1979

Selected Variables as Predictors of Illinois School Building Bond Bids and Interest Rates

William P. Cote
Loyola University Chicago

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SELECTED VARIABLES AS PREDICTORS
OF ILLINOIS SCHOOL BUILDING BOND
BIDS AND INTEREST RATES

by

William P. Cote

A Dissertation Submitted to the Faculty of the Graduate School
of Loyola University of Chicago in Partial Fulfillment
of the Requirements for the Degree of
Doctor of Education

May
1979
ACKNOWLEDGMENTS

I would initially like to express my appreciation to Dr. Robert Monks for his continued direction and encouragement throughout the development of this study as well as throughout my graduate program at Loyola University. His positive critique has lended to the development of a more worthwhile endeavor.

Dr. Melvin Heller, Dr. Jasper Valenti and Dr. Max Bailey must be further mentioned for the willingness with which they shared experiences and gave of their time to assist in the development of this dissertation.

Lastly, I would like to thank my wife for her willingness to work and play alone as I set aside the necessary months to complete the study.
VITA

William P. Cote, the oldest of five children, was born in Momence, Illinois, June 27, 1932. He attended Momence Community High School in Kankakee County and graduated in 1950.

He attended Illinois State University in Normal and received a B.S. in Education in 1954 and a M.S. in Education in 1955. He was licensed as a school administrator in the State of Illinois in 1968 and was listed in Who's Who Biographical Record - School District Officials in 1976.

He has been employed as a teacher, department chairman, research director, legislative consultant and school administrator. He is currently employed as Assistant Superintendent of Schools for Consolidated High School District 230, Palos Hills.
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CHAPTER I
INTRODUCTION

School districts in Illinois are faced with the continuous problem of obtaining large sums of money for the construction and equipping of school buildings. Throughout the years, local property taxes have been the major source of revenue for Illinois public schools. A limited assessed valuation in many communities has prevented payment of capital outlay needs, many Illinois school districts have relied upon either the sale of general obligation bonds by the school district or the Capital Development Board and its predecessor, the Illinois State Building Commission, for either low cost rental or outright grants for the construction of facilities.

School districts which sell bonds for capital improvements have paid widely varying rates of interest. The rate of interest received and, therefore, the amount of money paid for interest, affects markedly the total cost to the school district for the particular project for which the bonds were sold.

Many factors interact to determine bond rating and subsequent interest rates. Some factors may not be within the control of the school district. However, others appear to be subject to manipulation. Stollar categorized the interacting variables as "external" and...
"internal" factors. ¹

External factors according to Stollar include such variables as bond and stock market fluctuations, actions by the United States Treasury and the Federal Reserve Board in respect to governmental fiscal and monetary policy, the international balance of payments situation and national and international crisis.² Stollar concluded that school administrators have no direct control over such factors.

Internal factors as stated by Stollar are such variables as the employment of a bonding attorney; preparation of a prospectus; structuring, advertising, timing, selling, and issuance of bonds; evidence of longrange planning; length of the issue; and local managerial efficiency.³ Stollar stated that the foregoing internal factors which seem to affect bond ratings and interest rates are frequently under the direct control of school administrators.


² Ibid., p. 10.

³ Ibid.
Purpose of the Study

In order to achieve the purpose of this study and have a valid analysis, the Moody Investors Service rating was used in testing every hypothesis. The two major purposes of the study were:

1. Determine if there is a correlation between selected variables and number of bids. Variables to be analyzed include Moody rating, assessed valuation, amount of bonds, length of bonds, employment of legal service, characteristic of board prospectus publicity. In addition, determine if legal services are utilized, what is the nature, role and relation of legal counsel to the Superintendent and Board of Education.

2. Determine if there is a correlation between selected variables and the interest rate. The variables to be considered are employment of a bonding attorney, preparation of a prospectus, structuring of the advertising and the timing, of the selling, and issuance of bonds; and length of issue. In addition, determine what similarities and dissimilarities of characteristics exist between the various bond prospectus, what was the nature of financial planning leading up to the advertising of the bonds, who was involved in the financial planning and what techniques were utilized to get public support for the bond issue.

The following major questions to be answered were formulated as a basis for ascertaining answers to the foregoing questions.
Major Questions to be Answered

1. Does the Moody rating affect the number of bids received.
2. Does the assessed valuation of the district affect the number of bids received.
3. Does the amount of bonds bid in relation to the number of bonds outstanding affect the number of bids received.
4. Does the length of bonds affect the number of bids received.
5. Does the involvement on the part of outside legal services in advertising the Superintendent and Board of Education in the preparation of bonds affect the number of bids received.
6. Is there a relationship between the employment of the services of a bonding attorney and the effective interest rate.
7. Is there a relationship between the development of the prospectus by an attorney and the effective interest rate.
8. Is there a relationship between the structuring of the advertising, the timing of the selling and issuance of bonds and the interest rate.

