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Analysis of the Potential Savings From Saber Partners

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Executive Summary

Statistical analysis of actual securitization data suggests that for a 10-year securitization issue, Saber's advice would reduce the yield spread on the security by about 15 to 20 basis points. For a $500 million security, this amounts to a savings of $750,000 to $1,000,000 per year. The savings estimates are statistically robust in that several different approaches provide similar answers.

This analysis confirms the strong recommendation received from the staffs of the New Jersey Board of Public Utilities the Public Utility Commission of Texas that Saber Partners' advice adds substantial value for the ratepayer. It also confirms some of the concerns of our staff that the proposed deal in this proceeding reflects a potentially less-than-cost-effective relationship-type arrangement between the utility and its investment bankers, rather than a more competitively arranged deal.

Overview

Saber Partners provided us with a database containing information regarding utility securitizations that have been completed over the past three years. In some cases Saber advised the regulator overseeing the transaction; in other cases it did not.

The key variable in question is the yield spread on the securitized debt relative to a benchmark, in this case the LIBOR Swap rate. This is a commonly used benchmark for asset-backed securities. I analyzed the data using a variety of techniques ranging from a simple comparison of means to multiple regression (including multiplicative interaction terms). The null hypothesis in this analysis is that the average yield spread when Saber advised on the transaction is the same as the average yield spread when it did not provide advice. The alternative hypothesis is that the yield spreads are significantly lower when Saber advised on the transaction.

The Data

Saber presented, but did not include in its data analysis, the spreads on a few short-term securitizations. There are two reasons for this: (1) most utility securitizations involve long-term issues, suggesting that the short-term issues may not be particularly relevant; and (2) two of the short-term deals on which Saber did not advise had extremely high yield spreads. As to the latter point, Saber actually would have demonstrated greater savings if it had included the two extreme points.

I prefer not to remove outliers from the data. If one has time, robust statistical techniques can be used to reduce the influence of extreme points without actually eliminating them from the data set. Nevertheless, given the short amount of time afforded for the analysis of this data, the Saber approach seems reasonable, especially since eliminating those points makes it more difficult for Saber to make its case that it can lower the yield spread.

Comparison of Means and Medians

A relatively simple method of comparing the spreads on the securities is to examine measures of central tendency (means and medians). This provides a rough-cut comparison that is a jumping-off point more than a definitive answer.

The following table shows the means and median for the two groups of securitizations:

Comparison of Yield Spreads (basis points)
(Benchmark: LIBOR Swap Rate)

	Saber Advised	No Saber Advice	Savings Attributable to Saber
No. of Deals	16	38	***
Mean Yield Spread	26	45	19
Median Yield Spread	26	40	14

This simple analysis suggests that there is a noticeable difference between the yields on the Saber-advised deals relative to the yields on the other deals. The difference in means is highly significant (t-statistic = 4.7).[1]

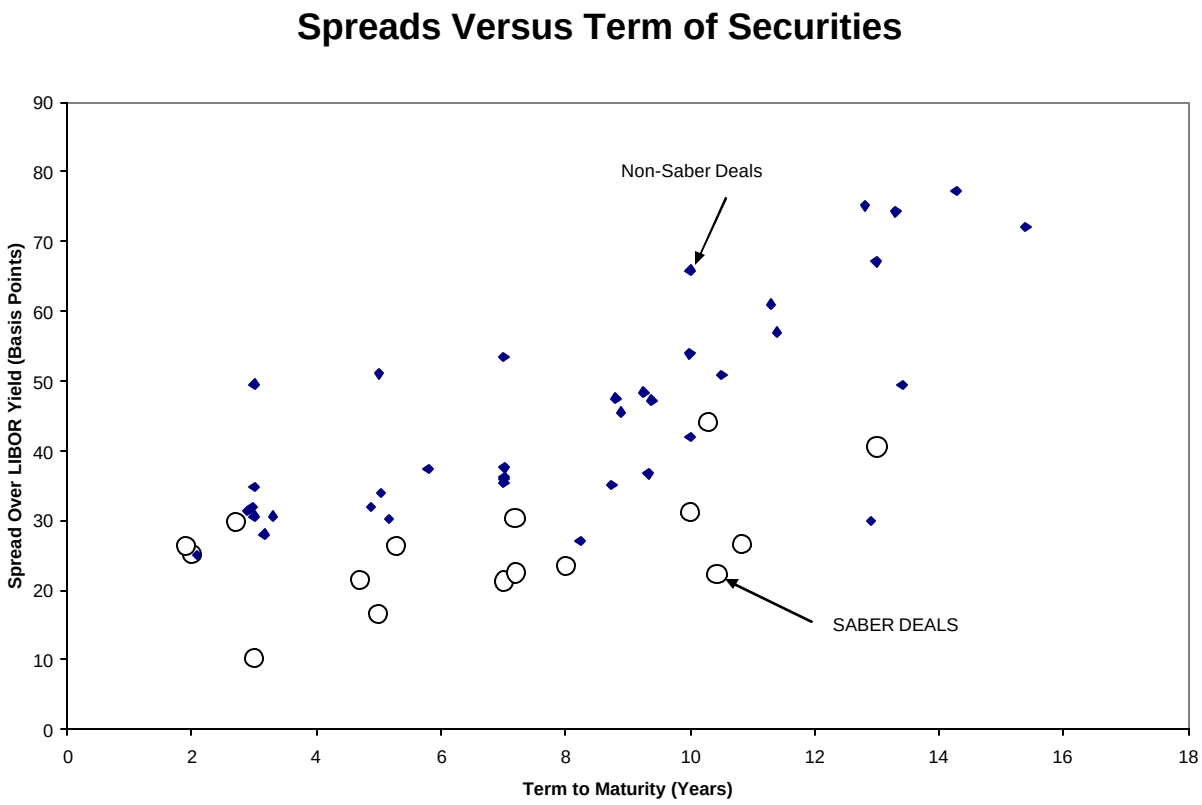
One might conclude from this analysis that, if all other factors were similar, Saber's advice reduces the yield spread by about 15 basis points relative to that which would result in a non-Saber-advised deal. On a $500 million issue, such as the one being proposed in our proceeding, that would amount to $750,000 per year in interest costs savings.

