)	(2.428)	(0.735)	(4.092)	(0.559)
dOCc_IMPINT	-1.603	-0.500	-4.102	-1.289	-11.004	2.001	-2.093	-1.169	-5.728	-0.209	-5.771	-0.598	-1.628	-0.701	-5.873	-1.953	-11.808	2.605
	(1.634)	(1.436)	(12.623)	(2.280)	(11.410)	(1.816)	(1.864)	(1.793)	(11.835)	(1.713)	(10.076)	(2.089)	(1.525)	(1.243)	(12.031)	(2.248)	(13.408)	(1.618)
dOCc_IMPINT2	-1.973	-0.186	-0.438	0.667	-0.290	8.581***	-1.196	0.155	-0.095	1.787	0.276	8.776***	-1.915	-0.319	-0.260	1.084	0.419	6.750***
	(1.685)	(1.629)	(6.278)	(2.454)	(7.525)	(2.464)	(1.880)	(1.701)	(6.052)	(2.737)	(9.445)	(1.763)	(1.641)	(1.616)	(6.760)	(2.579)	(8.202)	(1.625)
EC1							0.532***	0.692***	0.946**	0.567*	0.641**	-0.688						
							(0.121)	(0.091)	(0.313)	(0.285)	(0.265)	(0.777)						
dEC1							-0.971**	-1.041**	-2.506**	-1.249**	-0.587	0.745						
							(0.374)	(0.374)	(0.959)	(0.543)	(0.738)	(1.371)						
dEC12							-1.266**	-1.227**	-1.764***	-1.768**	-1.896*	-3.882*						
							(0.422)	(0.424)	(0.542)	(0.691)	(0.873)	(1.795)						
cheAT													1.184***	1.281***	0.791***	0.870***	-0.075	1.713***
													(0.082)	(0.091)	(0.124)	(0.076)	(0.290)	(0.298)
dcheAT													0.005	-0.040	-0.886**	0.084	0.194	0.088
													(0.224)	(0.210)	(0.353)	(0.131)	(0.220)	(0.404)
dcheAT2													0.355*	0.383*	-0.726*	0.198	-0.935***	0.869
													(0.193)	(0.193)	(0.342)	(0.153)	(0.292)	(0.585)
Constant	-0.309***	-0.188***	-0.517***	-0.327***	0.042	0.194**	-0.213***	-0.163***	-0.511***	-0.220**	-0.066	0.512**	-0.297***	-0.182***	-0.464***	-0.286***	0.046	0.157
	(0.028)	(0.039)	(0.037)	(0.053)	(0.084)	(0.068)	(0.022)	(0.032)	(0.045)	(0.072)	(0.084)	(0.164)	(0.019)	(0.038)	(0.025)	(0.040)	(0.071)	(0.091)
Observations	8,009	8,009	2,138	1,938	1,213	1,383	7,572	7,572	2,033	1,833	1,088	1,291	8,032	8,032	2,139	1,938	1,218	1,396
R-squared	0.511	0.516	0.685	0.579	0.842	0.608	0.501	0.504	0.668	0.598	0.860	0.615	0.512	0.516	0.680	0.580	0.843	0.604
Number of groups	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table A2.5 Panel C: Dependent Variable in all regressions is Firm Value defined as the excess of market over book assets, divided by book assets. The procedure and controls follow Fama & French (1998).

	EC (Fresard, 2010)						EC1 (Opler, 1999)						Cash&Equivalents/Assets					
	Full Sample		CUT2 = 1	CUT2 = 0	Low OC	High OC	Full Sample		CUT2 = 1	CUT2 = 0	Low OC	High OC	Full Sample		CUT2 = 1	CUT2 = 0	High OC	Low OC
OCc	0.614***	0.461***	0.028	1.469***			0.470***	0.290**	0.238	1.907**			0.585***	0.423***	-0.009	1.457***		
	(0.072)	(0.093)	(0.180)	(0.310)			(0.083)	(0.105)	(0.301)	(0.604)			(0.071)	(0.091)	(0.176)	(0.313)		
dOCc	-0.674	-0.536	0.904	-0.791			-1.525**	-1.614*	-0.691	0.742			-0.627	-0.501	1.232	-0.392		
	(0.642)	(0.656)	(1.077)	(1.304)			(0.665)	(0.786)	(1.062)	(3.096)			(0.616)	(0.633)	(1.037)	(1.683)		
dOCc2	2.061**	1.916**	-0.042	-0.151			3.186**	3.254**	1.459	-3.227			1.821**	1.678**	-0.478	-2.098		
	(0.764)	(0.773)	(1.204)	(1.643)			(1.115)	(1.208)	(0.894)	(3.775)			(0.725)	(0.736)	(1.146)	(4.124)		
EC	1.162***	1.157***	1.063***	0.868**	0.459	1.138***												
	(0.150)	(0.149)	(0.149)	(0.282)	(0.402)	(0.307)												
dEC	0.079	0.080	0.275	0.303	0.059	0.001												
	(0.230)	(0.230)	(0.239)	(0.396)	(0.299)	(0.519)												
dEC2	0.780***	0.771***	0.829***	-0.114	0.913	1.069												
	(0.219)	(0.218)	(0.176)	(0.548)	(0.905)	(0.688)												
HHI		-0.000**			0.000	0.000		-0.000*			-0.000	0.000		-0.000**			0.000	0.000
		(0.000)			(0.000)	(0.000)		(0.000)			(0.000)	(0.000)		(0.000)			(0.000)	(0.000)
dHHI		-0.000			-0.000	-0.001		-0.000			-0.000	-0.001		-0.000			-0.000	-0.001
		(0.000)			(0.000)	(0.000)		(0.000)			(0.000)	(0.000)		(0.000)			(0.000)	(0.000)
dHHI2		-0.000			-0.000	-0.000		0.000			-0.001	0.000		-0.000*			-0.000	-0.000
		(0.000)			(0.000)	(0.000)		(0.000)			(0.000)	(0.000)		(0.000)			(0.000)	(0.000)
OCc_HHI	0.001***	0.001***	0.005*	-0.001**	-0.002**	0.001***	0.001***	0.002***	0.005*	-0.002	-0.004	0.001	0.001***	0.001***	0.005*	-0.001**	-0.001	0.002***
	(0.000)	(0.000)	(0.002)	(0.000)	(0.001)	(0.000)	(0.000)	(0.000)	(0.002)	(0.001)	(0.003)	(0.001)	(0.000)	(0.000)	(0.002)	(0.000)	(0.001)	(0.000)
dOCc_HHI	0.003*	0.002*	-0.013	0.000	-0.004	0.002	0.003	0.003	-0.001	-0.005	-0.019	0.003	0.003*	0.002	-0.015	-0.001	-0.005	0.002
	(0.001)	(0.001)	(0.013)	(0.001)	(0.005)	(0.002)	(0.002)	(0.002)	(0.014)	(0.005)	(0.021)	(0.003)	(0.001)	(0.001)	(0.012)	(0.002)	(0.005)	(0.002)
dOCc_HHI2	0.001	0.001	0.008	0.002	0.004	0.006**	-0.001	-0.001	0.006	0.007	0.008	0.005**	0.001	0.001	0.010	0.005	0.006	0.005**
	(0.001)	(0.001)	(0.014)	(0.001)	(0.005)	(0.003)	(0.002)	(0.002)	(0.015)	(0.005)	(0.005)	(0.002)	(0.001)	(0.001)	(0.014)	(0.004)	(0.005)	(0.002)
EC1							0.495***	0.458***	-0.465	-0.775	0.443	-0.037						
							(0.143)	(0.137)	(0.539)	(0.566)	(0.265)	(0.419)						
dEC1							-0.570	-0.603	-0.901	-2.504**	-0.382	-0.369						
							(0.527)	(0.506)	(1.102)	(1.062)	(0.781)	(1.420)						
dEC12							-0.773	-0.825	0.427	-2.294	-1.858**	-2.424						
							(0.658)	(0.644)	(1.498)	(1.682)	(0.770)	(1.845)						
cheAT													1.051***	1.047***	0.993***	0.660***	0.074	1.221***
													(0.085)	(0.084)	(0.141)	(0.173)	(0.302)	(0.178)
dcheAT													-0.239**	-0.239**	-0.187	-0.388	0.151	-0.130
													(0.090)	(0.090)	(0.196)	(0.319)	(0.281)	(0.319)
dcheAT2													0.328**	0.328**	0.514**	-0.283	-0.773*	0.344
													(0.113)	(0.112)	(0.190)	(0.355)	(0.365)	(0.373)
Constant	-0.274***	-0.231***	-0.245***	-0.222***	0.006	-0.224**	-0.178***	-0.126***	-0.106*	-0.186***	-0.113	-0.123	-0.262***	-0.217***	-0.226***	-0.205***	0.025	-0.295***
	(0.029)	(0.031)	(0.046)	(0.041)	(0.075)	(0.085)	(0.035)	(0.032)	(0.050)	(0.051)	(0.100)	(0.094)	(0.024)	(0.030)	(0.054)	(0.045)	(0.060)	(0.074)
Observations	7,904	7,904	2,277	1,747	1,057	1,561	6,718	6,718	1,986	1,378	852	1,256	7,926	7,926	2,285	1,750	1,065	1,573
R-squared	0.490	0.491	0.568	0.652	0.803	0.552	0.502	0.504	0.598	0.704	0.859	0.589	0.490	0.491	0.571	0.651	0.803	0.543
Number of groups	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table A2.6 Panel A: Dependent Variable in all regressions is Firm Value defined as the excess of market over book assets, divided by book assets. The procedure and controls follow Fama & French (1998).

	EC (Fresard, 2010)						EC1 (Opler, 1999)						Cash&Equivalents/Assets					
	Full Sample		CUT2 = 1	CUT2 = 0	Low OC	High OC	Full Sample		CUT2 = 1	CUT2 = 0	Low OC	High OC	Full Sample		CUT2 = 1	CUT2 = 0	High OC	Low OC
FirmEffic	1.192***	1.146***	0.935***	1.058***			1.115***	0.869***	0.867*	0.905***			1.156***	1.166***	0.979***	1.065***		
	(0.191)	(0.246)	(0.256)	(0.241)			(0.222)	(0.182)	(0.430)	(0.230)			(0.141)	(0.205)	(0.246)	(0.196)		
dFE	-0.020	0.037	-0.220	0.177			-0.109	-0.010	-1.530	0.072			-0.111	-0.176	-0.382	0.019		
	(0.238)	(0.268)	(0.292)	(0.291)			(0.248)	(0.235)	(1.482)	(0.221)			(0.154)	(0.149)	(0.224)	(0.196)		
dFE2	0.513**	0.475*	0.494**	0.371			0.463**	0.345	0.581	0.422*			0.534**	0.505*	0.435*	0.553*		
	(0.216)	(0.230)	(0.229)	(0.245)			(0.165)	(0.193)	(0.444)	(0.208)			(0.223)	(0.247)	(0.237)	(0.294)		
EC	1.160***	1.146***	1.169***	1.171***	0.702**	1.880***												
	(0.138)	(0.144)	(0.333)	(0.165)	(0.268)	(0.268)												
dEC	0.190	0.205	-0.585	0.204	-0.871*	-0.068												
	(0.281)	(0.286)	(0.525)	(0.257)	(0.456)	(0.483)												
dEC2	0.863***	0.863***	0.656	0.543*	-0.032	0.898												
	(0.242)	(0.249)	(0.428)	(0.284)	(0.460)	(0.577)												
CUT2		0.030			-0.203	-0.443*		-0.304			-0.168	0.014		0.103			0.795	-0.100
		(0.142)			(0.612)	(0.244)		(0.225)			(0.840)	(0.224)		(0.153)			(0.485)	(0.193)
dCUT2		0.035			-0.191	0.150		0.119			-1.478	0.130		-0.067			-0.404	-0.074
		(0.064)			(0.264)	(0.114)		(0.094)			(0.951)	(0.255)		(0.074)			(0.247)	(0.103)
dCUT22		0.027			-0.279*	0.011		-0.156			22.715	-0.100		0.057			-0.191	-0.021
		(0.076)			(0.145)	(0.096)		(0.130)			(23.196)	(0.151)		(0.081)			(0.270)	(0.121)
FE_CUT2	-0.203	-0.270	0.265*	0.000	-0.151	0.773	0.080	0.956	0.324*	0.000	0.636	-0.071	-0.037	-0.295	0.287*	0.000	-3.588	-0.099
	(0.118)	(0.436)	(0.127)	(0.000)	(2.942)	(0.599)	(0.158)	(0.812)	(0.158)	(0.000)	(4.048)	(0.484)	(0.088)	(0.416)	(0.148)	(0.000)	(2.384)	(0.434)
dFE_CUT2	-0.093	-0.194	-0.201	-0.161	0.922	-0.472*	-0.109	-0.428	0.245	-0.183*	6.537	-0.334	-0.158	0.026	-0.195	-0.215*	1.539	0.075
	(0.095)	(0.194)	(0.186)	(0.100)	(1.218)	(0.249)	(0.084)	(0.285)	(0.323)	(0.093)	(3.744)	(0.451)	(0.093)	(0.154)	(0.178)	(0.113)	(1.161)	(0.172)
dFE_CUT22	-0.119	-0.196	0.071	-0.174*	0.896	-0.133	0.099	0.614	0.203	-0.074	-101.470	0.099	-0.122	-0.268	0.051	-0.141	0.875	-0.216
	(0.103)	(0.261)	(0.144)	(0.084)	(0.607)	(0.243)	(0.097)	(0.519)	(0.162)	(0.102)	(103.308)	(0.361)	(0.084)	(0.262)	(0.138)	(0.081)	(1.095)	(0.273)
EC1							0.723***	0.738***	2.001*	0.711***	0.784*	1.399***						
							(0.107)	(0.116)	(0.910)	(0.124)	(0.389)	(0.239)						
dEC1							-0.215	-0.306	-2.884	-1.040	2.166	3.307						
							(0.777)	(0.762)	(2.113)	(0.760)	(1.657)	(4.608)						
dEC12							-1.013**	-1.111**	-2.862	-1.598**	2.167	2.089						
							(0.415)	(0.405)	(1.694)	(0.541)	(2.524)	(3.153)						
cheAT													1.245***	1.233***	1.103***	1.302***	0.679**	1.641***
													(0.102)	(0.105)	(0.237)	(0.141)	(0.254)	(0.217)
dcheAT													-0.001	0.016	-0.425*	0.054	-0.025	-0.083
													(0.174)	(0.175)	(0.201)	(0.201)	(0.219)	(0.349)
dcheAT2													0.660***	0.664***	0.163	0.745***	0.636***	0.877***
													(0.132)	(0.136)	(0.242)	(0.142)	(0.203)	(0.228)
Constant	-0.388***	-0.345***	-0.431***	-0.320***	0.043	-0.165	-0.344***	-0.225***	-0.654***	-0.244***	-0.187	-0.232	-0.355***	-0.333***	-0.335***	-0.309***	0.108	-0.121
	(0.045)	(0.070)	(0.090)	(0.061)	(0.095)	(0.102)	(0.042)	(0.055)	(0.207)	(0.054)	(0.208)	(0.235)	(0.036)	(0.067)	(0.065)	(0.050)	(0.081)	(0.108)
Observations	10,785	10,785	3,146	7,639	2,053	3,043	7,263	7,263	2,312	4,951	1,420	2,075	13,289	13,289	3,930	9,359	2,919	3,489
R-squared	0.519	0.523	0.637	0.523	0.593	0.684	0.531	0.537	0.696	0.529	0.634	0.685	0.501	0.505	0.620	0.501	0.598	0.669
Number of groups	15	15	15	15	15	15	12	12	12	12	12	12	15	15	15	15	15	15

