Testing Alternative Theories of Capital Structure in the US Electric Industry

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Capital structure choices are somewhat mysterious. This mystery has prompted many different stories concerning a firm's choice of leverage. The traditional trade-off theory holds that firms balance the tax advantages of debt with the costs of financial distress to minimize overall financing costs. More sophisticated theories, such as the pecking-order theory and managerial prerogative theories, incorporate notions of asymmetric information between shareholders and managers and predict that leverage choice is used to address the asymmetry of information. Electric utilities, however, operate in a different business environment than do unregulated firms. Financial decisions are scrutinized publicly before a regulatory body which generally has authority over the firm's prices. Moreover, public utilities are charged with providing service at the lowest possible cost. This paper explores two alternative theories of capital structure: the trade-off theory and the pecking order theory. Following Shyam-Sunder and Myers (1999), we use data from FERC Form 1 to evaluate different theories of capital structure for the period 1988 through 2014 in the electric industry. We find that the POT tests do not characterize the electric industry through we do find that the TOT tests appear to provide some explanatory power.

Keywords: Capital Structure; Regulation; Trade-off Theory; Pecking Order Theory; Electric Utilities

Introduction

Much of the academic work on capital structure has focused on the so-called optimal capital structure implying that some combination of financing mechanisms produces the lowest overall average cost of financing (Myers, 2001). An overall theory of capital structure, however, eludes us, and indeed, as Myers (2001, p. 81) notes, that is probably to be expected. Yet firms devote significant resources to understanding, analyzing, and ultimately implementing capital structure decisions and it is generally accepted that financing decisions do matter. (Stiglitz, 1988). To address these issues, this paper reviews stories about the choice of financing. The first of these stories suggests that financing decisions do not matter at all. Introduced by Modigliani and Miller (1958) (MM), this story claims no material connection between the value of a firm and the financing decisions if capital markets are perfect, leaving no room for anything other than, perhaps, transitional arbitrage. The logic of the MM result has been largely accepted, yet the question of why financing matters to the firm remains. Subsequent work has identified other reasons why capital structure matters. First, taxes have an influence on the cost of financing through the tax shield. (Miller, 1977). There is a trade-off between higher levels of debt, and consequently lower taxes, and the incremental probability of financial distress. This is called trade-off theory (TOT) of capital structure. Value-maximizing firms should have modest debt levels since the cost of future financial distress, in present value terms, at some level outweighs the benefit from reducing current tax burdens. Second, managers (insiders) may have better information concerning the prospects of the firm than prospective investors (outsiders) leading to a perceived undervaluation of prospects by outsiders and a preference for using internally generated funds for financing (Myers & Majluf, 1984; Myers, 1984). This research supports the pecking order theory (POT) in which managers prefer to use the internal funding before moving to the market to obtain financing since the managers have better information concerning the true value of funded projects. The POT implies that the bulk of external financing should be accomplished through debt issuance and, while firms may not have a target debt ratio, those firms that are profitable should borrow less since such firms have more free cash flow and prefer to use that source of funds before other sources.

Most academic research has focused on a broad range of firms to detect some overall pattern or patterns. Yet financing decisions are likely affected by the degree of information publicly available, asset base, and the maturity of the firms. The electric industry provides a unique application of these approaches for several reasons. First, the industry is highly capitalized with firms owning significant physical assets. Second, the earnings of the firms, to a large extent, are dictated by an administrative decision-making process. Third, there is an unusual degree of public information about both the investment strategies of the firms and the financing decisions since most financing strategies must be approved, either explicitly or implicitly, by a regulatory body. Finally, the method of regulation for most electric utilities creates an implicit shield against significant financial distress. While one can point to bankruptcy or near-bankruptcy in the industry, the rate of bankruptcy is exceedingly small relative to unregulated industries.[1] In addition, each utility must keep separate books and finance itself separately from other entities that may be owned by the same holding company. Data from these individual utilities is collected by the Federal Energy Regulatory Commission (FERC) in the FERC's Form 1. This data covers not only financial operations but a wide range of operational, business, and other information.

This paper approaches the problem in a similar manner as Shyam-Sunder and Myers (1999). This method takes a rather simplest view of firms' financing choice by relating the net cash needs over the year to changes in debt levels. If debt is used to finance the cash deficit that provides evidence of the POT. We also run a simple test of the TOT by simulating a firm's optimal capital structure and relating that to the change in financing. We find moderate support for the TOT in the electric utility industry and no support for the POT.

