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DEPARTMENT OF FINANCE

IMPACT OF TAX AGGRESSIVENESS ON FIRM VALUE

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A thesis
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Reviewed and approved* by the following:

Samuel Bonsall
Associate Professor of Accounting
Thesis Supervisor

Brian Davis
Clinical Assistant Professor of Finance
Honors Adviser

* Signatures are on file in the Schreyer Honors College.

ABSTRACT

The term “tax aggressiveness” has many synonyms such as tax planning, tax avoidance and even tax evasion. All of these terms refer to a company’s attempt to lower its amount of income tax liability. Tax aggressiveness includes many actions from taking certain tax credits, all the way to using tax shelters or undergoing corporate inversion. These actions taken by public companies can have an impact on their shareholders’ views of the company and therefore affect firm value and stock price. This study aims to analyze the relationship between tax aggressiveness and overall firm value through statistical regression analysis. This study uses data from public companies registered with the Securities and Exchange Commission across all industries covering a time frame of 2003 – present. Although this study will focus mainly on statistical analysis, some conclusions will also be drawn regarding investor sentiments towards different specific methods of tax aggressiveness.

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Chapter 1

Introduction of Topic

One of the duties of a public company include increasing firm value for their shareholders. This can be accomplished by many different means. During the year they can increase sales, decrease costs, invest. After all of that is said and done when the fiscal year of each company has ended they will look to their taxes as one more way of saving their shareholders some additional money. These companies will perform any number of actions throughout the year to achieve the overall goal of lowering their amount of income tax liability. Companies all around the world, no matter the product, service, size, or industry they fall in, will utilize some level of tax aggressiveness.

"Tax aggressiveness" has taken many different names in the tax literature. In different studies, researchers have used tax avoidance, tax planning, and tax aggressiveness to mean the same construct. Among all of the terms, tax avoidance has the most negative connotation. It evokes a sense of taking illegal actions in the hopes of "avoiding" taxes (Dowling, 2013). While this was not always the case, others refer to this topic as tax planning. This term makes investors more confident in their corporate officers that they are simply planning ahead to keep their taxes low. The fact of the matter is that regardless of what you call it, there is a whole range of actions that cover everything from the smallest benign actions, to the most extreme cases. Therefore, this paper will refer to this topic as tax aggressiveness as it implies a full range of methods.

Tax aggressiveness is essentially any way a company can take advantage of the current U.S. Tax Code to reduce its effective tax rate. There are generally a few principles that cover

these actions including tax deferral, taking advantage of tax brackets/tax rates and general tax avoidance. Later in this paper I will discuss some examples of each of these principles.

Aside from the corporation, there are generally two bodies that have a direct interest in these actions: the U.S. Government and the shareholders of those companies. When the government feels as though it is losing significant tax revenue due to corporations taking advantage of loopholes in the tax code, it will attempt to undergo some sort of tax reform. This paper however will only focus on the shareholder perspective. While saving tax money for the firm is generally considered a positive action to shareholders, the ends may not always justify the means and there are also some reasons why shareholders may consider it unfavorable. One of the larger concerns surrounding companies regarding shareholder viewpoints is the increase in transparency of business activities. More prevalent than ever before, companies are required to disclose much more information to their shareholders and reports of overly aggressive tax planning can create discomfort among shareholders.

The purpose of this report is to test the relation between levels of tax aggressiveness and firm value. This is tested through a regression analysis between two variables: effective tax rate and book to market ratio.

Chapter 2

Literature Review

Common Examples of Tax Aggressiveness

In order to give some context as to how companies take advantage of the U.S. tax code, this section will provide examples of practices that fall under different levels of aggressiveness.