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table A2.6 Panel B: Dependent Variable in all regressions is Firm Value defined as the excess of market over book assets, divided by book assets. The procedure and controls follow Fama & French (1998).

	EC (Fresard, 2010)						EC1 (Opler, 1999)						Cash&Equivalents/Assets					
	Full Sample		CUT2 = 1	CUT2 = 0	Low OC	High OC	Full Sample		CUT2 = 1	CUT2 = 0	Low OC	High OC	Full Sample		CUT2 = 1	CUT2 = 0	High OC	Low OC
FirmEffic	1.552***	1.233***	0.975***	2.513***			1.599***	1.426***	1.137***	2.267***			1.729***	1.445***	1.213***	3.029***		
	(0.126)	(0.180)	(0.122)	(0.486)			(0.204)	(0.241)	(0.126)	(0.393)			(0.157)	(0.203)	(0.201)	(0.549)		
dFE	-0.312	-0.503	-1.662**	1.058			-0.207	-0.299	-2.078**	0.523			-0.294	-0.465	-1.637**	1.129		
	(0.378)	(0.435)	(0.640)	(0.990)			(0.392)	(0.458)	(0.691)	(0.899)			(0.290)	(0.382)	(0.534)	(0.979)		
dFE2	0.922**	0.794*	-0.585	0.915			1.030**	1.020*	-0.794*	0.694			1.066**	0.810	-0.181	1.254***		
	(0.316)	(0.435)	(0.361)	(0.806)			(0.442)	(0.537)	(0.387)	(0.441)			(0.408)	(0.542)	(0.223)	(0.395)		
EC	1.370***	1.385***	1.914***	0.826***	0.777**	2.176***												
	(0.131)	(0.113)	(0.248)	(0.112)	(0.253)	(0.352)												
dEC	0.161	0.179	-1.446	-0.442*	-0.557	-0.433												
	(0.235)	(0.241)	(0.825)	(0.214)	(0.678)	(0.353)												
dEC2	0.957***	0.930***	-0.173	0.602	-0.617	0.725												
	(0.268)	(0.256)	(0.663)	(0.333)	(0.661)	(0.600)												
IMPINT		-0.213			1.568	-0.934***		-0.113			-0.788	-0.856***		-0.187			0.708	-0.920***
		(0.158)			(1.162)	(0.236)		(0.204)			(2.997)	(0.238)		(0.148)			(1.024)	(0.271)
dIMPINT		-1.217*			0.629	-1.026		-0.869			-3.106	-1.113		-1.088			0.018	-1.294
		(0.641)			(0.855)	(0.731)		(0.775)			(2.097)	(1.005)		(0.869)			(0.775)	(0.799)
dIMPINT2		-0.399			-2.171***	-1.737		-0.295			-2.449**	-1.177		-0.480			-1.233	-1.978
		(0.562)			(0.570)	(1.551)		(0.570)			(0.873)	(1.670)		(0.546)			(0.729)	(1.338)
FE_IMPINT	-1.769***	-0.996	-2.976***	-0.499	-9.847*	0.075	-1.605***	-1.214	-1.750**	-0.464	1.231	-0.257	-1.758***	-1.106	-3.171***	-0.746*	-6.340	0.005
	(0.252)	(0.616)	(0.667)	(0.354)	(5.245)	(0.460)	(0.321)	(0.775)	(0.699)	(0.290)	(13.407)	(0.630)	(0.268)	(0.611)	(0.815)	(0.376)	(4.372)	(0.577)
dFE_IMPINT	0.734	1.463*	9.339**	-1.917	5.605	0.427	0.679	1.100	9.942**	-1.215	4.449	0.925	0.183	0.773	8.934***	-2.313*	3.968	0.382
	(0.628)	(0.803)	(3.272)	(1.102)	(4.217)	(0.666)	(0.657)	(0.986)	(3.229)	(1.126)	(4.049)	(0.801)	(0.657)	(0.745)	(2.693)	(1.098)	(3.142)	(0.546)
dFE_IMPINT2	-1.202*	-0.852	5.539***	-0.314	2.012	-0.136	-0.725	-0.652	6.880**	-0.013	5.171	0.455	-1.662**	-1.031	3.439	-0.600	1.752	-0.583
	(0.631)	(0.777)	(1.536)	(0.933)	(1.578)	(0.562)	(0.543)	(0.713)	(2.411)	(0.481)	(3.181)	(0.733)	(0.678)	(0.748)	(2.572)	(0.539)	(2.760)	(0.637)
EC1							1.056***	1.135***	2.093***	0.370*	-0.106	1.312***						
							(0.118)	(0.110)	(0.361)	(0.200)	(0.371)	(0.208)						
dEC1							-1.122	-1.212	-4.348**	-1.422*	-2.606*	-1.925						
							(0.859)	(0.823)	(1.390)	(0.657)	(1.386)	(1.952)						
dEC12							-1.437**	-1.398**	-2.043*	-1.320	0.725	-3.087*						
							(0.514)	(0.539)	(0.930)	(1.158)	(1.862)	(1.501)						
cheAT													1.383***	1.371***	1.466***	0.755***	0.875***	2.014***
													(0.140)	(0.130)	(0.147)	(0.164)	(0.230)	(0.297)
dcheAT													-0.151	-0.203	-1.357**	-0.073	-0.697	-0.654*
													(0.200)	(0.184)	(0.430)	(0.212)	(0.394)	(0.313)
dcheAT2													0.344*	0.303*	-0.738	0.212	0.315	0.215
													(0.161)	(0.164)	(0.533)	(0.350)	(0.211)	(0.486)
Constant	-0.387***	-0.273***	-0.530***	-0.650***	0.010	0.030	-0.406***	-0.347***	-0.735***	-0.550***	0.185	0.183*	-0.400***	-0.284***	-0.512***	-0.732***	0.097	0.225**
	(0.029)	(0.057)	(0.035)	(0.088)	(0.101)	(0.086)	(0.037)	(0.068)	(0.068)	(0.096)	(0.157)	(0.088)	(0.042)	(0.061)	(0.047)	(0.084)	(0.088)	(0.090)
Observations	6,644	6,644	1,924	1,505	1,422	1,635	6,153	6,153	1,801	1,404	1,278	1,542	7,415	7,415	2,107	1,715	1,762	1,705
R-squared	0.541	0.546	0.658	0.654	0.630	0.722	0.537	0.543	0.653	0.667	0.667	0.708	0.530	0.536	0.615	0.623	0.606	0.725
Number of groups	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table A2.6 Panel C: Dependent Variable in all regressions is Firm Value defined as the excess of market over book assets, divided by book assets. The procedure and controls follow Fama & French (1998).

	EC (Fresard, 2010)						EC1 (Opler, 1999)						Cash&Equivalents/Assets					
	Full Sample		CUT2 = 1	CUT2 = 0	Low OC	High OC	Full Sample		CUT2 = 1	CUT2 = 0	Low OC	High OC	Full Sample		CUT2 = 1	CUT2 = 0	High OC	Low OC
FirmEffic	1.275***	1.258***	2.201***	0.733***			1.238***	1.121***	2.905**	1.901*			1.372***	1.403***	2.887***	0.859***		
	(0.249)	(0.277)	(0.507)	(0.147)			(0.363)	(0.290)	(1.166)	(1.023)			(0.256)	(0.247)	(0.415)	(0.141)		
dFE	0.371	0.406	-0.372	0.189			0.158	0.243	0.092	2.624			0.193	0.160	-0.197	0.243		
	(0.276)	(0.280)	(0.573)	(0.342)			(0.497)	(0.464)	(0.958)	(2.813)			(0.267)	(0.244)	(0.477)	(0.348)		
dFE2	0.347	0.372	0.614	0.338			0.523	0.675	0.593	0.337			0.296	0.301	0.360	0.197		
	(0.208)	(0.216)	(0.813)	(0.412)			(0.304)	(0.384)	(1.154)	(0.610)			(0.302)	(0.283)	(0.835)	(0.623)		
EC	1.154***	1.159***	0.790***	1.589***	0.718***	1.839***												
	(0.101)	(0.101)	(0.170)	(0.261)	(0.218)	(0.273)												
dEC	0.102	0.108	0.221	-0.144	-0.785	-0.535**												
	(0.218)	(0.222)	(0.282)	(0.360)	(0.626)	(0.217)												
dEC2	0.744***	0.751***	0.759**	-0.214	0.440	0.339												
	(0.204)	(0.205)	(0.289)	(0.624)	(0.251)	(0.469)												
HHI		-0.000			0.002*	0.000		-0.000			-0.040	0.000		0.000			0.001	0.000
		(0.000)			(0.001)	(0.000)		(0.000)			(0.044)	(0.000)		(0.000)			(0.001)	(0.000)
dHHI		0.000*			-0.000	0.000		0.000**			-0.000	-0.000		-0.002			-0.000	-0.045
		(0.000)			(0.000)	(0.000)		(0.000)			(0.000)	(0.000)		(0.002)			(0.001)	(0.042)
dHHI2		-0.000			0.000	0.000		0.000			0.059	0.000		-0.006			-0.007	-0.000
		(0.000)			(0.000)	(0.000)		(0.000)			(0.056)	(0.000)		(0.006)			(0.008)	(0.000)
FE_HHI	-0.000	-0.000	-0.001	-0.000***	-0.012*	-0.000	0.000	0.001	-0.002	-0.002	0.168	0.000	-0.000	-0.000	-0.001	-0.000**	-0.005	-0.000
	(0.000)	(0.000)	(0.002)	(0.000)	(0.006)	(0.000)	(0.000)	(0.000)	(0.003)	(0.001)	(0.190)	(0.000)	(0.000)	(0.000)	(0.001)	(0.000)	(0.005)	(0.001)
dFE_HHI	-0.001**	-0.001***	0.001	-0.000*	0.002	-0.000	0.000	0.000	-0.007	-0.004	-0.058	-0.002	-0.001*	-0.001**	-0.003	-0.001	0.000	-0.000
	(0.000)	(0.000)	(0.004)	(0.000)	(0.003)	(0.000)	(0.001)	(0.001)	(0.014)	(0.004)	(0.059)	(0.002)	(0.000)	(0.000)	(0.003)	(0.000)	(0.001)	(0.000)
dFE_HHI2	-0.000	-0.000	0.004	-0.000**	-0.001	-0.000	-0.000	-0.000	0.010*	0.001	-0.318	0.000	-0.000	-0.000	0.007	-0.000	0.000	-0.000
	(0.000)	(0.000)	(0.005)	(0.000)	(0.001)	(0.000)	(0.000)	(0.001)	(0.005)	(0.001)	(0.304)	(0.001)	(0.000)	(0.000)	(0.007)	(0.000)	(0.002)	(0.001)
EC1							0.732***	0.739***	-0.393	0.109	10.088	1.390***						
							(0.090)	(0.093)	(0.504)	(0.724)	(8.509)	(0.396)						
dEC1							-1.212	-1.198	-0.768	-1.501	-13.439	-1.150						
							(0.733)	(0.723)	(0.705)	(2.229)	(13.445)	(2.037)						
dEC12							-1.337**	-1.356**	0.402	-1.083	64.977	-3.369**						
							(0.582)	(0.582)	(1.010)	(2.383)	(64.696)	(1.476)						
cheAT													1.205***	1.200***	0.730***	1.107***	0.789***	1.557***
													(0.137)	(0.142)	(0.209)	(0.191)	(0.146)	(0.207)
dcheAT													-0.167	-0.176	0.236	-0.746**	-0.463**	-0.587*
													(0.162)	(0.160)	(0.209)	(0.306)	(0.187)	(0.306)
dcheAT2													0.463***	0.431**	0.484	-0.281	0.207	0.419
													(0.145)	(0.140)	(0.286)	(0.425)	(0.314)	(0.320)
Constant	-0.415***	-0.404***	-0.593***	-0.326***	-0.031	-0.224**	-0.408***	-0.364***	-0.544***	-0.232*	-2.895	-0.334	-0.417***	-0.418***	-0.716***	-0.304***	0.004	-0.061
	(0.046)	(0.059)	(0.101)	(0.051)	(0.069)	(0.080)	(0.064)	(0.045)	(0.099)	(0.121)	(2.616)	(0.319)	(0.046)	(0.054)	(0.099)	(0.066)	(0.060)	(0.078)
Observations	7,623	7,623	2,225	1,792	1,698	1,763	5,590	5,590	1,681	1,183	1,221	1,345	8,539	8,539	2,478	1,950	2,100	1,843
R-squared	0.502	0.503	0.612	0.658	0.585	0.686	0.534	0.535	0.653	0.716	0.666	0.707	0.488	0.493	0.609	0.656	0.596	0.687
Number of groups	11	11	11	11	11	11	10	10	10	10	10	10	11	11	11	11	11	11