The paper is organized as follows: Section II provides a literature review. Section III presents the model and results and the last section is reserved for conclusions and comments concerning further research.

Literature Review

Most surveys of the literature on capital structure begin with the MM proposition that financing methods do not affect the overall cost of capital. (*See e.g.,* Myers, 2001, Harris & Raviv, 1991). MM suggest that the weighted overall cost of capital, ignoring taxes for the moment, must stay constant.

[1] Moreover, some bankruptcy costs associated with unregulated firms, such as the loss of human capital due to the concern that the firm will not survive, may also be mitigated due to the assumption that the utility will continue to operate, in some form, indefinitely due to the necessity of the product.

$$r_a = r_D \frac{D}{V} + r_E \frac{E}{V} \qquad (1)$$

Where:

$r_a =$ overall weighted average cost of capital
$r_D =$ cost of debt capital
$r_E =$ cost of equity capital
D = market value of debt
E = market value of equity
V = D + E

If we accept the MM proposition that the value of the firm is constant despite the financing decisions, one can easily solve (1) for the expected return on equity demanded by investors for this firm as:

$$r_E = r_a + (r_a - r_D)\frac{D}{E} \qquad (2)$$

This is the same equation Myers (2001, p. 85) uses to illustrate MM Proposition 2. Equation (2) shows that equity costs increase with the market debt-to-equity ratio and do so at a rate that reflects the spread between the average cost of capital and debt costs (Id.). Recognizing that debt capital has a first call on earnings of the firm, debt capital almost assuredly has a lower nominal cost than equity. Given this, a financial manager might be tempted to leverage the capital structure. This action, however, serves only to increase the cost of the remaining equity such that the overall cost remains constant. Testing this theory turns out to be remarkably complex yet some evidence can be marshaled to address this theory. For example, over the last forty years, financial innovation has created more and variable methods of raising capital and that would seem to suggest that new and better ways to obtain and package capital have value-enhancing properties. Moreover, some investors may be willing to pay for the ability of firms to borrow on more reasonable terms than they can themselves. In the end, the MM story is analogous to the story economists tell about perfectly competitive markets. The relatively restrictive assumptions provide insight as to when such results could be expected, but, perhaps more importantly, tell us where to look for reasons why real life does not turn out the way theory predicts.

The first place one might begin to look for a more realistic story is to include the effect of taxes. Debt capital, unlike equity capital, is treated as an expense providing the firm with a tax-shield. In this simple story, the after-tax cost of financing provides an incentive for firms to use debt since the effective cost of debt is reduced by the tax shield. Causal empirical observation suggests that there must be some cost associated with the tax shield otherwise corporations would not pay taxes if those taxes could be reduced by increasing debt in the capital structure (Myers, 2001, p. 88). This is suggestive of a trade-off theory (TOT) positing a balancing of the benefits of the tax shield with the costs of financial distress that may well be associated with an overly aggressive debt policy. The obvious implication of this theory in cases where financial distress is remote is that debt ratios should not be overly conservative. Yet many firms that have been highly profitable for years have conservative debt ratios. (Myers, 1984; Baskin, 1989, also see Harris and Raviv, 1991). Also, many studies focusing on the determinants of actual debt ratios find that profitability is the single most important factor. (*See e.g.,* Wald, 1999). The TOT suggests that those firms with relatively safe tangible assets are more likely to use debt than those with riskier assets. In the world of regulated utilities, regulation provides a form of commitment to a minimum level of financial strength, under the TOT once might expect a higher level of debt than other industries without such commitment. Indeed, debt ratios for regulated utilities tend to be relatively high compared to other industries.[2]