Companies that deal with inventory have a decision to make regarding their inventory tracking method that will ultimately have an impact on calculating their taxable income. The most commonly used methods are first-in, first-out (FIFO), last-in, last-out (LIFO) and weighted average. As a piece of inventory is sold, the cost of that good will offset the purchase price to determine the profit made. In an economy where prices for conforming goods are constantly changing, deciding which purchase price to offset the price can be a big decision. The company must determine if it is more beneficial to write off a cheaper good now and save the higher cost good for later, or vice versa. If we assume that prices are constantly rising, a company would choose to use the FIFO method. This would allow them to write off cheaper cost of goods, creating a higher profit margin. The same company would also like to use LIFO for tax purposes. By expensing a high cost inventory, they create less profit and lower taxable income. However, according to the Internal Revenue Code if a company elects to use the LIFO method for tax purposes, they may not use any other method when preparing financial reports to be supplied to "shareholders, partners, or other proprietors, or to beneficiaries, or for credit purposes" (I.R.C. § 472 (c) (1)). Aside from tax liability, this type of tax planning has no effect on cash flows of the company.

Additionally, there are some tax positions one can take without complete certainty the IRS will allow such a deduction or credit. These can lead to uncertain tax benefits (more details below in the *Measuring Tax Aggressiveness* section). With these positions, it is possible for a company to take a tax benefit understanding the risk that the IRS will deem that position unacceptable and force them to pay it back in future years. One example of this is taking advantage of the Research and Development Tax Credit (R&D Tax Credit). Under the "traditional method" of calculating the credit, it allows a company to take a credit amounting to 20% of qualified research expenses over a base amount (I.R.C. § 41 (1)(a)(b)). Any company that has a research and development department will most likely take advantage of this tax credit. In 2014, over $12 billion in current year R&D tax credits were claimed by corporations (Adams, 2016). The level of tax aggressiveness in this practice comes from management's determination of which expenses will be considered "qualified research expenses" and reported to the IRS. While there are certain guidelines as to what will and will not be generally accepted as qualifying expenses, a more tax aggressive company will attempt to classify more of their uncertain expenses as qualified in order to obtain a higher tax credit amount. Many financial services firms, such as public accounting firms, provide the service of reviewing a company's operation and determining for them what qualifies and then calculating the company's tax credit. This can however be a very lengthy process that requires many hours of service fees and providing an outside party with potentially sensitive information.

One of the more extreme methods of saving tax dollars is through the use of tax havens. A tax haven is a country where the corporate tax rate is lower than the current U.S. tax rate that tops at 35%. Some companies will choose to send their earnings to these countries instead of bring them back to the U.S. in order to pay lower taxes. The U.S. government can only claim

taxes on corporate earnings when they are repatriated into the country. Because of this, this method is also referred to as profit shifting as it keeps corporate profits out of the U.S. Some of the more popular tax havens include Ireland as well as a number of Caribbean islands. One of the most notable examples of using tax havens is Apple, Inc. It has been well reported that Apple has kept its earnings in Ireland to avoid U.S. tax rates. Apple accumulated close to $14.5 billion in tax savings between the years 2003 and 2014 (Barrera and Bustamante, 2017). When performed legally there is nothing the U.S. government can do, however it has been actively trying to shut down as many of these avenues in order to bring tax revenue back into America. A variation of this profit shifting is known as corporate inversion. This is when a U.S. based company moves its headquarters to another country, most likely one with a lower tax rate, in order to avoid the U.S. corporate tax rate. Whether the shift in headquarters is through mergers and acquisitions or otherwise, this is another large scale method of reducing income tax liability.

Shareholders' Opinion on Tax Aggressive Policies

Transparency has become a much larger point of emphasis in financial reporting and tax law. Now more than ever the shareholders of public companies expect to be able to see and understand how a company operates. Shareholders are no longer only concerned with the bottom line numbers of profits, cash flows and stock price. Other factors such as ethical behavior are having an extreme impact on how potential shareholder valuates an investment. Many studies have proven the relationship between corporate social responsibility, reputation, and shareholder value (Saeidi, Sayedeh Parastoo, et al., 2014). In the case of profit shifting and corporate inversion, described in the previous section, there is even a question of patriotism. The U.S.

