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Tax Avoidance and Firm Value: The Role of Legal Protection for Investor Rights

Kuo Nan-Ting

Guangzhou Institute of Science and Technology, Guangzhou, Guangdong, China
Email: kuonantin@gmail.com

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Abstract— *Our paper explores how corporate governance affects the valuation of tax avoidance. We argue that better governance enhances investor valuation of tax avoidance primarily through deterring managers from misallocating tax savings to pursue their private benefits. By exposing cross-country data, we find that investors on average negatively value corporate tax avoidance and such negative valuation is attenuated in countries with strong protection for investor rights. Our findings suggest that the primary agency issue concerning tax avoidance is the misallocation of tax savings instead of managers exploiting tax avoidance to shield their rent extraction.*

Keywords— ***corporate governance, firm value, tax avoidance.***

I. INTRODUCTION

Our study explores how corporate governance affects investor valuation of corporate tax avoidance. We find that better governance enhances the value of tax avoidance primarily through deterring managers (i.e. controlling shareholders in non-US countries) from using tax savings to pursue private benefits. Our study is motivated by the debates regarding the corporate governance view of tax avoidance[1,2].

Specifically, the corporate governance view of tax avoidance argues that tax avoidance does not naturally increase firm value because tax avoidance facilitates managers to extract rent by allowing them to exploit the opaqueness of tax avoidance activity to shield their rent extraction behaviors (tax-shielded rent extraction). In this regard, this view further argues that good governance can reduce tax-shielded rent extraction and therefore leads to higher valuation of tax avoidance. By incorporating agency conflicts into analysis, the corporate governance view of tax avoidance has received considerable attention in recent literature[2].

However, some recent studies find results contradicting the prevalence of the tax-shielded rent extraction[3,4]. In fact, evidence in support of tax-shielded rent extraction is primarily anecdotal , while the only empirical evidence comes from studies exploring Russian firms[5] and whether results of these studies can generalize to other countries is unclear. The scarcity of empirical evidence suggests that tax-shielded rent extraction is either difficult for outsiders to detect or it may only occur in extreme cases. In this regard, it is doubtful that corporate governance affects the valuation of tax avoidance just because it alleviates an agency issue that rarely occurs and difficult to detect in real world. It thus deserves further examination regarding whether and why governance affects investor valuation of tax avoidance.

Specifically, the general consequence of tax avoidance is to produce cash savings, but this does not necessarily enhance firm value because managers may misallocate these cash savings to advance their personal benefits[6] and tax avoidance will be worth less if there is more chance that tax savings are going to be wasted or expropriated[7]. In this regard, good corporate governance can rectify the misallocation of tax savings by redeploying them to more productive uses, as it is well documented that good governance induces managers to use firm liquid resources more efficiently[8-11].

Our study explores an international setting because this allows us to measure governance quality with country-level investor protection measures[12,13]. This increases the power of our research design since the cross-country variation in the extent to which manager can extract rent

from tax avoidance is likely to be more substantial than the cross-firm variation within a particular country. Moreover, using international data also avoids potential sample selection-bias that biases our test toward finding insignificant results, while this bias is more salient if we explore only single country and in this country managers inherently have little opportunities to extract rent (e.g., US).

Our study uses a sample that spans 34 countries and 17 years. We find that investors in the U.S. positively value tax avoidance but this result is insignificant, consistent with the finding of Desai and Dharmapala. In addition, investors in non-US countries on average negatively value tax avoidance, so the idea that tax avoidance does not increase firm value holds not only for the U.S but also for other countries. We also find that the valuation of tax avoidance is higher in countries with stronger investor protection, which finding suggests that the value of tax avoidance is a function of corporate governance.

Our finding that better governance leads to higher valuation of tax avoidance is consistent with both the tax-shielded rent extraction argument and the misallocation argument. However, consistent with the misallocation argument, we find that tax avoidance generally produces cash savings and this finding holds even for countries with weak investor protection. As tax-shielded rent extraction should be most prevalent in a poor-governed environment, this result suggests that tax-shielded rent extraction may be not as general as argued by prior studies.

We also find that tax avoidance is negatively related to payouts to shareholders, while this negative relation is attenuated by strong investor protection. This implies that managers appear to be reluctant to disgorge tax savings to shareholders, but strong investor protection induces them to do so, consistent with the outcome model as elaborated in La Porta et al[14]. Moreover, we find that the negative valuation implication for tax avoidance is more pronounced when firms hold excess cash. Therefore, investors perceive that tax savings exacerbate the agency problem of excess cash.

Our study makes following contributions to the literature. First, we contribute to the literature examining the agency cost implications of corporate tax avoidance. Overall, our findings suggest that the primary agency issue concerning tax avoidance is how managers use tax savings instead of how managers exploit tax avoidance to mask their rent extraction as argued by Desai and Dharmapala and Desai et al.. Second, our results suggest that the extent to which managers can extract rent from tax avoidance depends on investor protection. These results explain why prior studies fail to find significant relation between tax avoidance and rent extraction among US firms and a possible explanation for this finding is that investors in the U.S. enjoy good protection. Finally, our study contributes to the literature examining heterogeneity in investor valuation of tax avoidance. With this respect, we find that investors on average negatively value corporate tax avoidance, while country-level investor protection is an important determinant of how investors perceive the value of corporate tax avoidance. Our international setting is particularly relevant given that there is little systematic evidence on exploring the valuation of tax avoidance outside the U.S. market.

II. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

2.1 The effect of corporate governance on the valuation of tax avoidance

Prima facie, tax avoidance produces tax savings and thereby enhances firm value. In contrast to this intuition, the corporate governance view of tax avoidance argues that tax avoidance does not necessarily increase firm value because tax avoidance transactions facilitate managers to extract rent from the firm[15]. Specifically, to shield income from tax authorities managers often attempt to obscure the underlying intent of tax avoidance transactions and this limits firm-specific information flow to the public. The proprietary and obfuscatory feature of tax avoidance facilitates rent extraction by providing managers with a shield to conceal their opportunistic behaviors. Accordingly, better governance leads to higher valuation of tax avoidance[16].

However, the positive influence of good governance on the valuation of tax avoidance is not naturally attributed to the tax-shielded rent extraction argument. Another explanation is that better governance deters managers from using tax savings to pursue personal benefits. In an environment with poor governance, even if tax avoidance produces cash savings to the firm, investors are difficult to capture the value of tax savings. In this regard, investors will negatively value corporate tax avoidance because their firm affords the costs of tax avoidance while they enjoy no benefit from tax savings, given that managers expropriate the benefit of tax savings for personal purposes.

Which argument drives the positive valuation implication of good governance is an open empirical issue. As a first step to explore this issue, we examine whether the influence of governance on the valuation of tax avoidance can extend to an international setting. Specifically, we anticipate that strong investor protection leads to higher valuation of tax avoidance, as it is well

documented in the literature that in an environment with more protection for their rights investors can better fight against managerial opportunisms so that they can capture more value from corporate tax avoidance. Consistent with our argument, Cloyd et al. find that US market often negatively reacts to firms' expatriation announcements and the authors attribute this result to the reasoning that tax haven countries usually have low level of investor protection[17]. Accordingly, we propose our first hypothesis as follow.