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table A2.7 Panel A: Dependent Variable in all regressions is Firm Value defined as the excess of market over book assets, divided by book assets. The procedure and controls follow Fama & French (1998).

	EC (Fresard, 2010)						EC1 (Opler, 1999)						Cash&Equivalents/Assets					
	Full Sample		CUT2 = 1	CUT2 = 0	Low OC	High OC	Full Sample		CUT2 = 1	CUT2 = 0	Low OC	High OC	Full Sample		CUT2 = 1	CUT2 = 0	High OC	Low OC
OChat	0.063***	0.077**	0.261	0.081**			0.079***	0.098***	-0.099	0.103**			0.056***	0.072**	-0.080	0.074**		
	(0.019)	(0.026)	(0.160)	(0.031)			(0.022)	(0.028)	(0.229)	(0.036)			(0.015)	(0.027)	(0.200)	(0.027)		
dOChat	0.555	0.629	0.655	0.857			0.516	0.604	0.510	0.929			0.546	0.626	2.590	0.884		
	(0.444)	(0.413)	(0.498)	(0.561)			(0.459)	(0.420)	(0.364)	(0.559)			(0.468)	(0.430)	(1.872)	(0.553)		
dOChat2	0.363	0.345	-1.918	0.414			0.167	0.172	1.733	0.180			0.359	0.348	0.174	0.377		
	(0.285)	(0.316)	(2.199)	(0.351)			(0.280)	(0.309)	(1.674)	(0.333)			(0.291)	(0.327)	(0.533)	(0.337)		
EC	0.973***	0.955***	1.886**	0.760***	0.353*	-0.369												
	(0.125)	(0.141)	(0.688)	(0.178)	(0.190)	(0.291)												
dEC	0.558	0.556	-2.740	0.795*	0.170	2.068*												
	(0.361)	(0.353)	(2.779)	(0.377)	(0.356)	(0.991)												
dEC2	0.865**	0.889***	-1.006	0.574**	-0.213	1.726*												
	(0.286)	(0.279)	(1.471)	(0.245)	(0.282)	(0.928)												
CUT2		0.268			-0.112	-1.055		0.291			-0.134*	-1.727		0.274			-0.150***	-1.698
		(0.350)			(0.073)	(1.307)		(0.345)			(0.062)	(1.121)		(0.357)			(0.045)	(1.355)
dCUT2		0.014			0.024	0.172		0.003			0.037	0.114		0.018			0.065	0.769
		(0.091)			(0.071)	(0.953)		(0.093)			(0.059)	(0.856)		(0.100)			(0.052)	(0.891)
dCUT22		0.005			-0.039	-1.081		0.018			-0.046	-1.784*		0.005			-0.045	-1.164
		(0.042)			(0.063)	(0.809)		(0.047)			(0.063)	(0.851)		(0.045)			(0.060)	(0.712)
OChat_CUT2	0.016	-0.087	0.000	0.000	0.283*	0.339	0.029	-0.084	0.000	0.000	0.301**	0.561	0.017	-0.089	0.000	0.000	0.326**	0.544
	(0.027)	(0.157)	(0.000)	(0.000)	(0.135)	(0.521)	(0.035)	(0.157)	(0.000)	(0.000)	(0.130)	(0.466)	(0.028)	(0.161)	(0.000)	(0.000)	(0.107)	(0.535)
dOChat_CUT2	-0.024	-0.040	-0.230*	-0.001	0.040	-0.084	-0.030	-0.041	-0.186*	-0.011	0.014	-0.053	-0.025	-0.044	-0.122**	0.000	-0.015	-0.314
	(0.022)	(0.056)	(0.125)	(0.033)	(0.088)	(0.402)	(0.023)	(0.059)	(0.091)	(0.030)	(0.074)	(0.370)	(0.022)	(0.062)	(0.048)	(0.030)	(0.065)	(0.383)
dOChat_CUT22	0.010	0.010	0.038	-0.021	0.136*	0.403	0.015	0.013	0.034	-0.021	0.143*	0.676*	0.012	0.014	0.043	-0.025	0.139*	0.439
	(0.018)	(0.030)	(0.042)	(0.042)	(0.071)	(0.325)	(0.026)	(0.032)	(0.044)	(0.046)	(0.070)	(0.344)	(0.020)	(0.030)	(0.039)	(0.042)	(0.067)	(0.296)
EC1							0.204	0.225	2.563	0.053	-0.072	-1.575**						
							(0.168)	(0.161)	(1.876)	(0.253)	(0.192)	(0.519)						
dEC1							-0.416	-0.526	-5.340	0.202	-1.102**	0.077						
							(0.401)	(0.387)	(3.446)	(0.564)	(0.423)	(2.346)						
dEC12							-1.461***	-1.495***	-1.648**	-1.399**	-1.930***	-2.543**						
							(0.321)	(0.319)	(0.596)	(0.510)	(0.506)	(0.877)						
cheAT													0.931***	0.918***	0.645	0.858***	0.420**	-0.245
													(0.088)	(0.105)	(0.468)	(0.121)	(0.159)	(0.179)
dcheAT													0.020	0.036	-1.446	0.112	-0.278	1.270
													(0.153)	(0.153)	(0.974)	(0.219)	(0.289)	(0.773)
dcheAT2													0.362**	0.373**	-0.802	0.517**	-0.044	0.466
													(0.154)	(0.154)	(0.716)	(0.177)	(0.240)	(0.709)
Constant	-0.066	-0.098	-0.920	0.019	0.035	0.025	-0.014	-0.058	0.181	0.058	0.072*	0.355**	-0.064	-0.099	0.452	0.002	0.059	0.067
	(0.052)	(0.070)	(0.685)	(0.058)	(0.039)	(0.087)	(0.043)	(0.074)	(0.408)	(0.055)	(0.039)	(0.143)	(0.050)	(0.073)	(0.651)	(0.058)	(0.034)	(0.065)
Observations	9,718	9,718	3,029	6,689	2,557	1,411	9,778	9,778	3,041	6,737	2,592	1,418	9,778	9,778	3,041	6,737	2,592	1,418
R-squared	0.500	0.504	0.667	0.508	0.622	0.655	0.489	0.493	0.654	0.500	0.620	0.646	0.498	0.503	0.660	0.506	0.621	0.653
Number of groups	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table A2.7 Panel B: Dependent Variable in all regressions is Firm Value defined as the excess of market over book assets, divided by book assets. The procedure and controls follow Fama & French (1998).

	EC (Fresard, 2010)						EC1 (Opler, 1999)						Cash&Equivalents/Assets					
	Full Sample		CUT2 = 1	CUT2 = 0	Low OC	High OC	Full Sample		CUT2 = 1	CUT2 = 0	Low OC	High OC	Full Sample		CUT2 = 1	CUT2 = 0	High OC	Low OC
OChat	0.231***	0.206***	0.154***	-0.196**			0.229***	0.226***	0.180***	-0.247***			0.227***	0.216***	0.179***	-0.162**		
	(0.029)	(0.017)	(0.033)	(0.064)			(0.034)	(0.022)	(0.034)	(0.075)			(0.032)	(0.020)	(0.031)	(0.064)		
dOChat	1.547***	1.457***	1.354*	0.945			1.402***	1.362***	1.027	0.981			1.496***	1.418***	1.722**	1.059		
	(0.261)	(0.296)	(0.702)	(0.611)			(0.269)	(0.313)	(0.720)	(0.643)			(0.261)	(0.295)	(0.685)	(0.648)		
dOChat2	0.938**	0.840**	1.690**	1.640*			0.702**	0.596*	1.629**	1.359*			0.855**	0.762**	1.955**	1.644**		
	(0.345)	(0.323)	(0.614)	(0.805)			(0.308)	(0.279)	(0.620)	(0.697)			(0.353)	(0.315)	(0.723)	(0.734)		
EC	1.293***	1.326***	1.485***	1.161***	0.205	0.340												
	(0.104)	(0.108)	(0.242)	(0.132)	(0.256)	(0.278)												
dEC	0.194	0.160	-1.183	-0.280	-0.055	1.233												
	(0.267)	(0.263)	(0.831)	(0.263)	(0.253)	(0.757)												
dEC2	1.053***	1.072***	-0.342	0.729***	-0.480	0.874												
	(0.327)	(0.336)	(0.528)	(0.212)	(0.329)	(0.719)												
IMPINT		-0.206			-0.877***	-1.272		-0.069			-0.957***	-1.353*		-0.121			-0.904***	-1.337
		(0.161)			(0.215)	(0.858)		(0.160)			(0.209)	(0.615)		(0.151)			(0.202)	(0.847)
dIMPINT		-0.165			0.171	-8.620		0.062			0.344	-10.421**		-0.112			0.148	-8.100*
		(0.782)			(0.993)	(5.315)		(0.787)			(1.004)	(4.512)		(0.690)			(1.042)	(4.399)
dIMPINT2		-0.485			-0.067	-5.122		-0.480			0.320	-2.686		-0.418			0.141	-4.204
		(0.638)			(0.339)	(3.354)		(0.586)			(0.346)	(2.674)		(0.658)			(0.332)	(3.196)
OChat_IMPINT	-0.358***	-0.243***	0.322	0.180**	0.661***	0.291	-0.312***	-0.274***	0.499*	0.234**	0.737***	0.354	-0.364***	-0.295***	0.306	0.134*	0.667***	0.322
	(0.074)	(0.064)	(0.258)	(0.074)	(0.107)	(0.355)	(0.076)	(0.069)	(0.231)	(0.087)	(0.133)	(0.263)	(0.079)	(0.065)	(0.230)	(0.072)	(0.100)	(0.350)
dOChat_IMPINT	-0.700*	-0.583	1.010	-0.191	-0.768	4.873	-0.690	-0.672	0.252	-0.174	-1.020	5.841**	-0.618*	-0.526	0.774	-0.276	-0.920	4.869*
	(0.368)	(0.515)	(1.453)	(0.318)	(0.843)	(2.690)	(0.386)	(0.564)	(1.576)	(0.310)	(0.907)	(2.303)	(0.341)	(0.490)	(1.249)	(0.314)	(0.824)	(2.238)
dOChat_IMPINT2	-0.334	-0.083	-1.350	-0.158	-1.498	1.306	-0.252	0.014	-1.689	-0.057	-2.150*	0.819	-0.352	-0.118	-1.768	-0.171	-1.648	0.919
	(0.491)	(0.561)	(1.127)	(0.404)	(1.180)	(1.278)	(0.467)	(0.537)	(1.184)	(0.331)	(1.104)	(1.136)	(0.449)	(0.514)	(1.476)	(0.365)	(1.128)	(1.191)
EC1							0.421***	0.467***	0.237	0.707**	-0.218	-1.202						
							(0.101)	(0.093)	(0.411)	(0.252)	(0.251)	(0.728)						
dEC1							-0.644	-0.663	-2.888**	-0.774	-2.573***	0.916						
							(0.431)	(0.412)	(1.114)	(0.624)	(0.353)	(1.205)						
dEC12							-1.146**	-1.153**	-2.275***	-1.251**	-2.090***	-2.900						
							(0.388)	(0.386)	(0.597)	(0.557)	(0.525)	(1.931)						
cheAT													1.165***	1.177***	0.854***	0.913***	0.389*	0.268
													(0.060)	(0.059)	(0.131)	(0.083)	(0.191)	(0.175)
dcheAT													-0.061	-0.070	-0.989**	0.030	-0.383	0.217
													(0.176)	(0.178)	(0.367)	(0.112)	(0.288)	(0.363)
dcheAT2													0.214	0.230	-1.047**	0.083	-0.108	-0.167
													(0.226)	(0.219)	(0.370)	(0.149)	(0.226)	(0.392)
Constant	-0.071	-0.042	-0.365***	0.179**	0.014	0.244**	-0.013	-0.024	-0.320***	0.261***	0.043	0.516**	-0.063	-0.055	-0.307***	0.212**	0.023	0.216*
	(0.048)	(0.058)	(0.085)	(0.078)	(0.029)	(0.095)	(0.043)	(0.055)	(0.072)	(0.081)	(0.047)	(0.202)	(0.038)	(0.054)	(0.091)	(0.082)	(0.030)	(0.099)
Observations	7,554	7,554	2,032	1,833	1,716	984	7,572	7,572	2,033	1,833	1,717	989	7,572	7,572	2,033	1,833	1,717	989
R-squared	0.507	0.509	0.656	0.592	0.673	0.710	0.493	0.494	0.639	0.592	0.677	0.698	0.508	0.510	0.651	0.592	0.675	0.698
Number of groups	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table A2.7 Panel C: Dependent Variable in all regressions is Firm Value defined as the excess of market over book assets, divided by book assets. The procedure and controls follow Fama & French (1998).