government would like to point out to the public how much profit is sitting off shores and therefore taking away tax revenue that they believe belongs in the U.S. Many investors put a value on companies that demonstrate a sense of patriotism through domestic production, providing domestic jobs and bringing profits back into the U.S as seen in recent studies (Puncheva-Michelotti, 2014). In the case of Apple sheltering its profits in Ireland there was another ethical issue concerning the legality of its corporate tax rate. There were some accusations that Apple and the Republic of Ireland had illegally negotiated a special lower tax rate in order to save Apple additional tax dollars. In 2016 the European Union found their actions unlawful and forced Ireland to collect upwards of €13 billion in unpaid taxes plus interest as penalty. Apple as well as Ireland are still attempting to repeal this decisions and prove their actions were legal, however Apple has since moved its profits to Jersey, a U.K. dependency, which will serve as their tax haven for the foreseeable future (Kocieniewski, 2012). These types of allegations and fallouts can potentially have a major impact on a shareholder's opinion of a company. In an attempt to comfort shareholders of their situation, Apple made a post on their investor relations page expressing its confidence that the €13 billion will be returned to the company, and shareholders, when the ruling is overturned. This may be an extreme case with a many conditions but it represents the idea that overly tax aggressive methods may increase overall firm risk and therefore turn off some investors. Corporate social responsibility is a major concern for many investors.

In regards to the LIFO/FIFO requirements listed above, this could also have a large impact on shareholders' perceived value. Choosing the LIFO method in an inflationary price situation would effectively lower a company's tax liability. That being said it would also be shown to shareholders that their income was also smaller than could potentially be reported. This

type of tax decision may not affect the company's reputation or put their corporate social responsibility into question, but investors still highly value the bottom line figures and this could make a major difference in how profitable they appear.

Looking at other smaller scale tax aggressive methods, most investors do not take extreme notice to tax savings that are common to all companies. Examples include contributing to traditional IRAs, investing in tax free municipal bonds and many more possibilities. These types of tax aggressive behaviors tend to make more of a difference on how investors see the bottom line figures as opposed to corporate behavior.

A company's reputation is a major asset. In an age where everything is disclosed and any negative detail can be exploited it is vital to maintain investor relations. In the cases where reputational harm is the result of tax aggressive behaviors is where it becomes clear that some methods of tax saving can be considered too risky or off-putting to shareholders.

Measuring Tax Aggressiveness

While a company's tax bracket provides a tax rate at which their taxable income should be taxed (35% at the highest corporate level), the goal of these tax aggressive practices is to lower its percentage of actual taxes paid in relation to its pre-tax income. This measurement is called the effective tax rate (ETR). As there have been only a few empirical studies on this topic, there is no generally accepted formula or method of determining a company's level of tax aggressiveness. However, almost all research methods involve identifying a company's effective tax rate at some point. As mentioned above, the effective tax rate is measured by dividing the company's income taxes paid by their pre-tax income.

In a study performed by Guenther, Matsunaga and Williams (2013), they examined the relationship between a company's effective tax rate as compared to its uncertain tax benefit reserves (UTB Reserves). An uncertain tax benefit is when a company taxes a certain tax position on its tax returns in which it is not 100% positive that it qualifies for. In order for the company to take that position in good faith, it must meet the "more likely than not recognition threshold" (FASB Summary of Interpretation, 2006). It is believed that a more tax aggressive company would take more of these uncertain tax benefits, accepting the fact that there may be some repercussions in future years. According to FASB Interpretation No. 48 (commonly referred to as FIN 48) companies as of 2007 are required to disclose the amount the uncertain tax benefits they are claiming in the hopes of making tax risk more transparent to shareholders. This amount is called a UTB Reserve. On the opposite end of the spectrum would be companies with little to no UTB Reserves. These companies only take tax positions that they know for certain they can take and do not take any risk in being penalized in future years. Guenther et al. (2013) compared UTB Reserves to ETR to determine whether or not UTB's would create an overall favorable or unfavorable effect on a company's ETR over time. With this approach the study found it difficult to find concrete data and that "if firms consistently take aggressive tax positions, unfavorable resolutions of prior aggressive tax positions could be offset by new aggressive tax positions, leaving the firm's total tax payments relatively constant over time" (Guenther, Matsunaga, Williams, 2013). This paper will not use this approach as it only encompasses practices of taking uncertain positions. Tax aggressive practices come in many forms, including situations in which the company is completely sure of a tax position.