H1: Ceteris paribus, valuation of tax avoidance is higher in countries with better protection for investor rights.

2.2 Tax avoidance and firm cash policy

To determine which argument drives the result of H1, we further explore the relation between tax avoidance and firm cash flow as the tax-shielded rent extraction and the misallocation arguments have different predictions regarding this relation. If the misallocation argument dominates and the primary agency issue is how managers use tax savings, we should observe a positive relation between tax avoidance and cash flow because the prerequisite of misallocating tax savings is that tax avoidance can generally produce cash flow to the firm. In contrast, if the tax-shielded rent extraction argument dominates and managers employ tax avoidance primarily to conceal their rent extraction, then we should observe no specific relation between tax avoidance and cash flow. Because the direction of how tax avoidance affects cash flow is an open empirical issue, we state our second hypothesis non-directionally as follow.

H2: Ceteris paribus, tax avoidance is associated with firm cash flow.

III. RESEARCH DESIGN AND SAMPLE

3.1 Test of H1: whether the valuation of tax avoidance is higher in countries with better investor protection

3.1.1 Valuation specification

Following the specification of Desai and Dharmapala, we estimate regression (1) to test H1. Definitions of variables used in our main tests are shown in the appendix.

$$MV_{it} = \alpha_0 + \alpha_1 \cdot TA_{it} + \alpha_2 \cdot TA_{it} \cdot INP_j + \alpha_3 \cdot TA_{it} \cdot TAXEF_j + \alpha_4 \cdot TA_{it} \cdot CMARD_{jt} + \alpha_5 \cdot INP_j + \alpha_6 \cdot TAXEF_j + \alpha_7 \cdot CMARD_{jt} + \alpha_8 \cdot GDP_{jt} + \sum_{k=9}^{17} \alpha_k \cdot FSCONTROL + Fixed\ effects + \varepsilon_{it} \quad (1)$$

Where MV is the market value of the firm; TA represents the level of corporate tax avoidance; INP is the level of protection for investor rights; GDP, TAXEF and CMARD are country-level control variables; FSCONTROL is firm-specific control variables; Fixed effects represent year and industry fixed effects. Subscripts i, j, and t denote firm, country, and year, respectively.

MV is measured with Tobin's q ratio, which is defined as the sum of the market value of equity and the book value of debt minus deferred tax expense and then divided by the book value of total asset.

INP is measured with LAW and CORUP. LAW is a combined index of the legal protection for shareholders, which equals the anti-director rights index plus 50 percent of the rule of law index. As contended by La Porta et al.controlling shareholders (i.e. managers in our case) in countries with strong investor legal protection have few opportunities to extract private benefits of control. Prior studies also show that countries' institutions are major forces in shaping corporate governance practices[18,19]. CORUP is the corruption index, which assesses the risk of corruption of high government officials and a lower value of this index represents a higher level of corruption. We use CORUP because it is difficult for investors to use their formal rights in an environment where corruption is rampant.

Our H1 predicts a positive coefficient on TA· INP, which suggests that the valuation of tax avoidance is higher in countries with better protection for investor rights. This result implies that better governance leads to higher valuation of tax avoidance.

3.1.2 Tax avoidance measures

TA is proxied by three measures: book-tax difference (BTD), residual book-tax difference (RBTD), permanent book-tax difference (PBTD). There is no universally accepted definition of tax avoidance in the literature so we use multiple measures to increase the robustness of our results.

Book-tax difference (BTD) is calculated as [pretax book income – (domestic current tax expenses+ foreign current tax expenses) / top corporate statutory tax rate] / total assets.Prior studies suggest that larger book-tax difference is associated with higher probability of engaging in actual tax shelter activity[20,21]. By exploring an international setting, Goncharov find that large book-difference is associated with tax evasion and this result

suggests the feasibility of using BTD as a measure of tax avoidance in an international setting[22].

We use BTD to measure tax avoidance because this makes our results to be comparable with those of Desai and Dharmapala and because BTD captures more aggressive forms of tax avoidance. If we use a less aggressive measure such as accounting effective tax rate, then our results will be biased toward to reject the tax-shielded rent extraction argument as tax-shielded rent extraction must be accomplished by aggressive forms of tax avoidance. However, one concern of using BTD is that the effect of book-tax difference may be confounded by earnings management. We thus use residual book-tax difference to mitigate this concern.

Residual book-tax difference (RBTD) is the residual from a firm fixed-effect regression of BTD on total accruals that is estimated for each country, where total accruals is calculated as (net income before extraordinary items - operating cash flow) / total assets. Excluding the effect of total accruals eliminates, at least partially, the effect of earnings management embedded in BTD. In this regard, PBTD is expected to capture the effect of tax avoidance. Excluding the effect of total accruals also alleviates the concern that difference in accounting rules across countries may introduce a noise to using book-tax difference as a proxy of tax avoidance.

Permanent book-tax difference (PBTD) is computed as [pretax book income – (deferred tax expense + domestic current tax expenses+ foreign current tax expenses) / top corporate statutory tax rate] / total assets. Compared with BTD, PBTD captures more aggressive forms of tax avoidance as prior research suggests that an ideal tax shelter or tax avoidance investment creates a permanent rather than a temporary book-tax difference[23].

It is cautious that in addition to errors in inferring taxable income, the use of book-tax difference contains measurement error that arises from the mechanical difference in the calculations of book income and taxable income. However, this is not a serious concern since our main focus is on the interaction between investor protection and tax avoidance so any measurement error in tax avoidance is not expected to systematically affect our empirical results. We will further assess whether this measurement error affect our results in the robustness test section.

3.1.3 Control variables

Firm-specific control variables include the natural log of total assets (SIZE) in US dollar.We also include the closely-held shares percentage (CHS) and dividend amount (DIV) because higher insider stock ownership and dividend payment affect agency problems and thus in turn affect firm value.To control for the effect of tax shields, we include capital expenditures (CAP), book value of total debt (LEV), and interest expenses (INT), as tax shields may affect the value of engaging in tax avoidance. Interest expenses are included as an additional proxy for debt tax shields since the book value of debt may capture both the effect of financial distress and tax shields. Research and development expenses (RD) is included to control for the possibility that some intangibles are not imperfectly measured in book value of assets but are reflected on market value. Two-year (year t to t-1) average sales growth rate (GROWTH) is included to control for growth opportunities. We also include income tax credit (TAXCR) because it can affect the incentives to engage in tax avoidance and because the realization of tax deductions may also lead the incidence of book-tax difference that is mechanical in nature and has no relation with tax avoidance. Similar to BTD, all control variables are scaled with book value of total assets except for SIZE, CHS, and GROWTH.