	EC (Fresard, 2010)						EC1 (Opler, 1999)						Cash&Equivalents/Assets					
	Full Sample		CUT2 = 1	CUT2 = 0	Low OC	High OC	Full Sample		CUT2 = 1	CUT2 = 0	Low OC	High OC	Full Sample		CUT2 = 1	CUT2 = 0	High OC	Low OC
OChat	-0.002	-0.023	0.114	0.183***			0.006	-0.015	0.106	0.202**			-0.003	-0.027	0.118	0.178***		
	(0.016)	(0.019)	(0.148)	(0.054)			(0.013)	(0.019)	(0.098)	(0.072)			(0.018)	(0.020)	(0.164)	(0.054)		
dOChat	0.754*	0.786*	1.324**	2.568**			0.609	0.641	0.743	1.456			0.734*	0.758*	1.209**	2.042*		
	(0.363)	(0.374)	(0.528)	(0.893)			(0.377)	(0.386)	(0.444)	(0.837)			(0.365)	(0.376)	(0.446)	(0.953)		
dOChat2	0.377	0.419	0.483	0.112			0.231	0.266	0.531	0.872			0.273	0.319	0.776	0.668		
	(0.337)	(0.339)	(1.457)	(1.484)			(0.287)	(0.295)	(1.379)	(0.901)			(0.325)	(0.315)	(1.663)	(0.976)		
EC	1.002***	0.985***	0.802*	1.058**	0.313	-0.130												
	(0.147)	(0.154)	(0.433)	(0.359)	(0.241)	(0.263)												
dEC	0.103	0.113	0.529	0.218	-0.358	1.381**												
	(0.217)	(0.217)	(0.515)	(0.431)	(0.210)	(0.606)												
dEC2	0.618**	0.599**	0.724**	0.195	-0.226	0.769												
	(0.199)	(0.199)	(0.275)	(0.873)	(0.283)	(0.781)												
HHI		-0.000			-0.000**	0.001		-0.000			-0.000***	0.001		-0.000*			-0.000**	0.001
		(0.000)			(0.000)	(0.001)		(0.000)			(0.000)	(0.001)		(0.000)			(0.000)	(0.001)
dHHI		0.000			-0.000	-0.001		0.000			-0.000	-0.001		0.000			-0.000	-0.001
		(0.000)			(0.000)	(0.001)		(0.000)			(0.000)	(0.001)		(0.000)			(0.000)	(0.001)
dHHI2		0.000			0.000	-0.000		0.000			0.000	0.000		0.000			0.000	0.000
		(0.000)			(0.000)	(0.000)		(0.000)			(0.000)	(0.001)		(0.000)			(0.000)	(0.001)
OChat_HHI	0.000***	0.000***	-0.001	-0.000	0.000***	-0.000	0.000***	0.000***	-0.001	-0.000	0.000***	-0.000	0.000**	0.000***	-0.001	-0.000	0.000***	-0.000
	(0.000)	(0.000)	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.001)	(0.000)	(0.000)	(0.000)
dOChat_HHI	0.001	0.000	-0.009	-0.001	-0.000	0.002**	0.001	0.001	-0.007	-0.001	-0.000	0.002**	0.000	0.000	-0.009	-0.001	0.000	0.002*
	(0.000)	(0.000)	(0.006)	(0.001)	(0.000)	(0.001)	(0.000)	(0.000)	(0.005)	(0.001)	(0.000)	(0.001)	(0.001)	(0.000)	(0.006)	(0.001)	(0.000)	(0.001)
dOChat_HHI2	0.000	0.000	-0.007	0.000	-0.000	0.001	0.001	0.000	-0.008	0.001	0.000	0.000	0.000	0.000	-0.007	0.000	-0.000	0.000
	(0.000)	(0.000)	(0.005)	(0.001)	(0.000)	(0.001)	(0.000)	(0.001)	(0.005)	(0.001)	(0.000)	(0.001)	(0.000)	(0.000)	(0.005)	(0.001)	(0.000)	(0.001)
EC1							0.410**	0.365**	-0.280	-0.776	-0.171	-1.293***						
							(0.143)	(0.138)	(0.663)	(0.731)	(0.248)	(0.364)						
dEC1							-0.190	-0.214	-1.167	-2.619**	-2.576***	0.591						
							(0.581)	(0.575)	(0.754)	(0.883)	(0.461)	(1.400)						
dEC12							-0.837	-0.906	0.500	-2.218	-2.212***	-2.564						
							(0.539)	(0.514)	(1.665)	(1.440)	(0.671)	(1.637)						
cheAT													0.863***	0.851***	0.688	0.757**	0.389*	-0.011
													(0.161)	(0.172)	(0.397)	(0.292)	(0.201)	(0.170)
dcheAT													-0.033	-0.029	0.127	-0.400	-0.454	0.754
													(0.194)	(0.199)	(0.459)	(0.400)	(0.357)	(0.446)
dcheAT2													0.357**	0.360**	0.712	-0.001	-0.022	-0.078
													(0.148)	(0.150)	(0.400)	(0.424)	(0.229)	(0.394)
Constant	-0.009	0.031	-0.282**	0.114	-0.041	-0.042	0.011	0.055	-0.090	0.379	0.009	0.219**	-0.013	0.031	-0.195**	0.173	-0.025	-0.064
	(0.050)	(0.054)	(0.109)	(0.122)	(0.037)	(0.077)	(0.048)	(0.045)	(0.094)	(0.323)	(0.053)	(0.076)	(0.043)	(0.038)	(0.073)	(0.180)	(0.039)	(0.076)
Observations	6,703	6,703	1,979	1,377	1,337	978	6,718	6,718	1,986	1,378	1,338	983	6,718	6,718	1,986	1,378	1,338	983
R-squared	0.502	0.503	0.601	0.699	0.691	0.640	0.493	0.494	0.598	0.688	0.699	0.622	0.503	0.505	0.608	0.693	0.697	0.632
Number of groups	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table A2.8 Panel A: Dependent Variable in all regressions is Firm Value defined as the excess of market over book assets, divided by book assets. The procedure and controls follow Fama & French (1998).

	EC (Fresard, 2010)						EC1 (Opler, 1999)						Cash&Equivalents/Assets					
	Full Sample		CUT2 = 1	CUT2 = 0	Low OC	High OC	Full Sample		CUT2 = 1	CUT2 = 0	Low OC	High OC	Full Sample		CUT2 = 1	CUT2 = 0	High OC	Low OC
OCbhat	0.185***	0.189***	-0.029	0.133***			0.186***	0.188***	-0.268	0.139***			0.174***	0.175***	-0.122	0.127***		
	(0.030)	(0.030)	(0.111)	(0.030)			(0.033)	(0.032)	(0.217)	(0.031)			(0.029)	(0.029)	(0.101)	(0.031)		
dOCbhat	0.508	0.542	0.648	0.818			0.485	0.517	0.712	0.876			0.497	0.534	2.458	0.844		
	(0.439)	(0.427)	(0.500)	(0.549)			(0.458)	(0.441)	(0.474)	(0.558)			(0.458)	(0.442)	(1.918)	(0.548)		
dOCbhat2	0.379	0.391	0.153	0.434			0.151	0.182	-0.598	0.158			0.353	0.368	-3.488	0.370		
	(0.299)	(0.309)	(0.515)	(0.360)			(0.288)	(0.294)	(0.847)	(0.346)			(0.310)	(0.321)	(3.664)	(0.356)		
EC	1.113***	1.097***	2.306**	0.918***	0.926*	1.238***												
	(0.139)	(0.140)	(0.885)	(0.162)	(0.472)	(0.214)												
dEC	0.462	0.468	-2.707	0.690*	-0.785	1.132*												
	(0.346)	(0.342)	(2.655)	(0.355)	(0.964)	(0.605)												
dEC2	0.912***	0.896***	-0.218	0.656**	2.780	1.928***												
	(0.279)	(0.276)	(0.829)	(0.251)	(1.877)	(0.482)												
CUT2		0.069			0.254**	1.815		0.099			0.174	1.648		0.068			0.210**	2.175
		(0.053)			(0.100)	(1.521)		(0.056)			(0.104)	(1.560)		(0.050)			(0.092)	(1.969)
dCUT2		-0.053			-0.327	-0.579*		-0.068*			-0.182	-0.489*		-0.052			-0.175	-0.738
		(0.034)			(0.211)	(0.307)		(0.035)			(0.148)	(0.258)		(0.034)			(0.126)	(0.487)
dCUT22		0.006			0.184*	0.958		0.016			0.141	0.926		0.005			0.181*	1.540
		(0.021)			(0.086)	(0.958)		(0.027)			(0.082)	(0.963)		(0.020)			(0.093)	(1.496)
OCbhat_CUT2	-0.122	-0.147	0.000	0.000	0.294*	-2.325	-0.130	-0.122	0.000	0.000	0.197	-2.227	-0.132	-0.130	0.000	0.000	0.257*	-3.066
	(0.088)	(0.120)	(0.000)	(0.000)	(0.157)	(2.023)	(0.093)	(0.130)	(0.000)	(0.000)	(0.160)	(2.083)	(0.089)	(0.118)	(0.000)	(0.000)	(0.143)	(2.839)
dOCbhat_CUT2	-0.001	0.009	-0.468	-0.020	-0.528	0.528	0.004	0.015	0.009	-0.007	-0.360	0.410	0.000	0.005	0.360	-0.006	-0.289	0.682
	(0.062)	(0.067)	(0.587)	(0.068)	(0.352)	(0.298)	(0.058)	(0.067)	(0.118)	(0.064)	(0.254)	(0.243)	(0.060)	(0.066)	(0.273)	(0.067)	(0.168)	(0.489)
dOCbhat_CUT22	-0.046	-0.067	-0.167*	0.033	0.171	-1.365	-0.045	-0.043	-0.167*	0.014	0.134	-1.383	-0.046	-0.047	-0.151*	0.023	0.175	-2.370
	(0.045)	(0.047)	(0.090)	(0.050)	(0.130)	(1.384)	(0.047)	(0.050)	(0.091)	(0.052)	(0.125)	(1.412)	(0.045)	(0.043)	(0.076)	(0.050)	(0.136)	(2.298)
EC1							0.491***	0.471***	0.024	0.428**	1.036***	2.018***						
							(0.148)	(0.141)	(1.134)	(0.175)	(0.264)	(0.524)						
dEC1							-0.701	-0.671	-2.500***	-0.184	-0.149	-0.631						
							(0.433)	(0.444)	(0.570)	(0.542)	(0.955)	(1.371)						
dEC12							-1.522***	-1.478***	-1.694**	-1.456**	-3.576**	-1.701						
							(0.321)	(0.321)	(0.609)	(0.483)	(1.426)	(1.022)						
cheAT													0.968***	0.949***	0.713	0.922***	1.032***	1.467***
													(0.102)	(0.106)	(0.496)	(0.114)	(0.278)	(0.410)
dcheAT													-0.010	-0.011	-1.664	0.076	0.875	0.222
													(0.149)	(0.147)	(1.126)	(0.208)	(0.996)	(0.394)
dcheAT2													0.361**	0.354**	-0.772	0.532**	0.720	1.224***
													(0.152)	(0.151)	(0.778)	(0.185)	(0.634)	(0.308)
Constant	-0.010	-0.008	-0.295**	0.081	-0.197***	-0.303***	0.042	0.036	0.131	0.114*	-0.137*	-0.445***	-0.001	0.001	-0.376	0.069	-0.163***	-0.364***
	(0.041)	(0.042)	(0.129)	(0.056)	(0.047)	(0.063)	(0.041)	(0.048)	(0.331)	(0.060)	(0.065)	(0.119)	(0.039)	(0.042)	(0.254)	(0.055)	(0.048)	(0.112)
Observations	9,718	9,718	3,029	6,689	2,863	1,469	9,778	9,778	3,041	6,737	2,880	1,472	9,778	9,778	3,041	6,737	2,880	1,472
R-squared	0.506	0.509	0.669	0.510	0.652	0.740	0.495	0.498	0.656	0.499	0.650	0.725	0.504	0.507	0.662	0.507	0.661	0.736
Number of groups	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table A2.8 Panel B: Dependent Variable in all regressions is Firm Value defined as the excess of market over book assets, divided by book assets. The procedure and controls follow Fama & French (1998).