Another documented method is Frank, Lynch and Rego's measurement of permanent book-tax differences (2009). In their study of aggressive tax versus aggressive financial

reporting, they consider only permanent book-tax differences. Their reasoning for neglecting temporary differences in their measurement of tax aggressiveness is that temporary difference created a false correlation with their measurement for aggressive financial reporting as temporary differences are, "driven by *pre-tax* accrual earnings management and not tax planning" (Frank, Lynch, Rego 2009). This paper does not foresee the same problems as it is not testing a relationship to financial reporting. This paper will focus mainly on overall ETR as it covers the full range of tax aggressive practices and its relation to firm value.

Chapter 3

Research Design

I collected data through the Wharton Research Data Services (WRDS). This service is provided and offered by the Wharton School of the University of Pennsylvania. Within WRDS data was pulled using Compustat North America – Daily, an archive of historical financial reporting information from all public companies that file with the Securities and Exchange Commission. The entire database was filtered to include all public company records over the last sixteen years (March 2003 – March 2018). In order to create my set of raw data, I chose the applicable variables required for this study. Variables included pretax income, income taxes paid, total stockholders' equity, common shares outstanding and fiscal year stock closing price. Other information such as data year, company name, North American Industry Classification Code and ticker symbol were also included in the data but were not pertinent to the study (refer to Appendix A for sample of data). Once all variables were chosen the data were exported as an Excel file. To further analyze the data and perform the study the information was imported into STATA.

STATA is a statistical software package which allows one to process and analyze large quantities of data through coded commands (refer to Appendix B for sample of coding). Variables were combined in order to create the effective tax rate as well as the book to market ratio. Effective tax rate was calculated as (income taxes paid / pretax income). Book to market ratio was calculated as (total stockholders' equity / (common shares outstanding * fiscal year

stock closing price)). A regression was run between these two variables with the effective tax rate as the independent variable and the book to market ratio as the dependent variable.

Description of Sample

The sample of companies covered in this study include all companies that are registered with the SEC. Lowering a firm's effective tax rate and consideration of tax aggressiveness is a tactic that spans across all industries as they attempt to increase firm value for shareholders. Data was further cleaned by a process known as winsorization. This is a method commonly used in regression analysis with the goal of removing the impact that outliers may have on a regression. With a data containing information over the span of fifteen years there are bound to be some extreme outliers that would influence the results of a regression. By eliminating that influence we get a clearer and more accurate representation of the relationship between effective tax rate and book to market value. Through this data cleaning method we begin by identifying the data points from effective tax rate as well as book to market value that fall below the first percentile as well as above the 99^{th} percentile. These observations are the most extreme on both the high end and low end. These extreme values were replaced by the minimum and maximum limits set by the values sitting on the 1st and 99^{th} percentile. Essentially what this does is bring those values within an acceptable range that will improve the accuracy of the regression. Performing this type of data cleaning is often used when dealing with a high number of observations and data points. Over 44,000 data points were included in this regression analysis.

Assumptions

All companies with a negative pretax income were removed from the data set as they provide a negative effective tax rate and do not impact this study. This study only aims to analyze situations in which taxes are paid based on a positive amount of taxable income. Removing any years of operational loss for a company accomplishes this aim.

Effective Tax Rate and the Book to Market ratio were chosen as the two measuring variables because they are commonly used in the fields of accounting and finance and provide an accurate representations of this relationship between tax aggressiveness and firm value. The effective tax rate is an all-encompassing measurement of how much a company is actually paying in taxes. As mentioned above, there are many different types of tax aggressive methods that cover tax deductions, tax credits and more. While UTB's measure uncertain tax positions there are many certain tax positions that a company may take that would still impact the amount of successful tax savings.

There are many ways of valuing a company but this study used book to market ratio as it is widely used among investors of all different technical backgrounds. There are much more complicated ways of valuing a company through financial modeling and other means, however it is believed that the regression performed in this study and its results will appeal and relate to a much wider audience of investors. This valuation technique aims to determine how much of a stock's price results from the intrinsic value versus the added value from shareholder speculation. As the purpose of this study is to determine how shareholder opinions can change firm value the book to market ratio was determined to be the best measurement for this data.

Chapter 4

Data and Results

Once the raw data from Compustat was imported into STATA, the variables effective tax rate and book to market ratio were created in order to run this regression. Below are the results of the regression with the effective tax rate (ETR) as the independent variable and the book to market ratio (BTM) as the dependent variable.