For country-level control variables, we include the natural log of gross domestic product per capita in US dollar (GDP) to control for the effect of economic development on firm value. We also include the perceived strength of tax enforcement (TAXEF) because strong tax enforcement increases the probability of tax avoidance being challenged by tax authorities and this reduces the value of tax avoidance[24,25]. More importantly, strong tax enforcement may confound the interpretation of our results because stronger tax enforcement can also deter managerial opportunistic behaviors[26].Accordingly, we include TA·TAXEF to ensure that our finding concerning TA·INP does not reflect the effect of tax enforcement on deterring managerial opportunisms due to the potential correlation between investor protection and tax enforcement.

We also include the degree of capital market development (CMARD), calculated as the sum of stock market capitalization and domestic credit provided by banking normalized by gross domestic product. CMARD is used to control for external financing opportunities, as recent studies suggest that financial constraint is one determinant of tax avoidance[27]. Because counties with high investor protection are usually those with well-developed capital markets, we include TA·CMARD to control for the confounding interpretation that the effect of TA·INP reflects the difference in opportunities for accessing external financing.

3.2 Test of H2: Tax avoidance and cash flow

To test H2 we draw from Almeida et al. to specify the relation between tax avoidance and cash flow[28]. Borrowing insights from the literature on cash management[29-31], Almeida et al. model the change in

firm's cash holdings as a function of several funding sources and uses. If tax avoidance generates cash savings, it should represent a funding source and thus has a positive association with cash flow. To test H2, we explore following empirical specification.

$$\Delta Cash_{it} = \beta_0 + \beta_1 \cdot TA_{it} + \beta_2 \cdot CashFlow_{it} + \beta_3 \cdot \Delta NWC_{it} + \beta_4 \cdot \Delta STD_{it} + \beta_5 \cdot MV_{it} + \beta_6 \cdot SIZE_{it} + \beta_7 \cdot INVEST_{it} + \beta_8 \cdot INP_j + \beta_9 \cdot TAXEF_j + \beta_{10} \cdot CMARD_{jt} + \beta_{11} \cdot GDP_{jt} + Fixed\ effects + \varepsilon_{it} \quad (2)$$

Where ΔCash is the change in cash holdings scaled by total assets; CashFlow is cash flow from operations minus dividend scaled by total assets; ΔNWC is change in noncash net working capital scaled by total assets; ΔSTD is change in short-term debt scaled by total assets; INVEST is defined as (capital expenditures + research and development expense - proceeds from sale of fixed assets - depreciation) / the average total assets of years t and t-1;remaining variables are defined as in previous section.

In regression (2), CashFlow is included to accommodate the precautionary allocation of cash flows into cash savings.We control for ΔNWC because working capital can be a substitute for cash or it may compete for the available pool of cash reserves. Similarly, ΔSTD is included because short-term debt could be a substitute for cash or firms may use short-term debt to build cash reserves. SIZE is included to control for economies of scale with respect to cash management. INVEST is included since firms may draw down on cash reserves in a given year to pay for investment expenditures. MV is included to control for growth opportunities available to the firm because firms may reserve cash today to meet future investment opportunities. We use MV to proxy for growth opportunities because omitting it may make TA to absorb its effect, as our test of H1 in regression (1) implies that TA is associated with MV.

If the main agency issue of tax avoidance is tax-shielded rent extraction as argued by Desai and Dharmapala and Desai et al., we will find a negative coefficient on TA in regression (2). In contrast, if the main agency issue of tax avoidance is the misallocation of tax savings, we will find a positive coefficient on TA.

3. 3 Sample selection and summary statistics

We retrieve all required financial information from the Worldscope database. Our sampling period begins from 1996 to 2012. We start our sampling period from 1996 because firm coverage in the database prior to this year is spare. The calculation of book-tax differences requires statutory corporate tax rates for each sample country, and we hand-collect statutory tax rates from a KPMG LLP online summary, PricewaterhouseCoopers LLP's online information, Coopers & Lybrand LLP's worldwide tax summary guides, and the website of OECD. These statutory corporate tax rates include both the federal income tax rate and the average effects of state, provincial, and other local government income tax rates.

For investor protection measures, the anti-director rights index, the rule of law index and the corruption index are all collected from La Porta et al.. The perceived strength of tax enforcement is from Dyck and Zingales. Microeconomic data including gross domestic product per capita, stock market capitalization, domestic credit provided by banking, and gross domestic product are all collected from statistics disclosed by the World Bank.

We exclude countries with missing value of statutory tax rates, investor protection measures, or required microeconomic data. Our initial sample consists of firms with all required data on estimating regression (1). We further delete firms with book values of total assets less than US$ 10 million because small firms may behave unlike ordinary firms and several of our control variables are scaled by total assets while small total assets will lead to extreme value. After imposing these data requirements, we obtain a sample of 161,376 firm-year observations from 34 countries. To alleviate the concern of outliers, we winsorize all firm-level variables at the 1st and the 99th percentile levels.

Table 1 Summary Statistics

		Firm-level variables						
Country	Obs.	BTD	RBTD	PBTD	MV	ΔCash	INVEST	ROAt+1
Argentina	88	0.0088	0.0281	0.0090	1.0540	0.0019	0.0053	0.0743
Austria	514	0.0108	0.0260	0.0125	1.2066	0.0020	0.0007	0.0414
Australia	4115	0.0030	0.0206	0.0013	1.1944	0.0025	0.0000	0.0542
Brazil	1750	0.0078	0.0281	0.0070	1.1018	0.0106	0.0075	0.0749
Canada	2105	0.0135	0.0366	0.0043	1.3475	0.0017	0.0122	0.0733
Chile	505	-0.0145	-0.0028	-0.0201	1.4420	0.0052	0.0187	0.0864

Colombia	159	0.0075	0.0475	0.0098	1.6902	0.0356	0.0462	0.0552
Denmark	933	-0.0025	0.0081	-0.0009	1.0853	-0.0010	0.0001	0.0341
Finland	879	-0.0017	0.0125	0.0010	1.2266	0.0061	0.0041	0.0775
France	1985	0.0040	0.0225	0.0032	1.2125	0.0029	0.0076	0.0486
Germany	9398	0.0081	0.0352	0.0072	1.4598	0.0049	0.0205	0.0689
Hong Kong	10936	-0.0055	-0.0011	-0.0067	0.9741	0.0084	0.0016	0.0253
Indonesia	3052	-0.0093	0.0034	-0.0071	1.0923	0.0058	0.0002	0.0580
Israel	501	-0.0008	0.0104	-0.0002	1.1363	0.0017	0.0038	0.0306
Italy	1448	-0.0298	-0.0219	-0.0260	1.3090	-0.0113	0.0014	0.0199
Japan	26417	-0.0048	0.0060	-0.0033	1.0426	0.0005	0.0092	0.0406
Korea	1390	-0.0042	0.0096	-0.0010	0.9899	0.0090	-0.0044	0.0222
Malaysia	6727	-0.0003	0.0058	-0.0006	0.9411	0.0026	-0.0003	0.0336
Mexico	394	-0.0010	0.0068	0.0014	1.3071	0.0036	-0.0013	0.0676
New Zealand	717	0.0046	0.0161	0.0032	1.0714	0.0005	0.0001	0.0613
Netherlands	417	-0.0079	0.0296	0.0060	1.2722	0.0029	0.0113	0.0589
Norway	362	0.0075	0.0228	0.0096	1.1730	0.0163	0.0037	0.0342
Peru	641	-0.0079	0.0152	-0.0072	2.2571	0.0096	0.0245	0.1239
Philippines	1638	0.0042	0.0115	0.0052	0.9650	0.0027	0.0015	0.0226
Portugal	234	0.0039	0.0143	0.0005	1.1208	0.0046	-0.0073	0.0307
South Africa	1877	0.0228	0.0407	0.0188	1.3178	0.0061	0.0085	0.1000
Singapore	5191	-0.0016	0.0046	-0.0023	1.0125	0.0072	0.0003	0.0353
Spain	398	0.0189	0.0479	0.0156	1.4692	0.0224	0.0167	0.0854
Sweden	1995	0.0031	0.0207	-0.0010	1.3159	0.0021	0.0128	0.0521
Switzerland	2021	-0.0035	0.0126	-0.0041	1.4066	0.0041	0.0159	0.0733
Thailand	2588	0.0023	0.0238	0.0014	1.0515	0.0013	-0.0097	0.0367
Turkey	1500	0.0084	0.0037	0.0075	1.2982	0.0476	0.0156	0.0962
UK	10524	-0.0008	0.0148	-0.0018	1.2944	0.0027	0.0015	0.0724
US	57977	0.0056	0.0242	0.0036	1.2818	0.0031	0.0087	0.0543