	EC (Fresard, 2010)						EC1 (Opler, 1999)						Cash&Equivalents/Assets					
	Full Sample		CUT2 = 1	CUT2 = 0	Low OC	High OC	Full Sample		CUT2 = 1	CUT2 = 0	Low OC	High OC	Full Sample		CUT2 = 1	CUT2 = 0	High OC	Low OC
OCbhat	-0.053	-0.030	0.020	-0.421**			-0.067**	-0.046**	-0.012	-0.417**			-0.060*	-0.035	0.026	-0.463***		
	(0.030)	(0.021)	(0.035)	(0.135)			(0.027)	(0.019)	(0.036)	(0.172)			(0.029)	(0.020)	(0.041)	(0.139)		
dOCbhat	0.649**	1.256***	1.519*	0.717			0.678**	1.247***	1.148	0.896			0.635**	1.239***	1.818**	0.722		
	(0.261)	(0.254)	(0.696)	(0.609)			(0.268)	(0.272)	(0.709)	(0.665)			(0.272)	(0.255)	(0.716)	(0.645)		
dOCbhat2	0.073	0.522	1.579***	1.740*			-0.070	0.307	1.574***	1.659**			0.011	0.430	1.716***	1.629**		
	(0.279)	(0.322)	(0.324)	(0.787)			(0.234)	(0.266)	(0.433)	(0.724)			(0.256)	(0.294)	(0.366)	(0.706)		
EC	1.482***	1.536***	1.890***	1.058***	1.511***	1.273***												
	(0.141)	(0.130)	(0.235)	(0.151)	(0.192)	(0.321)												
dEC	0.028	0.023	-1.335	-0.281	-0.142	1.420**												
	(0.258)	(0.263)	(0.824)	(0.228)	(0.159)	(0.615)												
dEC2	1.107***	1.132***	-0.343	0.653**	1.028**	1.794**												
	(0.347)	(0.345)	(0.537)	(0.226)	(0.422)	(0.641)												
IMPINT		-0.480***			-0.187	-0.262		-0.416***			-0.116	-0.224		-0.460***			-0.197	-0.276
		(0.076)			(0.167)	(0.268)		(0.084)			(0.146)	(0.286)		(0.084)			(0.147)	(0.295)
dIMPINT		-0.542			0.989	0.075		-0.513			1.287**	0.628		-0.480			0.969	0.774
		(0.561)			(0.618)	(1.642)		(0.580)			(0.534)	(1.410)		(0.536)			(0.604)	(1.349)
dIMPINT2		-0.130			0.543	0.091		-0.071			0.394	1.466		-0.085			0.632	0.874
		(0.662)			(1.154)	(1.527)		(0.625)			(1.313)	(1.449)		(0.615)			(1.025)	(1.353)
OCbhat_IMPINT	0.390***	0.442***	-0.329	0.646***	0.319	-0.113	0.423***	0.451***	-0.820*	0.649***	0.343*	-0.120	0.356***	0.393***	-0.329	0.670***	0.222	-0.105
	(0.116)	(0.075)	(0.325)	(0.158)	(0.176)	(0.300)	(0.107)	(0.072)	(0.435)	(0.200)	(0.175)	(0.358)	(0.111)	(0.074)	(0.307)	(0.166)	(0.170)	(0.292)
dOCbhat_IMPINT	1.527***	-0.129	2.081	0.127	0.383	1.390	1.162***	-0.358	1.244	-0.177	0.491	1.578	1.501***	-0.123	1.931	0.233	0.413	0.415
	(0.289)	(0.309)	(1.160)	(0.467)	(0.353)	(1.162)	(0.316)	(0.392)	(1.718)	(0.591)	(0.444)	(1.195)	(0.279)	(0.333)	(1.264)	(0.489)	(0.363)	(1.115)
dOCbhat_IMPINT2	1.884***	0.759	-2.124	-0.477	0.745	-1.604	1.669***	0.737	-3.033*	-0.803	0.382	-3.061**	1.804***	0.746	-1.846	-0.411	0.744	-1.926
	(0.520)	(0.716)	(1.724)	(0.820)	(1.312)	(1.049)	(0.522)	(0.688)	(1.672)	(0.923)	(1.290)	(1.117)	(0.548)	(0.696)	(1.674)	(0.854)	(1.192)	(1.099)
EC1							0.852***	0.917***	2.715***	0.351	1.220***	1.984***						
							(0.134)	(0.121)	(0.385)	(0.336)	(0.260)	(0.502)						
dEC1							-0.931**	-0.925*	-4.059***	-0.615	-0.826	0.946						
							(0.388)	(0.422)	(1.113)	(0.635)	(0.820)	(0.908)						
dEC12							-1.242**	-1.131**	-1.523**	-1.602**	-2.011*	0.312						
							(0.401)	(0.404)	(0.632)	(0.603)	(1.038)	(0.594)						
cheAT													1.251***	1.280***	1.196***	0.830***	1.348***	1.440***
													(0.078)	(0.071)	(0.116)	(0.094)	(0.186)	(0.240)
dcheAT													-0.112	-0.136	-1.199***	0.036	-0.297	0.318
													(0.185)	(0.172)	(0.324)	(0.097)	(0.228)	(0.340)
dcheAT2													0.310	0.286	-0.899**	0.019	0.273	1.606***
													(0.207)	(0.216)	(0.360)	(0.153)	(0.368)	(0.370)
Constant	-0.033	0.157**	-0.134	0.027	-0.077	-0.316***	0.013	0.179***	-0.359***	0.128	-0.089	-0.544***	-0.014	0.172***	-0.050	0.055	-0.064	-0.400***
	(0.043)	(0.050)	(0.084)	(0.068)	(0.058)	(0.053)	(0.038)	(0.051)	(0.081)	(0.087)	(0.067)	(0.111)	(0.035)	(0.047)	(0.089)	(0.068)	(0.065)	(0.084)
Observations	7,554	7,554	2,032	1,833	2,264	1,213	7,572	7,572	2,033	1,833	2,264	1,213	7,572	7,572	2,033	1,833	2,264	1,213
R-squared	0.504	0.511	0.639	0.594	0.636	0.736	0.489	0.495	0.626	0.597	0.633	0.716	0.505	0.511	0.631	0.595	0.645	0.732
Number of groups	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table A2.8 Panel C: Dependent Variable in all regressions is Firm Value defined as the excess of market over book assets, divided by book assets. The procedure and controls follow Fama & French (1998).

	EC (Fresard, 2010)						EC1 (Opler, 1999)						Cash&Equivalents/Assets					
	Full Sample		CUT2 = 1	CUT2 = 0	Low OC	High OC	Full Sample		CUT2 = 1	CUT2 = 0	Low OC	High OC	Full Sample		CUT2 = 1	CUT2 = 0	High OC	Low OC
OCbhat	0.124***	0.103***	0.174	-0.090			0.109***	0.091***	0.171*	0.101			0.111***	0.087***	0.143	-0.064		
	(0.013)	(0.017)	(0.113)	(0.049)			(0.014)	(0.014)	(0.076)	(0.144)			(0.016)	(0.014)	(0.108)	(0.055)		
dOCbhat	0.788*	0.703*	0.620	2.575***			0.671	0.558	0.136	1.189			0.769*	0.688*	0.497	2.026**		
	(0.403)	(0.372)	(0.506)	(0.771)			(0.402)	(0.386)	(0.576)	(0.758)			(0.402)	(0.365)	(0.559)	(0.812)		
dOCbhat2	0.689*	0.525	-0.017	2.083			0.538	0.379	0.082	0.394			0.576*	0.420	0.093	1.589		
	(0.341)	(0.334)	(0.765)	(1.482)			(0.301)	(0.300)	(0.861)	(1.095)			(0.312)	(0.307)	(0.801)	(1.331)		
EC	1.037***	1.054***	0.895**	1.659***	0.747	1.359***												
	(0.167)	(0.169)	(0.288)	(0.246)	(0.593)	(0.270)												
dEC	0.060	0.063	0.426	0.136	-0.031	1.091*												
	(0.209)	(0.213)	(0.389)	(0.521)	(0.133)	(0.594)												
dEC2	0.600**	0.616**	0.642**	-0.410	2.129	2.091***												
	(0.199)	(0.200)	(0.243)	(0.516)	(1.470)	(0.480)												
HHI		0.000			0.001	0.000		0.000**			0.001	0.000		0.000			0.001	0.000
		(0.000)			(0.001)	(0.000)		(0.000)			(0.001)	(0.000)		(0.000)			(0.001)	(0.000)
dHHI		0.000			0.000	-0.000		0.000			0.000	-0.001		0.000			0.000	-0.001
		(0.000)			(0.000)	(0.001)		(0.000)			(0.000)	(0.001)		(0.000)			(0.000)	(0.001)
dHHI2		0.000			0.001	0.000		0.000			0.002	0.000		0.000			0.002	0.000
		(0.000)			(0.001)	(0.001)		(0.000)			(0.001)	(0.001)		(0.000)			(0.002)	(0.001)
OCbhat_HHI	-0.000**	-0.000*	-0.000	-0.000	0.002	-0.000	-0.000***	-0.000*	-0.001	-0.000	0.002	-0.000	-0.000**	-0.000***	-0.000	-0.000	0.002	-0.000
	(0.000)	(0.000)	(0.001)	(0.000)	(0.002)	(0.000)	(0.000)	(0.000)	(0.001)	(0.000)	(0.001)	(0.001)	(0.000)	(0.000)	(0.001)	(0.000)	(0.002)	(0.000)
dOCbhat_HHI	0.000	0.001*	-0.002	-0.000	-0.003	0.002	0.000*	0.001**	-0.001	0.000	-0.002	0.003	0.000	0.001	-0.002	-0.000	-0.001	0.002
	(0.000)	(0.000)	(0.003)	(0.001)	(0.003)	(0.001)	(0.000)	(0.000)	(0.003)	(0.001)	(0.002)	(0.002)	(0.000)	(0.000)	(0.003)	(0.001)	(0.001)	(0.001)
dOCbhat_HHI2	-0.000	0.000	-0.009*	0.001	0.001	-0.002	-0.000	0.000	-0.010**	0.001	0.002*	-0.003	-0.000	0.000	-0.009*	0.001	0.001	-0.003
	(0.000)	(0.001)	(0.004)	(0.001)	(0.001)	(0.002)	(0.000)	(0.001)	(0.004)	(0.001)	(0.001)	(0.002)	(0.000)	(0.000)	(0.004)	(0.001)	(0.001)	(0.002)
EC1							0.507***	0.548***	-0.290	0.117	0.617	1.960**						
							(0.149)	(0.152)	(0.510)	(0.651)	(0.528)	(0.614)						
dEC1							-0.283	-0.314	-1.193	-2.171*	-0.109	0.013						
							(0.595)	(0.568)	(0.710)	(1.068)	(1.948)	(0.730)						
dEC12							-0.850	-0.811	0.523	-2.274*	-2.526**	-1.093						
							(0.539)	(0.527)	(1.779)	(1.176)	(0.911)	(1.239)						
cheAT													0.869***	0.878***	0.754**	1.209***	0.486	1.214***
													(0.180)	(0.183)	(0.263)	(0.140)	(0.838)	(0.216)
dcheAT													-0.067	-0.063	-0.020	-0.837*	1.540	0.612**
													(0.193)	(0.200)	(0.302)	(0.410)	(1.896)	(0.245)
dcheAT2													0.341**	0.353**	0.490*	-0.099	0.657	0.948***
													(0.140)	(0.142)	(0.244)	(0.357)	(0.450)	(0.269)
Constant	0.023	-0.007	-0.305***	0.289	-0.167***	-0.310***	0.054	0.010	-0.077	0.271	-0.293*	-0.493***	0.026	-0.000	-0.221***	0.237	-0.094	-0.330***
	(0.043)	(0.050)	(0.066)	(0.183)	(0.047)	(0.066)	(0.041)	(0.042)	(0.114)	(0.170)	(0.147)	(0.143)	(0.037)	(0.050)	(0.059)	(0.157)	(0.100)	(0.072)
Observations	6,703	6,703	1,979	1,377	1,844	1,199	6,718	6,718	1,986	1,378	1,844	1,199	6,718	6,718	1,986	1,378	1,844	1,199
R-squared	0.501	0.504	0.599	0.696	0.676	0.680	0.491	0.494	0.597	0.682	0.676	0.661	0.502	0.505	0.602	0.689	0.685	0.677
Number of groups	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table A2.9 Panel A: Dependent Variable in all regressions is Firm Value defined as the excess of market over book assets, divided by book assets. The procedure and controls follow Fama & French (1998).