BTM	Coef.	Std. Err.	t	P>|t|	[95% Conf. Interval]	
ETR	**.0359853**	.0083831	**4.29**	**0.000**	.0195544	.0524163
_cons	.666453	.0036321	183.49	0.000	.6593341	.6735719

Figure 1. Regression Analysis Output

Bolded above are the notable figures to consider within this regression analysis output. There is a coefficient of .0359853. This represents the rate at which the two variables move in relation to each other. For every point that the ETR moves in either direction, the book to market value will move .0359853 points in the same direction.

The t value and P value together represent the statistical relationship between the two variables. These values allow me to reject the null hypothesis of no relationship between the two

variables. A t value further from zero along with a P value close to zero is suggestive that the probability that the coefficient on Tax Avoidance equals zero is very low.

In the figures below, I show a sample example as well as a couple of case examples with different companies to put the results of the regression in terms of real dollars. The first example seen in Figure 2 demonstrates the effect of a five percent decrease in ETR using mean BTM and Market values of the sample. By multiplying the change in ETR by the coefficient of the regression we can determine the change in the BTM. As this study aims to determine the impact this topic has on investor opinions, I am assuming that the book value of the company remains constant and the change in BTM is the result of a changing market value. With these assumptions I used the Goal Seek function on Microsoft Excel to determine how much the market value would have to change to provide the new calculated BTM. Once the new market value is calculated it is subtracted from the original to find the change in market value in terms of dollars.

5% Decrease in ETR with Mean Values from Sample

-5%	Change in ETR
x 0.03599	Coefficient
-0.00180	Change in BTM
0.69177	Mean BTM
-0.00180	Change in BTM
0.68997	New BTM
4658.104	Mean Market Value
x 1.00263	*Change in Market Value
4670.34238	New Market Value

12.24 Change in Market Value $(Millions)

Figure 2. Sample Case Using Mean Values

5% Decrease in Apple's 2017 ETR	
-5%	Change in ETR
x 0.03599	Coefficient
-0.00180	Change in BTM
0.16967	Original 2017 BTM
-0.00180	Change in BTM
0.16787	New 2017 BTM
790050.09812	Original 2017 Market Value
x 1.01165	*Change in Market Value
799252.54895	New 2017 Market Value
9202.45	**Change in Market Value ($Millions)**
1.80	**Change in Price per Share**

Figure 3. Apple Case Example

In Figure 3 we consider a five percent decrease in Apple's 2017 effective tax rate. Making the same calculations and assumptions as the sample example in Figure 2, a five percent decrease in Apple's effective tax rate would result in an increase of $9,202.45 million in market value. This increase divided by the number of shares outstanding provides an increase of $1.80 in stock price per share.

Additionally, in Figure 4 seen below, is another case example assuming a five percent increase in Hershey Co.'s 2017 effective tax rate. A five percent increase in their effective tax rate resulted in a decrease of market value amounting to $1,083.38 million, as well as a decrease in their per share price of $5.14.

5% Increase in Hershey Co's 2017 ETR	
5%	Change in ETR
x 0.03599	Coefficient
0.00180	Change in BTM
0.038920891	Original 2017 BTM
+ 0.00180	Change in BTM
0.04072	New 2017 BTM
23934.83211	Original 2017 Market Value
x 0.95474	*Change in Market Value
22851.45216	New 2017 Market Value
-1083.38	**Change in Market Value ($Millions)**
-5.14	**Change in Price per Share**