Country-level variables

Country	CMARD	GDP	ANTI	RULE	CORUP	TAXEF
Argentina	0.6814	3.8401	4	5.35	3.5	2.41
Austria	1.5497	4.5597	2	10.00	7.7	3.60
Australia	2.2265	4.4991	4	10.00	8.3	4.58
Brazil	1.3678	3.7452	3	6.32	3.9	2.14
Canada	2.6979	4.4423	5	10.00	9.2	3.77
Chile	1.7918	3.8756	5	7.02	7.4	4.20
Colombia	0.8216	3.5559	3	2.08	3.2	2.11
Denmark	2.1640	4.6329	2	10.00	9.8	3.70
Finland	1.8386	4.5292	3	10.00	10.0	3.53
France	1.9123	4.4972	3	8.98	6.7	3.86
Germany	1.8176	4.5070	1	9.23	7.6	3.41
Hong Kong	5.3615	4.4501	5	8.22	7.7	4.56
Indonesia	0.7861	3.1379	2	3.98	1.7	2.53
Israel	1.5946	4.3103	3	4.82	6.6	3.69
Italy	1.5304	4.4362	1	8.33	4.6	1.77
Japan	3.8149	4.5633	4	8.98	6.4	4.41
Korea	1.9903	4.1733	2	5.35	4.0	3.29
Malaysia	2.7165	3.7498	4	6.78	4.8	4.34

Mexico	0.6796	3.8203	1	5.35	3.3	2.46
New Zealand	1.6539	4.3219	4	10.00	9.4	5.00
Netherlands	2.7876	4.5874	2	10.00	8.9	3.40
Norway	1.2169	4.6462	4	10.00	9.1	3.96
Peru	0.6139	3.4937	3	2.50	4.4	2.66
Philippines	1.0637	3.1399	3	2.73	2.8	1.83
Portugal	2.0242	4.2504	3	8.68	6.4	2.18
South Africa	3.7812	3.7014	5	4.42	5.0	2.40
Singapore	2.4810	4.4812	4	8.57	9.1	5.05
Spain	2.3751	4.3444	4	7.80	7.0	1.91
Sweden	2.2411	4.5790	3	10.00	9.4	3.39
Switzerland	3.9509	4.7071	2	10.00	8.6	4.49
Thailand	1.9868	3.4629	2	6.25	3.2	3.41
Turkey	0.7704	3.7674	2	5.18	3.8	2.07
UK	3.0239	4.5034	5	8.57	8.7	4.67
US	3.4469	4.5963	5	10.00	7.8	4.47

ANTI is the anti-director rights index. RULE is the rule of law index. Both of these two indexes are retrieved from La Porta et al.. Definitions of remaining variables are shown in Table A1 in the appendix. For each firm-level variable, the reported statistics are the means of yearly medians for specific country. For CMARD and GDP, the reported statistics is the mean over our sampling period for each country. The number of observations for each country is shown in the first column. The total of observations is161,376 and this is for BTD and PBTD. For RBTD we have 154,670 firm-year observations.

Table 1 presents the summary statistics of our main test variables and institutional variables for each country in our sample. The number of firm-year observations for each country is shown in the first column of Table 1, which ranges from 88 for Argentina to 57,977 for the United States. The considerable variation in the number of observations per country raises the concern that our results may be unduly influenced by countries with extreme number of observations. We will further evaluate the effect of this concern in the robustness test section.

IV. MAIN EMPIRICAL RESULTS

4.1 Test results of H1: The effect of investor protection on the valuation of tax avoidance

In this section, we report our results of testing H1. We estimate equation (1) for the U.S. and non-US countries separately. This allows us to determine whether the idea that tax avoidance does not always increase firm value is specific to the U.S. or it can also extend to other countries. The results are shown in Table 2.

Table 2 Corporate Tax Avoidance and Firm Valuation (The dependent variable is MV)

	Panel A: Estimated with observations for the U.S.			Panel B: Estimated with observations for non-US countries		
	(1)	(2)	(3)	(4)	(5)	(6)
TA=	BTD	RBTD	PBTD	BTD	RBTD	PBTD
Intercept	1.698	1.644	1.713	1.081	1.084	1.094
	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***
TA	0.027	-0.036	0.121	-0.561	-0.723	-0.489

	(0.667)	(0.649)	(0.069)*	(0.000)***	(0.000)***	(0.000)***
SIZE	-0.082	-0.076	-0.086	-0.013	-0.014	-0.015
	(0.000)***	(0.000)***	(0.000)***	(0.009)***	(0.005)***	(0.003)***
CHS	-0.275	-0.287	-0.277	-0.114	-0.120	-0.116
	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***
DIV	9.834	9.847	9.775	11.527	11.544	11.485
	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***
CAP	2.091	2.168	2.086	1.531	1.625	1.512
	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***
RD	6.233	6.168	6.317	7.514	7.525	7.565
	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***
GROWTH	0.226	0.226	0.227	0.198	0.192	0.198
	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***
INT	-2.676	-2.655	-2.595	-0.542	-0.663	-0.442
	(0.000)***	(0.000)***	(0.000)***	(0.031)**	(0.014)**	(0.078)*
TAXCR	-484.265	-491.672	-483.990	789.531	730.820	792.491
	(0.002)***	(0.002)***	(0.002)***	(0.016)**	(0.026)**	(0.015)**
LEV	-0.007	0.002	0.002	0.273	0.301	0.276
	(0.840)	(0.959)	(0.962)	(0.000)***	(0.000)***	(0.000)***
Industry and year effects?	Yes	Yes	Yes	Yes	Yes	Yes
Obs.	57977	57601	57977	103399	97069	103399
Adj.-R2	0.271	0.274	0.271	0.258	0.261	0.257
F-value	248.654	250.763	248.788	414.349	395.629	412.743

This table shows the results of estimating equation (1) without considering country-level variables, where the dependent variable is the Tobin’ s q ratio, defined as the sum of the market value of equity plus the book value of debt minus deferred tax expense and then divided by the book value of total asset. The P-values are reported in parentheses. The estimated standard errors are adjusted by the procedure of Newey-West. ***, **, and * represent statistical significant (two-tailed) at the 1%, 5% and 10% levels, respectively.