	EC (Fresard, 2010)						EC1 (Opler, 1999)						Cash&Equivalents/Assets					
	Full Sample		CUT2 = 1	CUT2 = 0	Low OC	High OC	Full Sample		CUT2 = 1	CUT2 = 0	Low OC	High OC	Full Sample		CUT2 = 1	CUT2 = 0	High OC	Low OC
OCchat	0.466***	0.518***	0.746	0.548**			0.569***	0.656***	-0.206	0.688**			0.394***	0.464**	-0.233	0.488**		
	(0.151)	(0.159)	(0.506)	(0.217)			(0.177)	(0.174)	(1.262)	(0.249)			(0.128)	(0.153)	(1.218)	(0.195)		
dOCchat	3.769	4.082*	5.118*	5.233			3.325	3.710	5.046*	5.702			3.954	4.282*	10.476*	5.703		
	(2.352)	(2.283)	(2.731)	(3.570)			(2.484)	(2.365)	(2.399)	(3.382)			(2.480)	(2.399)	(5.331)	(3.493)		
dOCchat2	1.241	0.963	-0.272	1.260			0.093	-0.007	0.786	-0.204			1.381	1.098	0.340	0.990		
	(1.545)	(1.734)	(2.852)	(1.645)			(1.740)	(1.910)	(3.569)	(1.991)			(1.835)	(2.052)	(3.037)	(1.868)		
EC	0.951***	0.927***	1.806**	0.748***	0.985**	0.074												
	(0.123)	(0.145)	(0.634)	(0.178)	(0.375)	(0.259)												
dEC	0.548	0.552	-1.382	0.796*	0.748	1.496*												
	(0.360)	(0.354)	(1.480)	(0.377)	(1.071)	(0.757)												
dEC2	0.854**	0.875**	0.125	0.597**	-0.006	1.372												
	(0.293)	(0.289)	(0.509)	(0.245)	(0.278)	(1.005)												
CUT2		0.158			-0.099**	0.552		0.175			-0.089*	0.348		0.163			-0.117**	0.217
		(0.210)			(0.041)	(0.856)		(0.200)			(0.043)	(0.860)		(0.216)			(0.041)	(0.843)
dCUT2		-0.001			0.030	-0.108		-0.013			-0.017	-0.073		0.003			0.081***	0.173
		(0.060)			(0.051)	(0.628)		(0.058)			(0.072)	(0.581)		(0.064)			(0.026)	(0.478)
dCUT22		-0.013			-0.001	0.311		-0.007			-0.047	0.374		-0.017			-0.070	0.154
		(0.040)			(0.034)	(0.673)		(0.048)			(0.065)	(0.768)		(0.044)			(0.081)	(0.668)
OCchat_CUT2	0.101	-0.349	0.090	0.000	1.531**	-1.760	0.152	-0.336	-0.020	0.000	1.651*	-1.474	0.092	-0.368	0.000	0.000	1.447*	-1.139
	(0.226)	(0.797)	(0.090)	(0.000)	(0.580)	(2.611)	(0.244)	(0.783)	(0.020)	(0.000)	(0.814)	(2.692)	(0.212)	(0.825)	(0.000)	(0.000)	(0.666)	(2.572)
dOCchat_CUT2	-0.203	-0.237	-1.805*	-0.030	-0.430	0.151	-0.244	-0.232	-0.989**	-0.074	-0.393	0.221	-0.210	-0.263	-1.253**	-0.014	-0.436	-0.577
	(0.175)	(0.340)	(1.008)	(0.252)	(0.308)	(1.901)	(0.191)	(0.356)	(0.372)	(0.231)	(0.368)	(1.821)	(0.180)	(0.367)	(0.533)	(0.231)	(0.357)	(1.486)
dOCchat_CUT22	0.045	0.138	0.809	-0.154	0.139	-0.776	0.047	0.152	0.225	-0.187	0.396	-1.002	0.051	0.167	0.287	-0.196	0.193	-0.394
	(0.142)	(0.219)	(0.628)	(0.282)	(0.367)	(2.117)	(0.145)	(0.233)	(0.337)	(0.298)	(0.449)	(2.430)	(0.127)	(0.213)	(0.303)	(0.284)	(0.392)	(2.078)
EC1							0.126	0.146	1.074*	0.007	0.260	-0.416						
							(0.181)	(0.168)	(0.499)	(0.249)	(0.439)	(0.531)						
dEC1							-0.389	-0.489	-3.489*	0.157	-0.943**	0.793						
							(0.424)	(0.418)	(1.721)	(0.570)	(0.378)	(1.687)						
dEC12							-1.597***	-1.571***	-3.289*	-1.484**	-2.367***	-1.020						
							(0.309)	(0.314)	(1.513)	(0.487)	(0.407)	(0.874)						
cheAT													0.913***	0.889***	1.149***	0.840***	0.889**	0.164
													(0.080)	(0.107)	(0.257)	(0.122)	(0.298)	(0.170)
dcheAT													0.024	0.050	-0.915*	0.126	-0.533*	0.706
													(0.161)	(0.160)	(0.457)	(0.226)	(0.253)	(0.529)
dcheAT2													0.352**	0.360**	-0.106	0.499**	-0.576	0.363
													(0.157)	(0.157)	(0.244)	(0.170)	(0.747)	(0.495)
Constant	-0.117**	-0.132**	-0.114	-0.050	0.033	-0.036	-0.044	-0.072	0.140	0.015	0.167**	0.052	-0.113***	-0.130**	0.247	-0.061	0.119**	-0.060
	(0.039)	(0.045)	(0.154)	(0.050)	(0.039)	(0.106)	(0.033)	(0.050)	(0.379)	(0.051)	(0.066)	(0.115)	(0.036)	(0.043)	(0.467)	(0.044)	(0.050)	(0.085)
Observations	9,718	9,718	3,029	6,689	2,763	1,529	9,778	9,778	3,041	6,737	2,799	1,536	9,778	9,778	3,041	6,737	2,799	1,536
R-squared	0.499	0.503	0.666	0.507	0.660	0.650	0.489	0.493	0.654	0.499	0.655	0.639	0.497	0.502	0.659	0.504	0.656	0.645
Number of groups	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table A2.9 Panel B: Dependent Variable in all regressions is Firm Value defined as the excess of market over book assets, divided by book assets. The procedure and controls follow Fama & French (1998).

	EC (Fresard, 2010)						EC1 (Opler, 1999)						Cash&Equivalents/Assets					
	Full Sample		CUT2 = 1	CUT2 = 0	Low OC	High OC	Full Sample		CUT2 = 1	CUT2 = 0	Low OC	High OC	Full Sample		CUT2 = 1	CUT2 = 0	High OC	Low OC
OCchat	1.534***	1.098***	0.916***	-1.205**			1.541***	1.258***	1.082***	-1.457**			1.493***	1.132***	1.048***	-1.012*		
	(0.203)	(0.098)	(0.247)	(0.526)			(0.248)	(0.128)	(0.242)	(0.588)			(0.224)	(0.112)	(0.231)	(0.499)		
dOCchat	8.490***	7.387***	4.973	4.441			7.253***	6.537***	3.838	3.697			8.413***	7.322***	7.288	5.477		
	(1.827)	(1.982)	(5.301)	(5.049)			(1.697)	(1.936)	(4.873)	(4.917)			(1.711)	(1.851)	(4.681)	(5.356)		
dOCchat2	2.579	2.078	11.539***	8.590			1.020	0.511	11.942***	6.648			2.056	1.606	12.835***	8.412		
	(1.833)	(1.847)	(3.290)	(5.167)			(1.454)	(1.497)	(3.668)	(4.676)			(1.700)	(1.664)	(4.008)	(4.792)		
EC	1.220***	1.319***	1.484***	1.141***	0.878**	0.448												
	(0.106)	(0.110)	(0.238)	(0.144)	(0.384)	(0.292)												
dEC	0.197	0.126	-1.174	-0.280	-0.529	0.565												
	(0.282)	(0.271)	(0.846)	(0.259)	(0.376)	(0.629)												
dEC2	1.049**	1.089**	-0.294	0.704**	-0.419	-0.092												
	(0.336)	(0.349)	(0.553)	(0.224)	(0.356)	(0.701)												
IMPINT		-0.288**			-0.582***	-0.814		-0.155			-0.593***	-0.804		-0.224*			-0.571***	-0.629
		(0.128)			(0.172)	(0.617)		(0.124)			(0.171)	(0.580)		(0.123)			(0.153)	(0.577)
dIMPINT		-0.933			0.243	-4.861		-0.669			0.652	-5.576*		-0.867*			0.244	-5.485*
		(0.547)			(0.727)	(3.199)		(0.509)			(0.745)	(2.849)		(0.463)			(0.759)	(2.784)
dIMPINT2		-0.744			0.296	-2.336		-0.675			0.562	-2.035		-0.681			0.374	-2.634
		(0.580)			(0.555)	(2.237)		(0.546)			(0.562)	(2.585)		(0.628)			(0.560)	(2.338)
OCchat_IMPINT	-2.453***	-1.095***	1.910	1.341**	5.861***	0.359	-2.138***	-1.323***	3.017	1.636**	5.836***	0.550	-2.514***	-1.397***	1.802	1.034*	5.526***	-0.186
	(0.494)	(0.280)	(2.202)	(0.558)	(0.841)	(1.431)	(0.516)	(0.298)	(2.047)	(0.650)	(0.851)	(1.366)	(0.538)	(0.273)	(2.056)	(0.536)	(0.874)	(1.264)
dOCchat_IMPINT	-3.869	-1.280	7.933	-0.476	2.853	19.694	-3.950	-2.215	1.971	-0.478	-0.244	22.932**	-3.345	-0.940	5.943	-1.332	0.387	21.668**
	(2.553)	(2.658)	(11.107)	(2.464)	(4.416)	(11.049)	(2.732)	(3.062)	(12.152)	(2.377)	(6.073)	(8.772)	(2.404)	(2.513)	(9.770)	(2.462)	(4.456)	(9.023)
dOCchat_IMPINT2	-1.534	0.453	-10.360	-1.984	-1.973	3.223	-0.970	0.844	-12.390	-1.405	-5.971	4.616	-1.668	0.180	-13.131	-2.059	-3.184	4.278
	(3.699)	(3.612)	(7.900)	(3.557)	(4.303)	(5.775)	(3.515)	(3.484)	(8.830)	(3.019)	(4.459)	(5.855)	(3.424)	(3.439)	(10.579)	(3.348)	(4.456)	(5.832)
EC1							0.296**	0.426***	0.238	0.623**	0.135	-1.137**						
							(0.131)	(0.101)	(0.441)	(0.224)	(0.389)	(0.480)						
dEC1							-0.648	-0.725	-2.825**	-0.729	-1.737***	0.972						
							(0.445)	(0.422)	(1.124)	(0.647)	(0.366)	(0.757)						
dEC12							-1.369***	-1.381***	-2.242***	-1.392**	-2.326***	-2.929*						
							(0.365)	(0.365)	(0.579)	(0.565)	(0.616)	(1.389)						
cheAT													1.115***	1.169***	0.867***	0.905***	0.756**	0.406*
													(0.056)	(0.058)	(0.128)	(0.085)	(0.285)	(0.213)
dcheAT													-0.039	-0.070	-0.949**	0.024	-0.682**	0.220
													(0.185)	(0.178)	(0.362)	(0.121)	(0.228)	(0.236)
dcheAT2													0.207	0.241	-0.974**	0.059	0.005	-0.241
													(0.230)	(0.222)	(0.351)	(0.150)	(0.249)	(0.326)
Constant	-0.147***	-0.067	-0.449***	0.004	-0.009	0.226**	-0.067*	-0.032	-0.368***	0.079	0.068	0.502***	-0.133***	-0.067	-0.397***	0.042	0.021	0.223*
	(0.036)	(0.051)	(0.061)	(0.071)	(0.037)	(0.095)	(0.033)	(0.053)	(0.059)	(0.079)	(0.051)	(0.117)	(0.026)	(0.052)	(0.065)	(0.072)	(0.040)	(0.116)
Observations	7,554	7,554	2,032	1,833	1,949	1,190	7,572	7,572	2,033	1,833	1,951	1,195	7,572	7,572	2,033	1,833	1,951	1,195
R-squared	0.503	0.507	0.656	0.594	0.695	0.678	0.490	0.493	0.638	0.594	0.690	0.668	0.504	0.508	0.649	0.595	0.691	0.671
Number of groups	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table A2.9 Panel C: Dependent Variable in all regressions is Firm Value defined as the excess of market over book assets, divided by book assets. The procedure and controls follow Fama & French (1998).