Figure 4. Hershey Co. Case Example

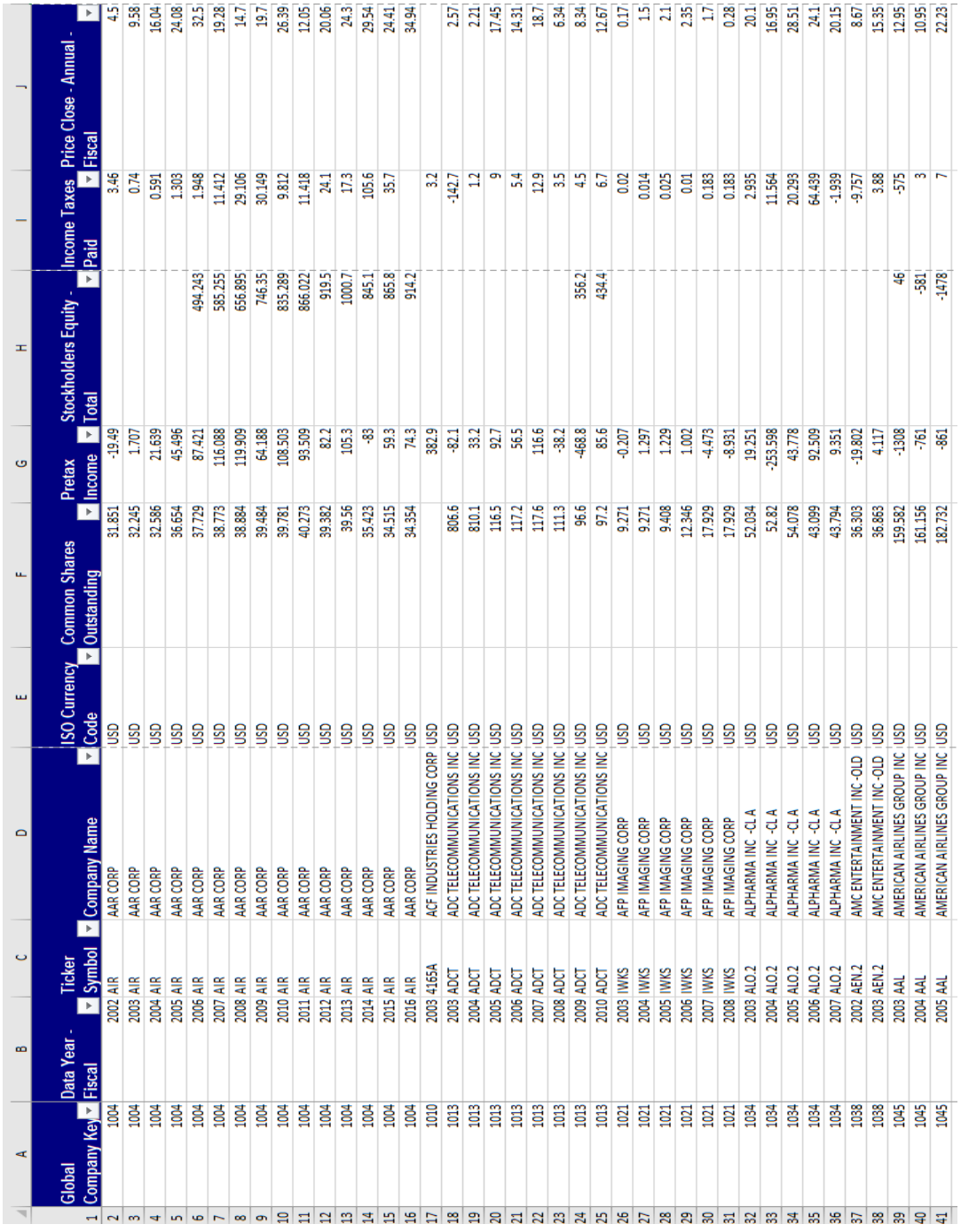
Chapter 5

Conclusion

With a generally accepted corporate tax rate of 35 percent, and a mean effective tax rate of just over 25 percent in this sample, it is safe to assume that saving tax dollars is a priority that spans across all companies. There are many ways that a corporation can go about reducing its income tax liability. Many methods are so common that they often go unseen by outside parties. Tax free investment vehicles like municipal bonds or contributing to IRA's are more expected among investors and therefore the effects of those tax aggressive measures are seen more through bottom line numbers. There is a strong relationship between effective tax rate and firm value, measured through the book to market ratio. Any company that engages in tax aggressive practices gives a lot of consideration towards shareholder value and seeks to improve its financial standings. The risk involved with tax aggressive behavior comes with the larger scale and more aggressive tax saving measures. They can have extreme payoffs, proven by the billions of tax dollars saved by Apple and its use of tax havens. These methods also bare the most risk, also proven by Apple's billions of dollars in penalties, claims of illegal actions and ongoing trials. The risk lies where there is the greatest chance of public disapproval and harm to reputation. While this study quantifies the relationship between tax aggressiveness and firm value, any harm to a company's reputation can cause major harm to a company's firm value.