Panel A of Table 2 presents the estimate results of using only US observations. Column (1) shows that the coefficient on BTD is positive but insignificant. In Column (2) the coefficient on RBTD is negative but insignificant while in Column (3) the coefficient on PBTD is positive and significant at 10% level (p-value=0.069). These results suggest that investors in the U.S. market do not always perceive corporate tax avoidance as increasing firm value, consistent with the finidng of Desai and Dharmapala.

Panel B of Table 2 presents the estimate results of using observations from non-US countries. Coefficients on our three tax avoidance measures across Columns (4) to (6) are all negative and significant at 1% level. This result suggests that investors in non-US countries generally perceive that corporate tax avoidance impairs firm value, so the idea that tax avoidance does not naturally increase firm value holds not only for the U.S market but also for other countries. This negative valuation result may suggest that investors perceive that most tax savings will be misused and the remaining tax savings cannot cover the costs of tax avoidance incurred by their firms.

Contrasting results in Panel A and Panel B, we know that the negative market valuation of tax avoidance is attenuated in the US than in other countries, and this may be because protection for investor rights is usually more stringent in the US than in other countries. In this regard, results in Table 2 provide preliminary evidence to support our H1. For control variables, coefficients on most of them are significant at conventional level so it is necessary to include them in our estimate.

Results of estimating the full specification of equation (1) are shown in Table 3, where results of measuring investor protection with LAW and CORUP are presented separately.

Table 3 The Effect of Investor Protection on the Valuation of Corporate Tax Avoidance

(The dependent variable is MV)

	Panel A: Investor Protection (INP) Measured with LAW			Panel B: Investor Protection (INP) Measured with CORUP		
	(1)	(2)	(3)	(4)	(5)	(6)
TA=	BTD	RBTD	PBTD	BTD	RBTD	PBTD
Intercept	1.072	1.043	1.077	1.226	1.096	1.228
	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***
TA	-0.694	-0.541	-0.742	-0.762	-0.727	-0.772
	(0.014)**	(0.123)	(0.009)***	(0.005)***	(0.034)**	(0.005)***
TA*INP	0.142	0.133	0.120	0.236	0.205	0.212
	(0.000)***	(0.007)***	(0.003)***	(0.000)***	(0.000)***	(0.000)***
TA*TAXEF	0.153	0.133	0.218	-0.007	0.024	0.050
	(0.115)	(0.271)	(0.031)**	(0.938)	(0.825)	(0.577)
TA*CMARD	-0.456	-0.473	-0.443	-0.372	-0.365	-0.365
	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***
INP	0.075	0.069	0.073	0.035	0.020	0.034
	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***
TAXEF	-0.154	-0.160	-0.152	-0.098	-0.098	-0.098
	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***
CMARD	-0.035	-0.024	-0.034	0.002	0.009	0.002
	(0.000)***	(0.000)***	(0.000)***	(0.649)	(0.009)***	(0.532)
GDP	0.035	0.041	0.035	0.030	0.050	0.031
	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***
Firm-level control variables included?	Yes	Yes	Yes	Yes	Yes	Yes
Industry and year effects included?	Yes	Yes	Yes	Yes	Yes	Yes

Obs.	161376	154670	161376	161376	154670	161376
Adj.-R2	0.264	0.266	0.263	0.262	0.264	0.261
F-value	616.954	597.863	615.187	609.980	590.320	608.193

This table shows the results of estimating the full specification of equation (1), where the dependent variable is the Tobin's q ratio, defined as the sum of the market value of equity plus the book value of debt minus deferred tax expense and then divided by the book value of total asset. Definitions of remaining variables are shown in Table A1 in the appendix. For brevity, firm-level control variables are included in our estimates but their results are not presented in this table. The P-values are reported in parentheses. The estimated standard errors are adjusted by the procedure of Newey-West. ***, **, and * represent statistical significant (two-tailed) at the 1%, 5% and 10% levels, respectively.

Consistent with H1, Table 3 shows that coefficients on TA·INP are all positive and significant at 1% level for the three tax avoidance measures and coefficients on TA are negative and significant in most columns. This result holds for measuring INP with either LAW or CORUP. Results in Table 3 suggest that market valuation of corporate tax avoidance is higher in countries with better legal protection for investor rights.

Moreover, Table 3 shows that coefficients on TA·TAXEF are positive in most columns, albeit they are insignificant. This result suggests that although strong tax enforcement provides additional monitoring from tax authorities on managerial opportunistic behaviors, investors perceive that this monitoring effect is offset by the correspondingly increased risk of tax avoidance being challenged by tax authorities. In addition, coefficients on TA·CMARD are consistently negative and significant at 1% level in all columns, which suggests that the valuation of tax avoidance is higher with more difficulty in accessing external capital, in which situation tax savings are an important source of internal funds.

Overall, results in this section suggest that strong investor protection enhances the valuation of corporate tax avoidance, consistent with H1. And the conclusion of Desai and Dharmapala that the value of tax avoidance is a function of firm governance can extend to an international setting.

4.2 Test results of H2: Tax avoidance and firm cash policy

In this section, we report results of testing H2 about whether tax avoidance positively or negatively affects cash flow. The results of estimating equation (2) are shown in Part I of Table 4. We present the results separately for using only US observations and non-US observations in high or low investor protection countries where the cutoff point is the median value of LAW.

Table 4 Corporate Tax Avoidance and Cash Flow (The dependent variable is ΔCash)

Part I: Results of estimating equation (2)

	Panel A: Observations for the US			Panel B: Observations for non-US Countries with high *INP*			Panel C: Observations for non-US Countries with low *INP*		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
TA=	*BTD*	*RBTD*	*PBTD*	*BTD*	*RBTD*	*PBTD*	*BTD*	*RBTD*	*PBTD*
Intercept	0.016	0.005	0.017	0.008	0.003	0.015	0.002	-0.001	0.003
	(0.010)**	(0.405)	(0.006)***	(0.773)	(0.923)	(0.600)	(0.697)	(0.906)	(0.645)
TA	0.108	0.076	0.115	0.122	0.068	0.116	0.117	0.071	0.113
	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***
CashFlow	0.164	0.187	0.161	0.207	0.231	0.213	0.218	0.230	0.226
	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***
Δ*NWC*	-0.210	-0.157	-0.214	-0.190	-0.140	-0.185	-0.143	-0.102	-0.137
	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***
Δ*STD*	-0.098	-0.045	-0.103	0.001	0.049	0.006	0.006	0.043	0.011
	(0.000)***	(0.001)***	(0.000)***	(0.955)	(0.001)***	(0.675)	(0.602)	(0.000)***	(0.308)
MV	0.016	0.016	0.016	0.016	0.015	0.016	0.008	0.008	0.008
	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***
SIZE	-0.007	-0.006	-0.007	-0.007	-0.006	-0.007	-0.002	-0.001	-0.002
	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.006)***	(0.000)***
INVEST	-0.053	-0.055	-0.050	-0.161	-0.155	-0.158	-0.145	-0.139	-0.142
	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***
INP				0.001	0.001	0.002	0.001	0.001	0.001