The second approach we review in this paper is the peaking-order theory (POT). POT, first suggested by Donaldson (1961) and later formalized by Myers and Majluf (1984) and Myers (1984), posits a hierarchy in firm funding that begins with internally generated cash, followed by, if necessary, debt and rarely equity. Myers and Majluf (1984) assume an on-going firm with an opportunity for growth. Capital markets are assumed efficient, but investors do not have sufficient information to value the projects and the securities sold to support the projects. A proposed financing scheme, such as a sale of equity, could be interpreted as a signal of the value of the firm. On one hand, investors may interpret the action as a sign that the firm believes its project to be valuable by increasing the net present value of the firm (good news). Alternatively, managers may have better information concerning the value of existing assets which could indicate that the securities are overvalued (bad news). One implication is that equity issues will cause the price of the stock to fall; not because demand is inelastic and as supply increases, price falls, but because investors see the bad news as outweighing the good news. Several studies of equity issues by firms have confirmed this phenomenon. (Asquith & Mullins, 1986; Dierkens, 1991; D'Mello & Ferris, 2000). Debt, however, is less susceptible to mistakes of judgment since it is superior to equity. When the risk of default is negligible one should find that debt issues are less of a drag on the price of equity and studies confirm this result. (Eckbo, 1986; Shyam-Sunder, 1991). Direct tests of the POT, however, are less consistent. For example, Shyam-Sunder and Myers (1999) find evidence for the POT, as opposed to the TOT, for a cross-section of 157 US firms in the Compustat database from 1971 to 1989. Frank and Goyal (2003) undertake a similar analysis and find that the POT does not hold for the 1990s. Fama and French (2002) find contradictory evidence for both POT and TOT but these authors claim that small low-leverage growth firms tend to be large issues of equity and claim this is a "deep wound" in the POT. Bessler et al. (2010), in a study of international firms from 1995 to 2005, find more evidence for the POT theory in non-US firms and those from civil law countries. Fama and French (2005) observe that firms undertake net issues of equity surprising often from the perspective of the POT, especially after 1990. Finally, Lemmon and Zender (2010) reexamine Fama and French's (2002) "deep wound" in the POT and claim that when debt capacity limits are incorporated into the POT the "deep wound" is repaired.

The prediction of the POT depends critically on the information asymmetry between managers and investors and while this assumption may be debatable for the broader cross-section of firms, the electric industry is fundamentally different than the broader cross-section of firms. First, the revenue expected from any utility investment is not a function of fickle market forces, rather revenue is generally calculated as a function of the historic investment cost of the project. Second, in most cases, public planning procedures are used to vet the potential value of projects. This often occurs through a formal process such as a least-cost plan which directly evaluates future projects for the purposes of including such projects in the investment queue and, notably, projects that do not make the cut are generally delayed or abandoned. Even in situations where a formal planning process is not in place, the regulatory contract and the *post hoc* nature of the review of utility investment behavior limits the discretion of mangers and consequently the likely errors investors may make in evaluating projects. These institutional arrangements likely limit the possible errors in evaluation by investors due to inconsistent or unavailable information concerning project valuation. For example,

[2] Bradley, Jarrell and Kim (1984, Table 1) find a systematic relationship between regulated firms and the degree of leverage, though these authors do not attempt to explain the reason for the relationship. Sanyala and Bulan (2011) find that the liberalization of entry barriers in the US electric utility market in the 1990s appears to be related to a reduction in leverage by 2001. Peterson and McDermott (2017) find the de-leveraging trend continuing into the current era even as entry liberalization began to fade. Whatever the reason for the changes in leverage in the industry, regulated utilities remain relatively highly leveraged relative to non-regulated industries.

Filbeck and Hatfield (1999) use an event study framework and find evidence from 325 new equity issues by public utility companies from 1977 to 1994 that the presence of institutional investors is insignificant when explaining share price response. This result is contrary to studies from a broader set of firms in which institutional investors are hypothesized to reduce the asymmetry of information as evidenced by a direct correlation with the size of the share price response to equity issuances. These authors interpret this finding as indicative of the information value to investors of regulation. McDermott and Peterson (2011) also find support for the TOT as opposed to the POT in a limited study of the electric industry in the 1980s.[3]

Methodology and Results

In this paper, we follow Shyam-Sunder and Myers (1999) (SSM) in testing the POT for electric utilities against the TOT. SSM explicitly removes electric utilities from their data set likely because there does appear to be an explicit trade-off of the tax shield and bankruptcy costs. (SSM, p. 221, citing Miller and Modigliani (1966). We wish to test the proposition directly and include only electric utilities in our data set. The SSM approach uses the simple statement of the POT that a firm will use internal cash flows to finance its dividends and real investment unless that is insufficient and then the firm will issue debt and the firm will never issue equity. SSM then create a funds flow deficit variable that must be funded. The funds flow deficit is defined at the end of period *t* as:

$$DEF_t = DIV_t + X_t + \Delta W_t + R_t - C_t \qquad (3)$$

where

$DIV_t =$ dividend payment in period *t*,

$X_t =$ capital expenditures during period *t*

$\Delta W_t =$ net increase in working capital

$R_t =$ current portion of long-term debt repaid during period *t*

$C_t =$ operating cash flow after interest and taxes

$A_t =$ net book assets, including working capital

$D_t =$ total outstanding long-term debt at end of period *t*

$d_t = \frac{D_t}{A_t}$ the book debt ratio

SSM argue that in the pecking order model the components of DEF_t are choices if safe debt can be issued. Therefore, there is no incentive to issue equity. (Id., p. 224). SSM claim that a direct test of the POT entails the following:

$$\Delta D_{it} = a + bDEF_{it} + e_{it} \qquad (4)$$

Where ΔD_{it} is the amount of debt issued or retired by firm *i* in period *t*. If the POT applies, then the coefficient *a* should be zero and *b* will equal 1. DEF_t can be either positive or negative and the POT logic works equally well in both cases since managers will wish to sell stock when the price is overvalued by the market and buy it when undervalued.[4]

The TOT suggests that mangers target a capital structure that minimizes overall costs. Of course, events may cause the actual to deviate from this optimum transitorily, but managers will move the structure back to the optimum over time (that is, we should expect mean-reverting behavior). SSM suggest a simple model of the static TOT as follows:

$$\Delta D_{it} = c + d(D_{it}^{*} - D_{it-1}) + e_{it} \qquad (5)$$

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[3] There is an additional area of research on the determinants of regulated firms' capital structure that is not reviewed in this paper. This research attempts to set the choice of capital structure in the context of the regulatory structure. *See e.g.,* Taggart (1981), Rao and Moyer (1994), or Spiegel and Spulber (1994, 1997)

[4] As SSM note, Equation (4) cannot be generally correct since it does not correct for extreme cases of debt or equity. This is not likely to be an issue in the electric industry. Lemmon and Zender (2010) modify equation (4) to include the square of DEF.

Equation (5) indicates that the change in debt levels is related by the parameter d to the difference between the target level in period t (D_{it}^{*}) and the last period's actual debt levels. If $d>0$ then adjustment is occurring toward the target, although there are likely to be some adjustment costs that make full adjustment in a single period infeasible which implies that $d<1$. The obvious problem with running Equation (5) is that the optimal debt level is unobservable. Several alternatives exist including long-term historical average debt ratios or perhaps some rolling average of shorter periods.

We use data from FERC Form 1 that is filed annually by electric utilities with the FERC. While as many as 300 firms report data, only 177 of these are what we consider state-regulated electric utilities.[5] Since we wish to restrict our analysis to state-regulated electric utilities we dropped firms that are required to report to FERC but are not traditionally state-regulated utilities.[6] SSM remove firms that underwent mergers from their data set, however, in the case of state-regulated electric utilities a simple merger is not likely to have much effect on the firm's financing decisions since the utility remains under existing regulations and subject to the same oversight as prior to the merger, including, and importantly, financing decisions. (Peterson and McDermott, 2007). We have, however, removed firms that undertook major restructuring such as merging two or more state-level utilities into one utility thereby merging their Form 1 reports into one report.[7] This approach limits the data set to 2,700 observations on 100 firms but also allows us to have a consistent set of data for each firm over the entire time to undertake the simulations used to estimating several of the equations below. Despite these constraints, the data is remarkably consistent over time and our data set contains consistent data on most major investor-owned electric utilities in the United States.

Equation (4) is estimated for 1988-2014 using three alternative measures of the change in debt levels: (1) net debt issues (scaled by the total assets); (2) gross debt issues (scaled by the total assets) and (3) change in debt ratio defined as book debt divided by total book capitalization. In Table 1 we report the OLS results. Further results on other model specifications are reported in Appendix A with summary statistics reported in Appendix B. We also tested several variations of the target debt level including rolling averages and period means. There was some sensitivity to shorter period rolling averages of the debt ratio to simulate target debt ratios. For example, when we used a three-year rolling average to simulate the target debt ratio the resulting coefficient estimates were not significant at normally reported levels. We simulated the target debt ratio with longer rolling averages, up to and including using the mean of the entire period, as reported in Table 1, and the resulting fit becomes better.

Overall the results are inconsistent with the POT and only moderately consistent with the TOT. The POT suggests that the coefficient on the dependent variable should be close to 1, yet for the POT model we find that the coefficients are all negative and inconsistently significant over the various specifications. (*See* Table 1 and Appendix A). The negative coefficient on the POT coefficient is difficult to interpret, however in reviewing Table 1 we see that the POT coefficient's absolute value is smaller than the constant and in all cases the R^2 is exceedingly small suggesting that the POT specification is not explaining the change in financing for electric utilities.