Appendix A

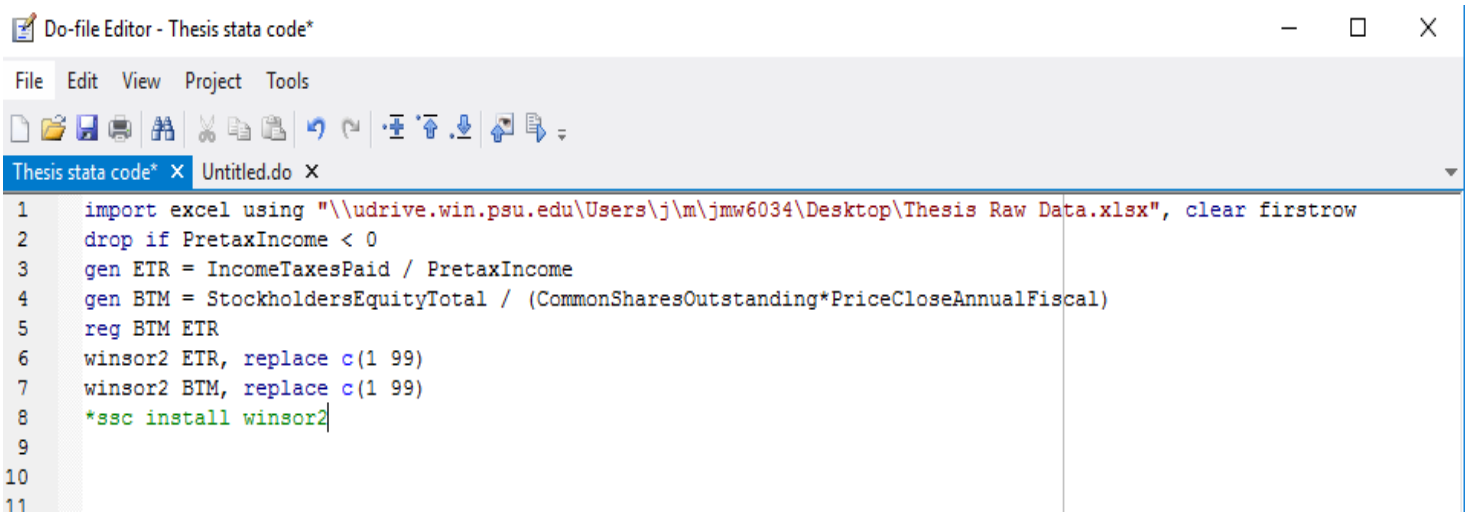
Raw Data Sample



Global Company Key	Data Year - Fiscal	Ticker Symbol	Company Name	ISO Currency Code	Common Shares Outstanding	Pretax Income	Stockholders Equity - Total	Income Taxes Paid	Price Close - Annual - Fiscal
1004	2002	AIR	AAR CORP	USD	31.851	-19.49		3.46	4.5
1004	2003	AIR	AAR CORP	USD	32.245	1.707		0.74	9.58
1004	2004	AIR	AAR CORP	USD	32.586	21.639		0.591	16.04
1004	2005	AIR	AAR CORP	USD	36.654	45.496		1.303	24.08
1004	2006	AIR	AAR CORP	USD	37.729	87.421	494.243	1.948	32.5
1004	2007	AIR	AAR CORP	USD	38.773	116.088	585.255	11.412	19.28
1004	2008	AIR	AAR CORP	USD	38.884	119.909	656.895	29.106	14.7
1004	2009	AIR	AAR CORP	USD	39.484	64.188	746.35	30.149	19.7
1004	2010	AIR	AAR CORP	USD	39.781	108.503	835.289	9.812	26.39
1004	2011	AIR	AAR CORP	USD	40.273	93.509	866.022	11.418	12.05
1004	2012	AIR	AAR CORP	USD	39.382	82.2	919.5	24.1	20.06
1004	2013	AIR	AAR CORP	USD	39.56	105.3	1000.7	17.3	24.3
1004	2014	AIR	AAR CORP	USD	35.423	-83	845.1	105.6	29.54
1004	2015	AIR	AAR CORP	USD	34.515	59.3	865.8	35.7	24.41
1004	2016	AIR	AAR CORP	USD	34.354	74.3	914.2		34.94
1010	2003	4165A	ACF INDUSTRIES HOLDING CORP	USD		382.9		3.2	
1013	2003	ADCT	ADC TELECOMMUNICATIONS INC	USD	806.6	-82.1		-142.7	2.57
1013	2004	ADCT	ADC TELECOMMUNICATIONS INC	USD	810.1	33.2		1.2	2.21
1013	2005	ADCT	ADC TELECOMMUNICATIONS INC	USD	116.5	92.7		9	17.45
1013	2006	ADCT	ADC TELECOMMUNICATIONS INC	USD	117.2	56.5		5.4	14.31
1013	2007	ADCT	ADC TELECOMMUNICATIONS INC	USD	117.6	116.6		12.9	18.7
1013	2008	ADCT	ADC TELECOMMUNICATIONS INC	USD	111.3	-38.2		3.5	6.34
1013	2009	ADCT	ADC TELECOMMUNICATIONS INC	USD	96.6	-468.8	356.2	4.5	8.34
1013	2010	ADCT	ADC TELECOMMUNICATIONS INC	USD	97.2	85.6	434.4	6.7	12.67
1021	2003	IWKS	AFP IMAGING CORP	USD	9.271	-0.207		0.02	0.17
1021	2004	IWKS	AFP IMAGING CORP	USD	9.271	1.297		0.014	1.5