	EC (Fresard, 2010)						EC1 (Opler, 1999)						Cash&Equivalents/Assets					
	Full Sample		CUT2 = 1	CUT2 = 0	Low OC	High OC	Full Sample		CUT2 = 1	CUT2 = 0	Low OC	High OC	Full Sample		CUT2 = 1	CUT2 = 0	High OC	Low OC
OCchat	0.061	0.053	0.969	1.165**			0.103	0.099	0.590	1.681**			0.042	0.016	0.930	1.321**		
	(0.083)	(0.092)	(1.140)	(0.388)			(0.078)	(0.092)	(0.526)	(0.588)			(0.097)	(0.092)	(1.207)	(0.416)		
dOCchat	5.476**	5.476**	8.025*	11.931**			4.209*	4.217*	2.700	5.888			5.185**	5.161**	6.357**	9.405		
	(2.149)	(2.205)	(3.746)	(5.091)			(2.109)	(2.173)	(3.041)	(6.191)			(2.167)	(2.213)	(2.791)	(6.306)		
dOCchat2	0.594	0.595	0.589	3.154			-0.748	-0.721	-0.080	2.704			-0.070	-0.068	2.485	4.361		
	(2.016)	(2.051)	(7.764)	(5.997)			(1.857)	(1.930)	(6.465)	(5.121)			(1.803)	(1.831)	(9.148)	(5.055)		
EC	1.014***	0.991***	0.685	1.047***	1.396***	0.226												
	(0.139)	(0.156)	(0.467)	(0.312)	(0.378)	(0.246)												
dEC	0.096	0.111	0.818	0.221	-0.950***	0.555												
	(0.219)	(0.219)	(0.710)	(0.428)	(0.282)	(0.767)												
dEC2	0.596**	0.578**	0.737**	-0.317	-0.104	0.042												
	(0.194)	(0.194)	(0.279)	(0.563)	(0.362)	(0.787)												
HHI		-0.000			-0.002	0.001***		-0.000			-0.002	0.001***		-0.000			-0.002	0.001***
		(0.000)			(0.002)	(0.000)		(0.000)			(0.002)	(0.000)		(0.000)			(0.002)	(0.000)
dHHI		0.000			0.000	-0.000		0.000			0.000	0.000		0.000			0.000	-0.000
		(0.000)			(0.000)	(0.001)		(0.000)			(0.000)	(0.001)		(0.000)			(0.000)	(0.001)
dHHI2		0.000			0.002	0.001		0.000			0.002	0.000		0.000			0.002	0.001
		(0.000)			(0.002)	(0.001)		(0.000)			(0.002)	(0.001)		(0.000)			(0.002)	(0.001)
OCchat_HHI	0.001	0.001**	-0.005	-0.002	0.006	-0.002***	0.001**	0.001***	-0.003	-0.002	0.006	-0.002**	0.001	0.001**	-0.005	-0.002	0.005	-0.002***
	(0.000)	(0.000)	(0.005)	(0.001)	(0.004)	(0.001)	(0.000)	(0.000)	(0.003)	(0.001)	(0.004)	(0.001)	(0.000)	(0.000)	(0.006)	(0.001)	(0.004)	(0.001)
dOCchat_HHI	0.003	0.003	-0.064	-0.002	-0.031	0.002	0.003	0.004	-0.035	-0.001	-0.031	0.009	0.002	0.003	-0.058	-0.003	-0.031	0.002
	(0.003)	(0.002)	(0.040)	(0.004)	(0.028)	(0.006)	(0.002)	(0.002)	(0.021)	(0.004)	(0.028)	(0.005)	(0.003)	(0.003)	(0.033)	(0.005)	(0.028)	(0.005)
dOCchat_HHI2	0.002	0.002	-0.048	0.002	-0.018	-0.010*	0.002	0.002	-0.060**	0.003	-0.017	-0.011***	0.002	0.002	-0.045	0.002	-0.018	-0.014***
	(0.003)	(0.003)	(0.027)	(0.003)	(0.021)	(0.004)	(0.003)	(0.003)	(0.026)	(0.003)	(0.021)	(0.003)	(0.003)	(0.003)	(0.026)	(0.003)	(0.021)	(0.004)
EC1							0.403**	0.363**	-0.395	-0.909	0.346	-0.695						
							(0.155)	(0.148)	(0.660)	(0.841)	(0.431)	(0.429)						
dEC1							-0.330	-0.342	-1.288	-2.236**	-1.990***	1.993						
							(0.569)	(0.559)	(0.771)	(0.774)	(0.557)	(1.369)						
dEC12							-1.019	-1.073*	0.282	-2.724*	-2.807***	-1.098						
							(0.557)	(0.529)	(1.609)	(1.286)	(0.806)	(1.212)						
cheAT													0.875***	0.855***	0.591	0.807***	1.214***	0.260
													(0.143)	(0.167)	(0.436)	(0.234)	(0.291)	(0.183)
dcheAT													-0.061	-0.054	0.291	-0.523	-0.806***	0.124
													(0.182)	(0.192)	(0.576)	(0.323)	(0.231)	(0.376)
dcheAT2													0.341**	0.345**	0.653	-0.038	0.163	-0.273
													(0.142)	(0.142)	(0.396)	(0.393)	(0.301)	(0.300)
Constant	-0.080*	-0.083	-0.353*	0.133	0.176	-0.191***	-0.047	-0.048	-0.121	0.317	0.297	-0.012	-0.078*	-0.077*	-0.278*	0.053	0.219	-0.226***
	(0.043)	(0.046)	(0.161)	(0.226)	(0.261)	(0.054)	(0.037)	(0.035)	(0.076)	(0.304)	(0.251)	(0.074)	(0.036)	(0.036)	(0.127)	(0.147)	(0.256)	(0.062)
Observations	6,703	6,703	1,979	1,377	1,578	1,134	6,718	6,718	1,986	1,378	1,580	1,139	6,718	6,718	1,986	1,378	1,580	1,139
R-squared	0.500	0.502	0.600	0.697	0.704	0.634	0.492	0.493	0.597	0.689	0.701	0.620	0.501	0.503	0.607	0.691	0.704	0.628
Number of groups	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table A2.10 Panel A: Dependent Variable in all regressions is Firm Value defined as the excess of market over book assets, divided by book assets. The procedure and controls follow Fama & French (1998).

	EC (Fresard, 2010)						EC1 (Opler, 1999)						Cash&Equivalents/Assets					
	Full Sample		CUT2 = 1	CUT2 = 0	Low OC	High OC	Full Sample		CUT2 = 1	CUT2 = 0	Low OC	High OC	Full Sample		CUT2 = 1	CUT2 = 0	High OC	Low OC
FEhat	1.394***	1.212***	2.526	1.306***			1.451***	1.251***	1.962**	1.360***			1.562***	1.344***	1.528**	1.457***		
	(0.232)	(0.222)	(1.608)	(0.187)			(0.215)	(0.235)	(0.813)	(0.181)			(0.255)	(0.221)	(0.570)	(0.219)		
dFEhat	1.479	1.638**	-1.163	1.363*			1.477	1.579*	0.696	1.181			1.441	1.566*	0.969	1.191		
	(0.878)	(0.744)	(2.132)	(0.719)			(1.028)	(0.874)	(1.050)	(0.695)			(0.920)	(0.778)	(1.010)	(0.684)		
dFEhat2	-0.718	-0.745	-3.084***	-1.166*			-0.641	-0.721	-2.172**	-1.267*			-0.507	-0.575	-2.125**	-1.221*		
	(0.642)	(0.629)	(0.662)	(0.612)			(0.632)	(0.635)	(0.777)	(0.619)			(0.721)	(0.722)	(0.771)	(0.685)		
EC	0.945***	0.932***	0.333	0.819***	0.778***	1.758***												
	(0.130)	(0.149)	(0.937)	(0.153)	(0.148)	(0.385)												
dEC	0.477	0.504	2.538	0.703*	-0.292	-0.065												
	(0.321)	(0.311)	(2.644)	(0.356)	(0.538)	(0.739)												
dEC2	0.857***	0.811***	0.646	0.611**	0.319	2.392*												
	(0.271)	(0.261)	(0.574)	(0.262)	(0.340)	(1.246)												
CUT2		0.027			-0.126	-0.820		0.015			-0.236	-1.523		0.009			-0.307	-0.891
		(0.323)			(0.790)	(1.409)		(0.330)			(0.543)	(1.093)		(0.308)			(0.490)	(0.842)
dCUT2		0.070			-0.357*	1.635		0.079			-0.222	2.515		0.076			-0.278	0.911
		(0.148)			(0.190)	(1.332)		(0.151)			(0.221)	(1.591)		(0.152)			(0.217)	(0.830)
dCUT22		0.162			-0.121	0.739		0.181			-0.196	1.208**		0.158			-0.272	0.592
		(0.156)			(0.553)	(0.465)		(0.184)			(0.398)	(0.527)		(0.166)			(0.308)	(0.514)
FEhat_CUT2	0.239	0.186	0.141	0.000	2.127	1.609	0.285*	0.282	0.000	0.000	2.662	3.673	0.218	0.204	0.150	0.000	2.862	2.300
	(0.169)	(1.019)	(0.141)	(0.000)	(3.261)	(3.287)	(0.160)	(1.032)	(0.000)	(0.000)	(2.185)	(2.489)	(0.156)	(0.970)	(0.150)	(0.000)	(1.980)	(2.072)
dFEhat_CUT2	-0.161*	-0.364	1.553	-0.122	1.054	-3.236	-0.199**	-0.421	0.252	-0.195	0.443	-5.605	-0.152*	-0.372	-0.304	-0.127	0.644	-2.142
	(0.088)	(0.458)	(1.941)	(0.124)	(0.765)	(2.853)	(0.084)	(0.459)	(0.602)	(0.114)	(0.935)	(3.368)	(0.084)	(0.463)	(0.202)	(0.113)	(0.871)	(1.751)
dFEhat_CUT22	0.092	-0.317	0.201	-0.057	1.184	-1.510	0.082	-0.356	0.165	-0.039	1.623	-2.486**	0.081	-0.315	0.223	-0.066	1.846	-1.250
	(0.078)	(0.427)	(0.143)	(0.120)	(2.211)	(0.911)	(0.072)	(0.496)	(0.140)	(0.119)	(1.477)	(1.006)	(0.073)	(0.450)	(0.134)	(0.119)	(1.144)	(1.004)
EC1							0.549***	0.545***	-1.036	0.529**	0.675*	1.680*						
							(0.139)	(0.135)	(2.201)	(0.208)	(0.337)	(0.803)						
dEC1							-0.581	-0.585	-0.917	-0.401	-0.953	-0.186						
							(0.393)	(0.414)	(1.088)	(0.452)	(0.568)	(1.239)						
dEC12							-1.005**	-0.999**	-3.059	-1.143**	-0.159	-1.227						
							(0.334)	(0.333)	(1.971)	(0.426)	(0.926)	(0.699)						
cheAT													0.988***	0.975***	1.109***	0.979***	0.628***	2.098***
													(0.100)	(0.111)	(0.184)	(0.113)	(0.117)	(0.403)
dcheAT													-0.042	-0.052	-1.014*	0.019	-0.285	-0.689**
													(0.146)	(0.138)	(0.519)	(0.225)	(0.223)	(0.289)
dcheAT2													0.451**	0.416**	-0.118	0.599***	0.228	0.501
													(0.153)	(0.145)	(0.285)	(0.165)	(0.261)	(0.425)
Constant	-0.421***	-0.357***	-0.736*	-0.342***	-0.089	-0.130	-0.422***	-0.349***	-0.131	-0.353***	-0.076	-0.296	-0.488***	-0.407***	-0.518**	-0.427***	-0.060	-0.175
	(0.085)	(0.114)	(0.372)	(0.077)	(0.067)	(0.215)	(0.096)	(0.105)	(0.357)	(0.083)	(0.063)	(0.183)	(0.086)	(0.107)	(0.199)	(0.078)	(0.070)	(0.130)
Observations	9,718	9,718	3,029	6,689	2,473	2,427	9,778	9,778	3,041	6,737	2,485	2,461	9,778	9,778	3,041	6,737	2,485	2,461
R-squared	0.513	0.520	0.673	0.512	0.619	0.667	0.505	0.512	0.661	0.504	0.603	0.656	0.515	0.522	0.667	0.513	0.609	0.671
Number of groups	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table A2.10 Panel B: Dependent Variable in all regressions is Firm Value defined as the excess of market over book assets, divided by book assets. The procedure and controls follow Fama & French (1998).