For the TOT equation, there is some evidence that utilities appear to use an optimal capital structure, although the magnitude of the coefficients is relatively small. The result that is most tantalizing comes from the use of the change in debt ratio as the dependent variable. Not only does the TOT coefficient change in magnitude relative to the other specifications but the fit becomes better

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[5] In general, this means that the state regulatory body has oversight over financial decisions, at least as those decisions relate to setting the prices of the utility.

[6] For example, entities such as regional transmission companies and wholesale electric generation companies, who are not regulated by the states, are dropped from this data set.

[7] We have, however, left in firms that divested portions of the business such as generation assets since the remaining assets remain under regulation and must have separate financing from other portions of the holding company's portfolio.

as well. Indeed, the results for this specification are more consistent with what SSM found in their study of non-utility financing decisions. (SSM, Table 2, Panel A, Column (5)). This could be an indication that long term target debt ratios are used in regulatory proceedings either tacitly or explicitly. If this is the case, utilities, because of the repeated interaction with regulators, use such metrics in their own financing decisions.[8] We also tested a one-period lag of the DEF as well as first differences and in both cases either the coefficient's absolute value was close to zero or was not significant at normal levels.

Finally, the overall fit of these equations is rather low. For example, SSM find that the TOT variables explain as much as 25 percent of the variation. (SSM, Table 1, Panel A). Our results are, for the most part, significantly lower than the SSM results. This suggests that the financing choices for regulated utilities are potentially somewhat more complicated.

Our results indicate weak support for the TOT and no support for the POT. While perhaps somewhat disappointing, we explain these results by referring to the very nature of the regulatory process. The lack of support for the POT is perhaps understandable given the remarkable degree of transparency and predictability of the regulatory process. The asymmetric information concerns that form the foundation of the POT simply do not exist to the same extent that they do for unregulated firms. Further, regulators may play the role of monitors who examine and approve or disapprove projects on a case-by-case basis for inclusion in approved prices.[9] The historic financing decisions of the utility are incorporated into pricing using a weighted average cost of capital. While a specific optimal capital structure is not always, or even often, a result from this process, never-the-less since the regulator sets the final prices, a target range of capital structure may well be the result, even if that is not the intention. Indeed, one regulatory body has expressed its approach as follows:

> [T]he Commission has the duty to regulate utilities in a manner which provides customers with reliable service at reasonable cost. This is not to say that we may mandate to regulated utilities the proportions of debt and equity contained in their capital structures. Rather, the actual capital structure is a matter within the discretion of corporate management; however, this does not preclude the commission from determining that a particular utility's capital structure is unreasonable or uneconomical when balancing the goals of safety, prudent management and economy and utilize a hypothetical capital structure for ratemaking purposes. *Pa. PUC v. Carnegie Natural Gas Company,* 54 Pa. PUC 381, 393 (1980).

It is therefore not surprising that utility financing decisions would take this process into account and we would observe, at least some degree, of capital structure targeting.

Table 1
Results for Equations (4) and (5) Using OLS

Dependent Variable	Net Debt Scaled	Gross Debt Scaled by Assets	Change in Debt Ratio	Net Debt Scaled by Assets	Gross Debt Scaled by Assets	Change in Debt Ratio

[8] This could be due to the concern that a regulatory body may impose a capital structure for the purposes of setting rates that differs from the actual capital structure used to raise funds. There is evidence that such decisions by regulatory bodies can have dramatic, if short term, negative effects on the market valuation of the firm. (*See e.g.,* Peterson and McDermott, 2018)

[9] The notion that regulators are active monitors of financing decisions as opposed to passive players who respond optimally to decisions made by the regulated firm is at odds with much of the theoretical work on regulated capital structure in which the regulated firm strategically uses debt to elicit a predictable response from the regulator. (*See e.g.,* Taggart, 1991, Spiegel and Spulber 1994, 1997). Jensen and Meckling (1976) do argue that the regulatory body plays a monitoring role.

	by Assets					
POT coefficient Equation (4)	-0.0060 (0.0064)	-0.0159* (0.0076)	-0.0599* (0.0116)			
TOT coefficient Equation (5)				0.0971* (0.0099)	0.0243* (0.0120)	0.2569* (0.1284)
Constant	0.0065* (0.0013)	0.0388* (0.0016)	0.0103* (0.0023)	0.0057* (0.0007)	0.0365* (0.0009)	-0.0002 (0.0009)
R^2	0.0003	0.0016	0.0103	0.0358	0.0016	0.1334

* Significant at 5 percent level. The POT independent variable is the deficit defined in Equation (4). The TOT independent variable uses the total period average debt ratio to estimate the target debt levels.