				(0.217)	(0.540)	(0.168)	(0.150)	(0.040)**	(0.139)
TAXEF				-0.003	-0.003	-0.003	0.002	0.003	0.002
				(0.316)	(0.336)	(0.339)	(0.001)***	(0.000)***	(0.001)***
CMARD				0.007	0.007	0.007	-0.004	-0.004	-0.004
				(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***
GDP				-0.001	-0.001	-0.002	-0.001	-0.002	-0.001
				(0.482)	(0.521)	(0.262)	(0.032)	(0.000)***	(0.015)**
Industry and year effects included?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Obs.	39295	39292	39295	41035	41035	41035	37035	37035	37035
Adj.-R^2	0.139	0.130	0.140	0.157	0.145	0.155	0.149	0.138	0.148
F-value	76.255	71.171	76.970	87.813	79.910	86.584	74.824	68.125	74.311

Part II: The association between tax avoidance and the cash outflow effect of investment expenditures

	Panel A: Observations for the US			Panel B: Observations for non-US Countries with high *INP*			Panel C: Observations for non-US Countries with low *INP*		
	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
TA=	*BTD*	*RBTD*	*PBTD*	*BTD*	*RBTD*	*PBTD*	*BTD*	*RBTD*	*PBTD*
Intercept	0.020	0.008	0.021	0.008	0.003	0.015	0.003	0.000	0.003
	(0.000)***	(0.115)	(0.000)***	(0.769)	(0.905)	(0.598)	(0.654)	(0.933)	(0.631)
TA	0.120	0.095	0.127	0.124	0.075	0.117	0.118	0.074	0.113
	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***
*TA*INVEST*	-0.142	-0.149	-0.134	-0.178	-0.194	-0.141	-0.279	-0.197	-0.272

	(0.004)***	(0.011)**	(0.008)***	(0.021)**	(0.044)**	(0.073)*	(0.004)***	(0.075)*	(0.005)**
INVEST	-0.076	-0.069	-0.072	-0.174	-0.161	-0.168	-0.155	-0.141	-0.152
	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***
Control variables included?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry and year effects included?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Obs.	39295	39292	39295	41035	41035	41035	37035	37035	37035
Adj.-R^2	0.136	0.127	0.137	0.158	0.145	0.155	0.151	0.138	0.150
F-value	90.573	83.853	91.330	87.203	79.298	85.837	74.723	67.627	74.153

This table shows the results of estimating equation (2), where the dependent variable is ΔCash, defined as change in cash holdings scaled by total assets. Definitions of remaining variables are shown in Table A1 in the appendix. For Panels B and C in Parts I and II, countries with high (low) investor protection are deified as those with LAW values higher (lower) than the median of LAW, where the median is calculated with all our non-US sample countries. For brevity, in Part II firm-level and country-level variables are included in the estimates but their results are not presented. The P-values are reported in parentheses. The estimated standard errors are adjusted by the procedure of Newey-West. ***, **, and * represent statistical significant (two-tailed) at the 1%, 5% and 10% levels, respectively.

H2 argues that if the primary agency issue is how managers use tax savings, we should observe a positive relation between tax avoidance and cash flow because the prerequisite of misallocating tax savings is that tax avoidance can generally produce cash flows. Consistent with this argument, Part I of Table 4 shows that the coefficients on TA are all positive and significant at 1% level across all columns, which suggests that tax avoidance is a substantial funding source that provides firms with additional internal funds. In particular, results of columns (7) through (9) show that in countries with poor investor protection tax avoidance still produces cash savings. This result seems to suggest that tax-shielded rent extraction may not be as prevalent as thought by prior literature, given that tax-shielded rent extraction should be most prevalent in these countries so that producing cash flows is not the primary goal of corporate tax avoidance in these countries

However, finding a positive coefficient on TA does not necessarily mean that managers spend these tax savings on investment expenditures. It is also possible that managers hoard these tax savings for future uses. To resolve this concern and thus bridge the gap between H2 and H3, we investigate the association between tax avoidance and the cash outflow effect of investment expenditures.

Specifically, referring to Almeida et al., a larger coefficient on TA in regression (2) implies that firms save a

larger portion of cash flow from tax avoidance as cash reserves. In this regard, if managers use tax savings to fund investment expenditures, then greater investment expenditures should lead to smaller coefficient on TA, because now some tax savings are used to invest and only a smaller portion of them is hoarded as cash reserves. This yields an empirical testable prediction that the coefficient on TA in equation (2) should be smaller with a larger amount of INVEST, and we explore this prediction by extending equation (2) with an interaction term TA·INVEST.

As shown in Part II of Table 4, coefficients on TA·INVEST are negative and significant at conventional levels in all columns, and this holds even for non-US countries with low investor protection. These results support our expectation that managers use tax savings to finance investment projects. Furthermore, coefficients on TA·INVEST are largely smaller (more negative) in Panel C of Part II than those in Panels A and B and this result seems to suggest that managers in countries with weak investor protection spend a larger portion of tax savings on investment expenditures.

V. ADDITIONAL TESTS

5.1 Test of H1: alternative valuation specification

In Table 2, we test H1 with the valuation specification of Desai and Dharmapala. However, this specification raises the concern that the negative value implication of tax avoidance may be interpreted as market's expectation that firms will experience a negative shock on future performance so they evade more taxes and use tax savings as a buffer to mitigate this negative shock. To rule out this confounding interpretation, we repeat our test of H1 with the specification of Fama and French[32], because it controls for determinants that are likely to affect investors' expectations of future cash flows as well as earnings. Specifically, we extend the specification of Fama and French as following regression (3):

$$\begin{aligned} MV_{it} = {} & \gamma_0 + \gamma_1 \cdot TA_{it} + \gamma_2 \cdot TA_{it} \cdot INP_j + \gamma_3 \cdot TA_{it} \cdot TAXEF_j + \gamma_4 \cdot TA_{it} \cdot CMARD_{jt} + \gamma_5 \cdot INP_j + \\ & \gamma_6 \cdot TAXEF_j + \gamma_7 \cdot CMARD_{jt} + \gamma_8 \cdot GDP_{jt} + \gamma_9 \cdot E_{it} + \gamma_{10} \cdot dE_{it} + \gamma_{11} \cdot dE_{it+1} + \gamma_{12} \cdot dA_{it} + \\ & \gamma_{13} \cdot dA_{it+1} + \gamma_{14} \cdot RD_{it} + \gamma_{15} \cdot dRD_{it} + \gamma_{16} \cdot dRD_{it+1} + \gamma_{17} \cdot INT_{it} + \gamma_{18} \cdot dINT_{it} + \\ & \gamma_{19} \cdot dINT_{it+1} + \gamma_{20} \cdot DIV_{it} + \gamma_{21} \cdot dDIV_{it} + \gamma_{22} \cdot dDIV_{it+1} + \gamma_{23} \cdot dMV_{it+1} + \\ & Fixed\ effects + \varepsilon_{it} \end{aligned} \tag{3}$$

Where Xt is the level of variable X in year t divided by total assets; dXt is the change in the level of X from year t-1 to year t (i.e., Xt - Xt−1) divided by total assets; dXt+1 is the change in the level of X from year t to year t+1 (i.e., Xt+1 - Xt) divided by total assets; E is earnings before extraordinary items plus interest expenses; A is book value of total assets; remaining variables are defined as in previous sections. The results are presented in Table 5.