1021	2005	IWKS	AFP IMAGING CORP	USD	9.408	1.229		0.025	2.1
1021	2006	IWKS	AFP IMAGING CORP	USD	12.346	1.002		0.01	2.35
1021	2007	IWKS	AFP IMAGING CORP	USD	17.929	-4.473		0.183	1.7
1021	2008	IWKS	AFP IMAGING CORP	USD	17.929	-8.931		0.183	0.28
1034	2003	ALO.2	ALPHARMA INC -CL A	USD	52.034	19.251		2.935	20.1
1034	2004	ALO.2	ALPHARMA INC -CL A	USD	52.82	-253.598		11.564	16.95
1034	2005	ALO.2	ALPHARMA INC -CL A	USD	54.078	43.778		20.293	28.51
1034	2006	ALO.2	ALPHARMA INC -CL A	USD	43.099	92.509		64.439	24.1
1034	2007	ALO.2	ALPHARMA INC -CL A	USD	43.794	9.351		-1.939	20.15
1038	2002	AEN.2	AMC ENTERTAINMENT INC -OLD	USD	36.303	-19.802		-9.757	8.67
1038	2003	AEN.2	AMC ENTERTAINMENT INC -OLD	USD	36.863	4.117		3.88	15.35
1045	2003	AAL	AMERICAN AIRLINES GROUP INC	USD	159.582	-1308	46	-575	12.95
1045	2004	AAL	AMERICAN AIRLINES GROUP INC	USD	161.156	-761	-581	3	10.95
1045	2005	AAL	AMERICAN AIRLINES GROUP INC	USD	182.732	-861	-1478	7	22.23

Appendix B

STATA Coding



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ACADEMIC VITA

Academic Vita of Joshua Michael Wolf
Jmw6034@psu.edu

Education: The Pennsylvania State University, Schreyer Honors College
Major(s) and Minor(s): Masters in Accounting | Bachelor of Science in Accounting, Bachelor of Science in Finance

Thesis Title: Impact of Tax Aggressiveness on Firm Value
Thesis Supervisor: Samuel Bonsall

Work Experience:
Date: June 2017 – July 2017
Title: Tax Intern
Description: Aiding and preparing federal, state and local tax returns
Institution/Company: Ernst & Young (EY), Tysons, VA
Supervisor's Name: Thompson Harner

Awards: Provost Award, Schreyer Scholar Scholarship

Community Service Involvement: Camp Kesem, Penn State Dance Marathon

International Education: Summer Business Program at Pforzheim University in Pforzheim, Germany