Conclusions

This paper reviews the POT and TOT theories of capital structure for electric utilities using a simple deficit funding model and a target adjustment model. Our results are inconsistent with the POT and only moderately consistent with the TOT theory of capital structure for 1988-2014 in the electric industry. These results are consistent with McDermott and Peterson (2011) who found moderate support for the TOT in a limited study of the electric utility industry. It appears that utility financing is somewhat more complicated than the simple models of capital structure might suggest. It may well be that the electric industry, due to its regulated nature, is less susceptible to problems of asymmetric information. Moreover, it appears that the nature of the rate-setting process could lead to the use of a target capital structure range. Future work, however, is necessary to refine the picture of the financing process for electric utilities. For example, the specific rate-setting mechanism may influence capital structure decisions. (See e.g., De Fraja and Stones, 2004). Utilities that have formula rate mechanisms in which capital structure is set on an annual basis through an exogenous metric may operate differently from utilities with a more traditional administratively set capital structure. Moreover, the favorability of the regulatory climate may also influence the decision. (See e.g., Rao and Moyer, 1994). For example, during portions of the time frame under study here, financing decisions were likely influenced by the rapid changes in the structure of the industry, namely the relaxing of entry restrictions. (See e.g., Sanyal and Bulan, 2011). We might expect deregulatory policies to favor the POT as regulated firms transition to operating more like unregulated firms and, consequently, begin to de-lever capital structures. Yet deleveraging appears to have continued after the initial reforms in the industry and appears to have done so even for that portion of the industry not open to entry. Finally, this paper has not addressed the strategic nature of the regulatory relationship. Since regulated firms operate in a semi-closed system in which managerial decisions can influence regulatory outcomes, regulated firms may have incentives to strategically choose their capital structure (See e.g., Taggart, 1981, Spiegel & Spulber (1994, 1997) or Bortolotti et al., 2007). Attempting to refine the picture of capital structure decisions through a more detailed examination of the regulatory structure should provide additional insights.

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APPENDIX A: RESULTS FROM OTHER EQUATION SPECIFICATIONS

	Variance Components		Dummy Variable Each Year		*
Dependent Variable	Change in Debt Ratio	Change in Debt Ratio			
POT coefficient Equation (4)	-0.0599* (0.0115)		-0.0629* (0.0116)		
TOT coefficient Equation (5)		0.2569* (0.0128)		0.2585* (0.0129)	
Constant	0.0104* (0.0023)	-0.0002 (0.0009)	0.0114* (0.0056)	-0.0027 (0.0048)	
R^2			0.0327	0.1532	

*Significant at 5 percent level. The POT and TOT independent variables are the same as **Error! Reference source not found.**. We also tested first order serial correlation and rejected its existence in the POT equation but could not reject in the TOT equation. Addressing the serial correlation in the TOT model does not change our conclusions from **Error! Reference source not found.**.

APPENDIX B: SUMMARY STATISTICS

	Mean	Standard Deviation	Minimum	Maximum
		All Years		
Book Value of Assets	5,697,924	6,424,713	170,157	56,400,000
Total Book Equity	1,816,495	2,046,668	(585,951)	16,600,000
Total Capitalization	3,474,787	3,780,611	114,216	30,900,000
Debt Ratio	47.58	9.88	-	138.71
		1988		
Book Value of Assets	3,784,639	4,110,308	170,157	23,400,000
Total Book Equity	1,402,213	1,526,404	71,592	8,100,123
Total Capitalization	2,709,387	2,944,056	114,216	15,900,000
Debt Ratio	47.55	7.00	13	71.65
		1995		
Book Value of Assets	4,794,063	4,973,854	322,197	26,800,000
Total Book Equity	1,593,212	1,675,914	4,937	9,138,689
Total Capitalization	3,010,765	3,128,189	214,305	17,200,000
Debt Ratio	47.06	9.28	-	99.60
		2014		
Book Value of Assets	9,348,059	10,400,000	547,545	56,400,000
Total Book Equity	2,923,655	3,116,867	116,168	16,200,000
Total Capitalization	5,452,158	5,743,268	221,071	30,900,000
Debt Ratio	46.82	6.45	14	57.61