Table 5 Valuation of Corporate Tax Avoidance: Using the Specification of Fama and French
(The dependent variable is MV)

	INP measured with LAW			INP measured with CORUP		
	(1)	(2)	(3)	(4)	(5)	(6)
TA=	BTD	RBTD	PBTD	BTD	RBTD	PBTD
Intercept	0.553	0.514	0.554	0.750	0.595	0.749
	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***
TA	-0.558	-0.222	-0.476	-0.583	-0.416	-0.489
	(0.067)*	(0.531)	(0.121)	(0.051)*	(0.230)	(0.105)
TA*INP	0.131	0.093	0.095	0.179	0.150	0.169
	(0.002)***	(0.072)*	(0.033)**	(0.000)***	(0.000)***	(0.000)***
TA*TAXEF	-0.002	0.035	0.051	-0.094	-0.052	-0.096
	(0.983)	(0.777)	(0.637)	(0.305)	(0.638)	(0.318)
TA*CMARD	-0.486	-0.468	-0.453	-0.406	-0.368	-0.381
	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***

Et+1	0.766	0.710	0.755	0.768	0.708	0.756
	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***
Et	1.002	0.793	0.956	1.007	0.792	0.962
	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***
Et-1	-0.042	-0.006	-0.038	-0.047	-0.010	-0.043
	(0.321)	(0.866)	(0.354)	(0.259)	(0.787)	(0.287)
Control variables included?	Yes	Yes	Yes	Yes	Yes	Yes
Industry and year effects included?	Yes	Yes	Yes	Yes	Yes	Yes
Obs.	142578	137331	142578	142578	137331	142578
Adj.-R2	0.298	0.297	0.296	0.295	0.294	0.294

This table shows the results of estimating equation (3), where the dependent variable is the Tobin's q ratio, defined as the sum of the market value of equity plus the book value of debt minus deferred tax expense and then divided by the book value of total asset. For brevity, we only present the results relevant to our analysis and other variables are included in the estimates but their results are not presented. Data used in the estimates herein do not cover 1996 and 2012, since coverage of these two years requires data of 1995 and 2013 and this is beyond our sampling period. The P-values are reported in parentheses. The estimated standard errors are adjusted by the procedure of Newey-West. ***, **, and * represent statistical significant (two-tailed) at the 1%, 5% and 10% levels, respectively.

Table 5 shows that controlling for investors' expectations does not change our conclusions. Coefficients on TA remain to be consistently negative and coefficients on TA·INP are still significantly positive, consistent with the results of Table 3. Therefore, our result regarding the negative valuation of tax avoidance does not merely reflect investors' expectations about firms' future performance.

5.2 Tax avoidance and payout policy

As a supplement test, we also investigate how tax avoidance relates to corporate payout policy. If managers hoard tax savings for self-serving reasons, then they would not want to pay tax savings out to shareholders, as payouts to shareholders will reduce the amount of cash that otherwise would be used to advance their private benefits. To test this conjecture, we follow the specification of Alzahrani and Lasfer by regressing corporate payouts on tax avoidance[33], the interaction between tax avoidance and investor protection, and other control variables, where payout is defined as (dividend paid on common shares + repurchases of common shares – proceeds from issuance of common shares) divided by total assets. The results are shown in Table 6.

Table 6 Corporate Tax Avoidance and Payout

	INP measured with LAW			INP measured with CORUP		
	(1)	(2)	(3)	(4)	(5)	(6)
TA=	BTD	RBTD	PBTD	BTD	RBTD	PBTD
Intercept	-0.010	-0.002	-0.007	0.023	0.037	0.028
	(0.000)***	(0.392)	(0.006)***	(0.000)***	(0.000)***	(0.000)***
TA	-0.098	0.023	-0.055	-0.099	-0.001	-0.056
	(0.000)***	(0.064)*	(0.000)***	(0.000)***	(0.942)	(0.000)***
TA*INP	0.004	0.004	0.005	0.003	0.004	0.003
	(0.000)***	(0.008)***	(0.000)***	(0.001)***	(0.006)***	(0.007)***
TA*TAXEF	-0.017	-0.016	-0.020	-0.015	-0.010	-0.015

	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.006)***	(0.000)***
TA*CMARD	-0.002	-0.003	-0.003	0.001	0.002	0.000
	(0.043)**	(0.124)	(0.013)**	(0.486)	(0.172)	(0.881)
LEVt-1	-0.011	-0.008	-0.010	-0.010	-0.008	-0.009
	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***
CASHt-1	0.035	0.039	0.036	0.035	0.040	0.036
	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***
SIZEt-1	0.006	0.005	0.006	0.006	0.006	0.006
	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***
CF	0.193	0.098	0.161	0.189	0.096	0.157
	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***
MVt-1	0.005	0.007	0.006	0.005	0.007	0.006
	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***
RE/TEt-1	0.001	0.001	0.001	0.001	0.001	0.001
	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***
Control variables included?	Yes	Yes	Yes	Yes	Yes	Yes
Industry and year effects included?	Yes	Yes	Yes	Yes	Yes	Yes
Obs.	130730	124865	130730	130730	124865	130730
Adj.-R2	0.284	0.244	0.271	0.287	0.249	0.275
F-value	571.793	443.358	536.235	578.990	454.897	546.107

This table shows the results of regressing payouts on tax avoidance, where payout is defined as (dividend paid on common shares + repurchases of common shares – proceeds from issuance of common shares) divided by total assets. RE/TEt-1 is the date t-1ratio of retained earnings over total equity. For brevity, variables INP, TAXEF, CMARD, and GDP are included in the estimates but their results are not presented. The P-values are reported in parentheses. The estimated standard errors are adjusted by the procedure of Newey-West. ***, **, and * represent statistical significant (two-tailed) at the 1%, 5% and 10% levels, respectively.

Table 6 shows that coefficients on TA are significantly negative in most columns, while coefficients on TA·INP are significantly positive in all column. This result is consistent with our conjecture that managers tend to be reluctant to pay tax savings out to shareholders, but this tendency is weakened in countries with better investor protection. This result also conforms to the outcome model of La Porta et al. that with better legal protection minority shareholders can force corporate insiders to disgorge more cash to them.