	EC (Fresard, 2010)						EC1 (Opler, 1999)						Cash&Equivalents/Assets					
	Full Sample		CUT2 = 1	CUT2 = 0	Low OC	High OC	Full Sample		CUT2 = 1	CUT2 = 0	Low OC	High OC	Full Sample		CUT2 = 1	CUT2 = 0	High OC	Low OC
FEhat	1.640***	1.414***	1.059***	0.955**			1.658***	1.492***	2.136***	0.641*			1.833***	1.591***	1.058***	1.248***		
	(0.211)	(0.180)	(0.219)	(0.330)			(0.211)	(0.188)	(0.158)	(0.346)			(0.202)	(0.186)	(0.215)	(0.349)		
dFEhat	1.975	2.131*	-3.458**	3.239**			1.821	2.042	-3.262**	2.792*			1.614	1.912	-2.936**	3.359**		
	(1.097)	(1.097)	(1.479)	(1.428)			(1.217)	(1.236)	(1.425)	(1.490)			(1.030)	(1.091)	(1.121)	(1.360)		
dFEhat2	-0.371	-0.253	-6.942***	-0.314			-0.552	-0.259	-6.296***	-0.718			-0.252	-0.153	-6.668***	-0.173		
	(1.049)	(1.396)	(1.452)	(2.111)			(1.084)	(1.426)	(1.263)	(2.452)			(1.066)	(1.425)	(1.537)	(2.075)		
EC	1.349***	1.346***	1.693***	1.010***	1.082***	2.645***												
	(0.122)	(0.118)	(0.246)	(0.128)	(0.180)	(0.496)												
dEC	0.067	0.077	-1.634*	-0.318	-0.620	-0.452												
	(0.275)	(0.271)	(0.897)	(0.226)	(0.582)	(0.642)												
dEC2	1.013***	1.003**	-0.727	0.485**	0.942**	0.862												
	(0.319)	(0.325)	(0.541)	(0.203)	(0.417)	(0.876)												
IMPINT		-0.388			-1.834**	0.573		-0.311			-1.912**	1.476		-0.404			-1.904**	-0.569
		(0.313)			(0.770)	(0.954)		(0.304)			(0.711)	(0.847)		(0.325)			(0.685)	(0.758)
dIMPINT		-0.036			0.293	-3.168		0.094			0.700	-3.212		0.120			0.679	-2.489
		(0.758)			(0.838)	(2.495)		(0.794)			(0.689)	(2.625)		(0.714)			(0.656)	(2.746)
dIMPINT2		0.255			-0.584	8.714***		0.435			-0.973	9.862***		0.216			-0.856	8.699***
		(0.779)			(0.985)	(2.607)		(0.712)			(0.755)	(2.912)		(0.752)			(0.847)	(2.559)
FEhat_IMPINT	-1.221***	-0.520	-0.044	1.008***	5.394**	-2.297	-1.075***	-0.533	0.864	1.234***	5.716**	-3.538*	-1.259***	-0.498	0.643	0.763***	5.682**	0.093
	(0.283)	(0.487)	(1.764)	(0.259)	(2.177)	(1.823)	(0.280)	(0.462)	(1.452)	(0.338)	(2.066)	(1.774)	(0.270)	(0.479)	(1.682)	(0.232)	(1.961)	(1.586)
dFEhat_IMPINT	-2.768	-3.136	20.133***	-3.497*	-3.999	4.632	-2.809	-3.371	14.835***	-3.227*	-3.375	4.911	-2.537	-3.277	19.228***	-3.592*	-3.908*	3.133
	(1.567)	(2.323)	(4.076)	(1.674)	(2.764)	(3.090)	(1.622)	(2.427)	(4.465)	(1.661)	(2.249)	(3.464)	(1.508)	(2.389)	(4.799)	(1.623)	(2.121)	(3.446)
dFEhat_IMPINT2	-2.836*	-3.291	5.324	-1.946	1.986	-17.961***	-2.609	-3.522	4.692	-1.593	2.525	-18.477***	-2.787*	-3.193	6.338	-2.184	2.166	-17.031***
	(1.425)	(2.148)	(3.668)	(1.528)	(3.269)	(4.854)	(1.475)	(2.090)	(2.998)	(1.503)	(3.034)	(4.734)	(1.396)	(2.184)	(4.641)	(1.445)	(2.932)	(5.326)
EC1							0.849***	0.840***	3.378***	0.535*	0.790**	1.248**						
							(0.125)	(0.109)	(0.349)	(0.257)	(0.315)	(0.456)						
dEC1							-0.992**	-0.968**	-4.263***	-0.946	-0.143	-1.468						
							(0.397)	(0.401)	(1.100)	(0.563)	(0.697)	(1.678)						
dEC12							-0.968**	-0.967**	-1.158	-1.815**	0.189	-1.776						
							(0.415)	(0.413)	(0.656)	(0.804)	(1.097)	(1.002)						
cheAT													1.288***	1.279***	1.165***	0.792***	0.892***	2.463***
													(0.071)	(0.068)	(0.140)	(0.084)	(0.123)	(0.383)
dcheAT													-0.149	-0.153	-1.342***	0.009	-0.276	-1.172**
													(0.162)	(0.166)	(0.344)	(0.101)	(0.283)	(0.403)
dcheAT2													0.375	0.361	-0.759***	-0.147	0.494	0.948*
													(0.223)	(0.230)	(0.233)	(0.146)	(0.275)	(0.512)
Constant	-0.381***	-0.243*	-0.469**	-0.519**	0.101*	0.166	-0.340***	-0.232*	-1.119***	-0.420**	0.126	0.114	-0.436***	-0.294**	-0.524**	-0.511**	0.116**	0.302**
	(0.106)	(0.122)	(0.198)	(0.166)	(0.052)	(0.145)	(0.107)	(0.121)	(0.177)	(0.145)	(0.076)	(0.148)	(0.097)	(0.119)	(0.187)	(0.169)	(0.041)	(0.125)
Observations	7,554	7,554	2,032	1,833	2,160	1,568	7,572	7,572	2,033	1,833	2,170	1,570	7,572	7,572	2,033	1,833	2,170	1,570
R-squared	0.517	0.520	0.675	0.622	0.618	0.689	0.505	0.508	0.670	0.627	0.593	0.673	0.521	0.524	0.663	0.625	0.608	0.696
Number of groups	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table A2.10 Panel C: Dependent Variable in all regressions is Firm Value defined as the excess of market over book assets, divided by book assets. The procedure and controls follow Fama & French (1998).

	EC (Fresard, 2010)						EC1 (Opler, 1999)						Cash&Equivalents/Assets					
	Full Sample		CUT2 = 1	CUT2 = 0	Low OC	High OC	Full Sample		CUT2 = 1	CUT2 = 0	Low OC	High OC	Full Sample		CUT2 = 1	CUT2 = 0	High OC	Low OC
FEhat	1.705***	1.579***	1.733***	3.184**			1.733***	1.654***	1.858***	3.204**			1.849***	1.687***	1.853***	3.030**		
	(0.415)	(0.301)	(0.309)	(1.319)			(0.390)	(0.273)	(0.423)	(1.137)			(0.424)	(0.273)	(0.321)	(1.059)		
dFEhat	1.098*	1.122**	-0.948	5.086			0.858	0.873	-0.689	3.363			1.027*	1.088**	-1.031	4.492**		
	(0.507)	(0.487)	(1.321)	(2.808)			(0.556)	(0.523)	(1.511)	(1.860)			(0.461)	(0.439)	(1.372)	(1.780)		
dFEhat2	-1.104	-1.156	-4.931**	3.685			-1.376	-1.329	-4.195**	2.658			-1.021	-1.025	-4.968**	3.210		
	(1.017)	(1.012)	(1.646)	(3.238)			(0.966)	(0.984)	(1.538)	(2.420)			(1.109)	(1.089)	(1.611)	(2.808)		
EC	0.888***	0.884***	0.872***	1.102*	0.918***	2.044***												
	(0.190)	(0.193)	(0.238)	(0.556)	(0.143)	(0.405)												
dEC	0.146	0.178	0.373	0.665	-0.629	-2.193												
	(0.206)	(0.214)	(0.367)	(0.551)	(0.512)	(1.473)												
dEC2	0.551**	0.556**	0.229	-1.152	0.409	0.287												
	(0.181)	(0.181)	(0.295)	(0.927)	(0.382)	(0.733)												
HHI		-0.000			-0.001	-0.000		-0.000			-0.001	-0.000		-0.000			-0.001	-0.001
		(0.000)			(0.000)	(0.001)		(0.000)			(0.000)	(0.001)		(0.000)			(0.001)	(0.001)
dHHI		-0.000			-0.000	-0.002		-0.000			-0.000	-0.002		-0.000			-0.000	-0.001
		(0.000)			(0.000)	(0.001)		(0.000)			(0.000)	(0.002)		(0.000)			(0.000)	(0.001)
dHHI2		-0.000			0.000	-0.001		0.000			0.000	-0.003		-0.000			0.000	-0.002
		(0.000)			(0.000)	(0.001)		(0.000)			(0.000)	(0.003)		(0.000)			(0.000)	(0.002)
FEhat_HHI	0.000	0.000	-0.003	-0.001*	0.003*	0.002	0.000	0.000	-0.003	-0.000	0.003*	0.001	0.000	0.000	-0.003	-0.001	0.003*	0.003
	(0.000)	(0.000)	(0.003)	(0.000)	(0.001)	(0.003)	(0.000)	(0.000)	(0.002)	(0.001)	(0.002)	(0.003)	(0.000)	(0.000)	(0.003)	(0.000)	(0.002)	(0.003)
dFEhat_HHI	0.001	0.001	0.003	-0.001*	-0.002	0.004	0.001	0.001	0.003	-0.002	-0.002	0.001	0.001	0.001	0.003	-0.002**	-0.001	0.003
	(0.002)	(0.001)	(0.010)	(0.001)	(0.002)	(0.003)	(0.002)	(0.001)	(0.009)	(0.002)	(0.002)	(0.005)	(0.002)	(0.001)	(0.009)	(0.001)	(0.002)	(0.003)
dFEhat_HHI2	-0.000	-0.001	0.009	-0.001	-0.001	-0.005*	-0.000	-0.001	0.009	-0.002	-0.001	-0.001	-0.000	-0.001	0.011	-0.001	-0.001	-0.002
	(0.000)	(0.001)	(0.018)	(0.002)	(0.001)	(0.003)	(0.001)	(0.001)	(0.015)	(0.002)	(0.001)	(0.005)	(0.001)	(0.001)	(0.017)	(0.002)	(0.001)	(0.003)
EC1							0.509**	0.510**	-0.074	1.360	0.901***	1.338**						
							(0.160)	(0.162)	(0.402)	(1.011)	(0.271)	(0.429)						
dEC1							-0.373	-0.389	-0.629	-2.551	-0.178	-3.004**						
							(0.561)	(0.547)	(0.935)	(1.457)	(0.575)	(0.973)						
dEC12							-0.638	-0.659	1.064	-2.288*	-0.067	-2.068**						
							(0.607)	(0.589)	(1.600)	(1.224)	(1.024)	(0.895)						
cheAT													0.896***	0.895***	0.812***	1.103***	0.704***	1.845***
													(0.181)	(0.182)	(0.216)	(0.278)	(0.174)	(0.299)
dcheAT													-0.139	-0.117	-0.256	-0.907**	-0.187	-1.970**
													(0.151)	(0.171)	(0.213)	(0.381)	(0.319)	(0.727)
dcheAT2													0.421**	0.427**	0.242	-0.115	0.153	0.553
													(0.144)	(0.145)	(0.170)	(0.326)	(0.210)	(0.360)
Constant	-0.462***	-0.433***	-0.541***	-0.701***	0.006	-0.023	-0.442***	-0.425***	-0.447***	-0.923***	-0.002	-0.112	-0.522***	-0.479***	-0.543***	-0.758***	0.049	0.163
	(0.111)	(0.107)	(0.139)	(0.103)	(0.103)	(0.271)	(0.128)	(0.116)	(0.115)	(0.158)	(0.071)	(0.263)	(0.099)	(0.102)	(0.104)	(0.106)	(0.091)	(0.336)
Observations	6,703	6,703	1,979	1,377	2,105	1,244	6,718	6,718	1,986	1,378	2,114	1,245	6,718	6,718	1,986	1,378	2,114	1,245
R-squared	0.518	0.519	0.607	0.714	0.535	0.706	0.511	0.512	0.603	0.711	0.515	0.698	0.522	0.524	0.609	0.709	0.530	0.710
Number of groups	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table A2.11: Correlation of Instrumental Variables

	OC	IDD	UI_max	OChat	OCb	OCbhat	OCc	OCchat	FirmEffic	FEhat	OChat_CUT2	OCbhat_CUT2	OCchat_CUT2	FEhat_CUT2
OC	1													
IDD	0.0924***	1												
UI_max	0.110***	0.412***	1											
OChat	0.590***	0.0379***	0.0894***	1										
OCb	0.833***	0.0708***	0.0667***	0.261***	1									
OCbhat	0.270***	-0.00634	0.0173	0.582***	0.459***	1								
OCc	0.939***	0.105***	0.114***	0.588***	0.786***	0.302***	1							
OCchat	0.543***	0.0331**	0.0702***	0.966***	0.292***	0.680***	0.563***	1						
FirmEffic	0.00114	-0.0649***	0.0172	-0.273***	-0.0148	-0.368***	-0.00216	-0.354***	1					
FEhat	-0.122***	-0.0267**	0.0474***	-0.376***	-0.180***	-0.547***	-0.144***	-0.485***	0.707***	1				
OChat_CUT2	0.123***	0.00821	0.0271**	0.224***	0.0555***	0.143***	0.133***	0.230***	-0.0607***	-0.0747***	1			
OCbhat_CUT2	0.116***	-0.0158	0.00899	0.284***	0.220***	0.510***	0.135***	0.340***	-0.194***	-0.278***	0.289***	1		
OCchat_CUT2	0.134***	0.00728	0.0237*	0.256***	0.0768***	0.199***	0.150***	0.281***	-0.0996***	-0.124***	0.984***	0.399***	1	
FEhat_CUT2	-0.0281**	0.0144	0.0182	-0.0771***	-0.0361***	-0.105***	-0.0233*	-0.0881***	0.115***	0.175***	0.756***	-0.196***	0.670***	1

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Vita

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Academic Employment

2016 - Current Regent University Virginia Beach, VA
Full Time Faculty, Finance Lecturer: School of Business and Leadership

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Graduate Assistant. Taught BUSN 110 (Introduction to Business) and FIN 323 (Principles of Finance). Research assistant for Dr. John Griffith and Dr. Kenneth Yung.

Professional Employment

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Head of U.S. Equity: March 2015 - 2016

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2005 - 2007 OTA Asset Management Purchase, NY
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2018 - Best Doctoral Student Paper – Association of Behavioral Finance Annual Meeting, October 2018.

2018 – Top Doctoral Finance Student – Old Dominion University

2018 – Constant Fellowship Recipient – Old Dominion University

Publications

Yung, K., & Root, A. (2019). Policy uncertainty and earnings management: International evidence. *Journal of Business Research*, *100*, 255-267.

Conference Presentations

2017 - Regent University Research Roundtable

2018 - Association of Behavioral Finance Annual Meeting – Chicago, IL, USA

2019 - Dean's Research Symposium – Old Dominion University

2019 - International Society for Corporate Governance Annual Meeting – Essex University, Colchester, UK.