Yield Spread Versus Term to Maturity

The major problem with the comparison of the measures of central tendency is that other factors may confound the analysis. For example, it could be the case that all of the Saber-advised deals involved securities with a term to maturity of 10 years or less while the other deals had terms to maturity in excess of 10 years.

[1] Calculating the statistical significance of the difference in medians requires a more complex non-parametric statistical analysis, which given the time constraints is beyond the scope of this investigation.

Analysis of the data reveals that term to maturity is not a confounding factor. The following chart is a plot of the yield spread and the term to maturity for all the deals in the data set. Note that most of the Saber-advised deals produced yield spreads below those of the other deals regardless of the term to maturity.



A simple regression model that adjusts for time to maturity (term) can be estimated using the entire data. (Alternatively, two separate regressions, one on the Saber data and one on the non-Saber data could be estimated.)

The regression model that I estimated[2] has the following functional form:

$$Spread = b_0 + b_1 \times Term + b_2 \times Saber$$

The variables are defined as follows:

Spread = yield spread over LIBOR Swap rate
Term = years to maturity
Saber = indicator as to whether Saber advised (1 = yes; 0 = no)

[2] All regression models in this analysis are ordinary least squares models.

The estimated regression model is:

$$Spread = 24.58 + 2.54 \times Term - 15.65 \times Saber$$

The coefficients on the *Term* and *Saber* variables are highly significant. The interpretation of these coefficients is: (1) increasing the term to maturity by 1 year adds about 2.5 basis points to the yield spread; and (2) including Saber as advisor reduces the yield by about 16 basis points, regardless of the term to maturity.

We can allow for an interaction between the *Term* variable and the *Saber* variable by estimating the following model (the reason for doing this will be obvious in a moment):

$$Spread = b_0 + b_1 \times Term + b_2 \times Saber + b_3 \times (Term \times Saber)$$

Estimating this model yields the following result:

$$Spread = 21.06 + 2.97 \times Term - 3.48 \times Saber - 1.71 \times (Term \times Saber)$$

Interpreting the statistical significance of individual variables when interaction terms are included in a regression model is a bit more complicated than it is when only non-interactive variables are considered. In this case, the *Term* and *Term x Saber* variables are significant, but when viewed in isolation, the *Saber* variable is not. Anyone who has even a small amount of knowledge of regression analysis would know that this does not suggest that Saber's advice is not valuable. To estimate the net effect of Saber's advice, we must know whether Saber advised and the term to maturity of the security. The following table shows the estimated net effect:

Comparison of Yield Spreads (basis points)
(Benchmark: LIBOR Swap Rate)

Term to Maturity (Years)	Saber Advised	No Saber Advice	Savings Attributable to Saber
1	19	24	5
2	20	27	7
3	21	30	9
4	23	33	10
5	24	36	12
6	25	39	14
7	26	42	16
8	28	45	17
9	29	48	19
10	30	51	21
11	31	54	23
12	33	57	24
13	34	60	26
14	35	63	28
15	37	66	29

This reveals that the savings attributable to Saber increase as the term to maturity increases. At a 1-year maturity, the savings attributable to Saber are only about 5 basis points; at a 10-year maturity, the savings increase to 21 basis points. For a $500 million issue with a weighted average life of 10 years, the savings in interest cost due to Saber's advice are estimated to be about $1,000,000 per year.