VI. CONCLUSION

Jensen argues that entrenched managers may waste free cash flows[34]. We extend this argument to cash savings from tax avoidance. Our study proposes a new explanation for why corporate governance can affect the value of tax avoidance, which is beyond the tax-shielded rent extraction argument proposed by Desai and Dharmapala and Desai et al.. Our results suggest that the main agency issue regarding tax avoidance is the misallocation of tax savings instead of managers exploiting tax avoidance to mask their rent extraction.

We find that better investor protection leads investors to place higher valuation on corporate tax avoidance. This finding is attributed to the reasoning that in countries with weak investor protection managers are more likely to squander tax savings on suboptimal investments or misallocate too much of them as cash reserves, so in these countries tax avoidance negatively impact operating performance. In contrast, these negative consequences of tax avoidance are all mitigated by better investor protection. Our international evidence suggests that the extent to which

managers extract rent from tax avoidance through misallocating tax savings varies across countries with different level of investor protection.

Findings in this paper contribute to our understanding about the interaction between firm governance and tax avoidance. Although a large literature documents that better governance enhances firm value, much less is understood about how better governance works. Our study provides insight into this question by providing a direct link between governance and the value of tax savings. In this regard, we find that better governance increases firm value by improving the use of tax savings. This result sheds new light on the role of governance in the valuation of tax avoidance.

REFERENCES

[1] Desai, M. and D. Dharmapala,2009.*Corporate tax avoidance and firm value*.Review of Economics and Statistics 91: 537–546.

[2] Dhaliwal, D., S. Huang, W. Moser, and R. Pereira,2011. *Corporate Tax Avoidance and the Level and Valuation of Firm Cash Holdings*.Working paper, University of Arizona, Arkansas and Missouri.

[3] Wang, X.,2010. *Tax avoidance, corporate transparency, and firm value*.Working paper, University of Texas.

[4] Blaylock, B.,2011.*Do managers extract economically significant rents through tax aggressive transactions?* Working paper, Oklahoma State University.

[5] Mironov, M.,2013.T*axes, theft, and firm performance*. Journal of Finance 68: 1441–1472.

[6] Christie, W., and V. Nanda,1994. *Free cash flow, shareholder value, and the undistributed profits tax of 1936 and 1937*.Journal of Finance 49: 1727–1754.

[7] Pinkowitz, L., R. Stulz, and R. Williamson,2006. *Does the contribution of corporate cash holdings and dividends to firm value depend on governance? A cross-country analysis*.Journal of Finance 61: 2725–2751.

[8] Dittmar, A., J. Mahrt-Smith, and H. Servaes,2003. *International corporate governance and corporate cash holdings*.Journal of Financial and Quantitative Analysis 38: 111–133.

[9] Dittmar, A. and J. Mahrt-Smith,2007. *Corporate governance and the value of cash*.Journal of Financial Economics 83: 599–634.

[10] Harford, J., S. Mansi, and W. Maxwell,2008. *Corporate Governance and Firm Cash Holdings in the US.*Journal of Financial Economics 87:535-555.

[11] Iskandar-Datta, M. and Y. Jia,2013.*Investor protection and corporate cash holdings around the world: new evidence.*Review of Quantitative Finance and Accounting 43: 245–273.

[12] La Porta R, F. Lo´pez-de-Silanes, A. Shleifer, and R. W. Vishny,1998. *Law and finance*.Journal of Political Economy 106:1113–1155.

[13] La Porta R, F. Lo´pez-de-Silanes, A. Shleifer, and R. W. Vishny,2000.*Investor protection and corporate governance*.Journal of Financial Economics 58:3–27.

[14] La Porta R, F. Lo´pez-de-Silanes, A. Shleifer, and R. W. Vishny,2000b.*Agency problems and dividend policies around the world*.Journal of Finance 55: 1–33.

[15] Desai, M. and D. Dharmapala,2008.*Tax and Corporate Governance: an Economic Approach*.In Schon, W.,,Ed.. Tax and Corporate Governance. Berlin: Springer-Verlag, 13-30.

[16] Wilson, R.,2009.*An examination of corporate tax shelter participants*.The Accounting Review 84: 969-999.

[17] Cloyd, B., L. Mills, and C. Weaver,2003.*Firm valuation effects of expatriation of U.S. corporations to tax-haven countries*.The Journal of American Taxation Association,Supplement: 87–109.

[18] Doidge, C., G. A. Karolyi, and R. M. Stulz,2007. *Why do countries matter so much for corporate governance?*Journal of Financial Economics 86: 1-39.

[19] Aggarwal, R., I. Erel, R.M. Stulz, and R. Williamson,2009. *Differences in governance practices between US and foreign firms: measurement, causes, and consequences*.Review of Financial Studies 22: 3171–3209.

[20] Mills, L. F.,1998. *Book-tax differences and Internal Revenue Service adjustments*.Journal of Accounting Research 36: 343-356.

[21] Manzon, G. B. and G. A. Plesko,2002.*The relation between financial and tax reporting measures of income*.Tax Law Review 55: 175-214.

[22] Goncharov, I.,2009. *Does reporting timeliness affect book-tax difference?* Working paper, University of Amsterdam.

[23] Shevlin, T.,2002.*Commentary: corporate tax shelters and book-tax differences*. Tax Law Review 55, 427-443.

[24] Dyck, A., and L. Zingales,2004. *Private benefits of control: An international comparison*.Journal of Finance 59: 537-600.

[25] Atwood, T., M. Drake, J. Myers, and L. Myers,2012. *Home country tax system characteristics and corporate tax avoidance: International evidence*.The Accounting Review 87: 1831-1860.

[26] Haw, I., B. Hu, L. Hwang, and W. Wu,2004. *Ultimate ownership, income management, and legal and extra-legal institutions*. Journal of Accounting Research 42: 423-462.

[27] Edwards, A., C. Schwab, and T. Shevlin,2012. *Financial constraints and the incentive for tax planning*. Working Paper, University of California-Irvine.

[28] Almeida, H., M. Campello, and M. S. Weisbach,2004. *The cash flow sensitivity of cash*. Journal of Finance 59: 1777–2084.

[29] Kim, C., D. Mauer, and A. Sherman,1998. *The determinants of corporate liquidity: theory and evidence*. Journal of Financial and Quantitative Analysis 33: 335-359.

[30] Opler, T., L. Pinkowitz, R. Stulz, and R. Williamson.,1999. *The determinants and implications of cash holdings*. Journal of Financial Economics 52: 3-46.

[31] Harford, J.,1999. *Corporate cash reserves and acquisitions*. Journal of Finance 54: 1969-1997.

[32] Fama, E.F. and K. French,1998. *Taxes, financing decisions, and firm value*. Journal of Finance 53: 819–843.

[33] Alzahrani, M. and M. Lasfer,2012. *Investor protection, taxation, and dividends*. Journal of Banking and Finance 18:745-762.

[34] Jensen, M. C.,1986. *Agency costs and free cash flow, corporate finance and takeovers*. American Economic Review 76: 659–665.