While not necessary in a technical sense, to assuage any concerns among non-statistically-trained people about the insignificant term in the regression, we can re-estimate model with the Saber term deleted to show that the savings attributable to Saber are significant. In that case the model is:

$$Spread = b_0 + b_1 \times Term + b_3 \times (Term \times Saber)$$

Note that the Saber variable is in the model, but now only as a component of an interaction term. Estimating this model yields:

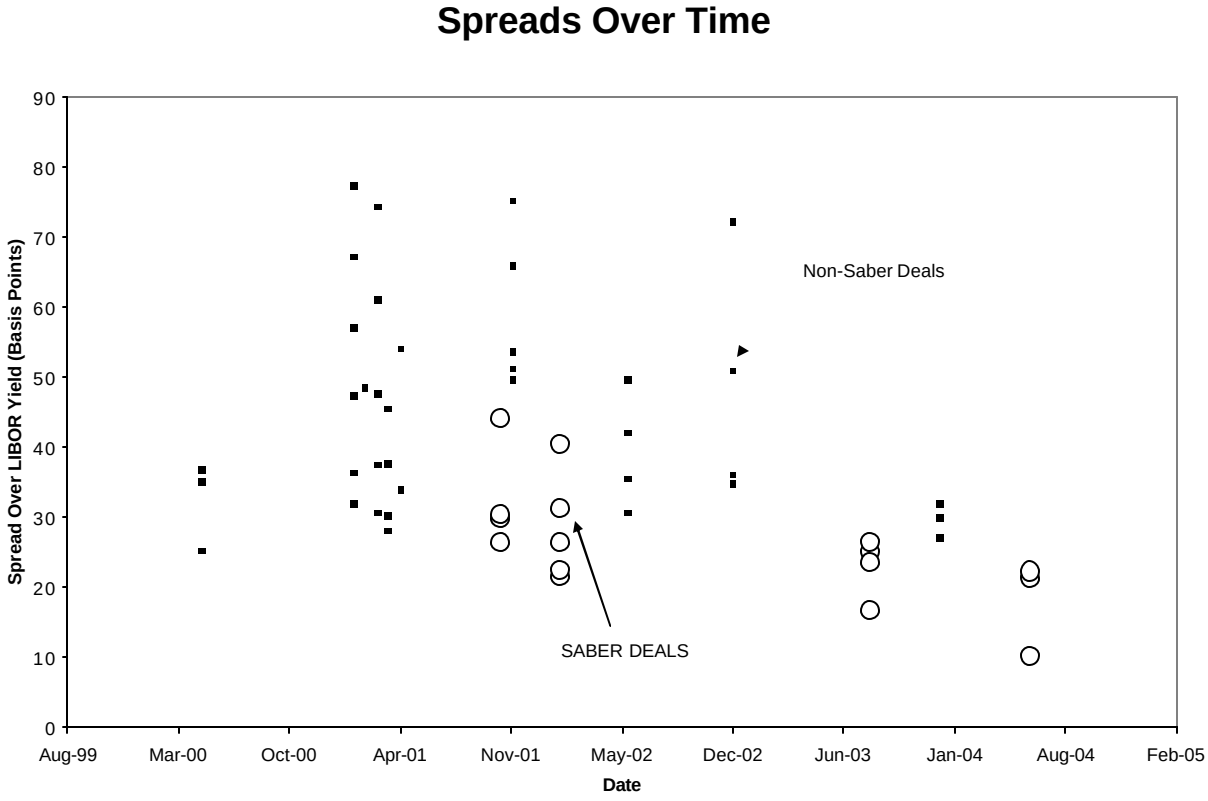
$$Spread = 19.94 + 3.09 \times Term - 2.11 \times (Term \times Saber)$$

Both slope coefficients are highly statistically significant. According to this model, if Saber advised on a deal involving a 10-year security, the estimated savings would be 21 basis points, which is exactly the same as the estimate from the prior model.

Yield Spread Versus Time

Another variable that could confound the analysis is time. It is hypothetically possible that Saber could have advised on deals at a time when market conditions for securitized securities were more favorable than they were when the other securities, for which Saber was not the advisor, were issued.

Analysis of the data again reveals that such is not the case. The following chart shows the yield spread for the Saber-advised and non-Saber-advised deals over time.



The yields on the Saber-advised deals are consistently below the yields on the bulk of the non-Saber-advised deals regardless of the timing of those deals.

We can include the time variable in our regression model as follows:

$$Spread = b_0 + b_1 \times Term + b_2 \times Saber + b_3 \times (Term \times Saber) + b4 \times Time$$

The time variable is an index based on the Microsoft Excel® date convention. That number is adjusted so that on an annual basis January 1, 2001 equals the value of 1. The estimated model is:

$$Spread = 346.17 + 3.03 \times Term + 0.63 \times Saber - 1.79 \times (Term \times Saber) - 323.21 \times Time$$

All terms are significant, again with the exception of the stand-alone Saber variable. The Saber effect is picked up via the interaction term, which is highly significant. This model suggests that for a security with a 10-year term, the savings from Saber's advice would on net be about 17 basis points.

If one prefers the model with only the interaction term for Saber, and not the stand-alone variable, the result is:

$$Spread = 343.19 + 3.01 \times Term - 1.72 \times (Term \times Saber) - 320.06 \times Time$$

This model suggests that the savings from a Saber-advised 10-year deal would be 17 basis points, which is again identical to the estimate from the previous model.

Conclusion

The analysis of the data suggests that for a 10-year security, Saber's advice is worth about 15 to 20 basis points per year, on net, in terms of reduced interest charges. For a $500 million bond issue, this amounts to interest cost savings of $750,000 to $1,000,000 per year.