Assumptions

The study was based on the following assumptions.

1. School administrators can control and affect selected internal factors which relate to school bond interest rates.
2. The Bond Issue Data Instrument is an effective and efficient evaluative measure of school bond administrative practices.
Definition of Terms

For the purpose of the investigation, the following definition of terms were applicable.

**Administrative Practices.** -- Those activities accomplished by an administrator of a local school district which relate to the operation and function of that school district.

**Amortization Schedule.** -- A plan for reduction of debt through stated, periodic payments of principal and interest.\(^4\)

**Basic Bond Issue Data Instrument.** -- The instrument used to obtain data from school districts participating in the study.

**Bond Prospectus.** -- A brochure distributed by a school district to prospective bond buyers and rating agencies. The prospectus contains information pertinent to the nature of the bond, the mechanics of the bond sale, and the credit rating of the school district.

**Bond Rating.** -- A letter symbol assigned by a rating bureau to a bond issue representative of relative investment quality. Two prominent rating bureaus are Moody's Investors Service and Standard and Poor's Corporation.

**Calendar Year.** -- The twelve month period of time extending from January 1 to December 31.

**Capital Outlays.** -- Expenditures that result in increases in the fixed assets of a school district.

Debt Service. -- Expenditures to repay borrowed funds including principal, interest and contingent cost when the transactions take place in more than one fiscal year.

External Factor. -- "A factor that cannot be influenced or controlled by a member or members of the local school administrative staff of a school district and which is not considered to be within the responsibility of this group." ⁵

Factor. -- Factor is used to denote an element or variable that affects the success of a school bond sale process, with success measured by lowest effective interest rate.

Fiscal Year. -- The twelve month period of time extending from July 1 to June 30.

General Obligation Bonds. -- Bonds secured by a pledge of the full resources, taking power, and credit of the issuer for payment of bonds. ⁶

Internal Factor. -- "A factor than can be influenced or controlled by a member or members of the local school administrative staff of a school district and which is considered to be within the responsibility of this group." ⁷

Local School Administration. -- A phrase that includes the chief school administrator (superintendent, assistant superintendent and/or


business manager) and other school administrators with assigned or delegated duties and responsibilities in the area of school finance and business management.

Net Interest Cost. -- The combination for a bond issue of the average interest rate for the series and the prorated premiums paid.

Revenue Bond. -- Bonds payable from revenue produced by the facility.\(^8\)

School Bond. -- An instrument issued to borrow money.

School Building Bond. -- Revenue bonds issued by a school district for the purpose of building or repairing school houses or purchasing or improving school sites.

School District. -- A political sub-division created by the Illinois General Assembly for the purpose of administering public elementary and secondary education in a particular locality. It is a legally designated public education entity governed locally by an elected board of education.

Serial Bond. -- A type of bond with maturities each year from year of issue to termination date of issue.\(^9\)

Weekly Bond Buyer Twenty Bond Average. -- An interest rate average quoted each week in the Weekly Bond Buyer which is based on the weekly average interest rates paid for a selected series of fixed quality bonds. A comparison of bond averages gives a measure of the interest rate fluctuations of the overall bond market.


\(^9\)Ibid.
Significance of the Study

During the 1977 fiscal year, 40 Illinois school district building bond referenda were passed for an amount totaling $64,765,500.

Paul Mort in 1951 stated:

"Borrowing money for public school buildings and equipment has become a more serious problem as school enrollments have increased and as the physical facilities for education have become more extensive."\(^{10}\)

As a result of increasing school populations and educational changes that require more and larger capital outlay expenditures to be financed over a period of years, it becomes increasingly important for school districts to obtain the lowest possible rate of interest on borrowed funds. School districts must accept part of the responsibility for conservation of tax money. There are areas in which good school administrative practices may result in conserving tax dollars, but one that is often neglected is the area of school bond marketing.

School construction needs are financed through the sale of bonds, usually with issues amortized over a period of 10 to 30 years. In dollar value and number of issues involved, the school bond market is big business.

The large expenditures for capital improvement emphasizes the need of good management. Financial errors in bond preparation are long lasting, and the Municipal Finance Officers Association made the following cautionary statement:

When a municipality sells a bond issue, it creates a large fixed obligation for a long term. Errors or extravagances in ordinary operations can be changed from year to year, but contracts for the payment of principal and interest on bonds are long term obligations affecting the municipal expenditures for twenty to forty years in the future. The chief argument for extreme care in the planning and sale of municipal bond issues is the fact that such sales create inflexible obligations for long periods of time.\textsuperscript{11}

If the school bond issue is not properly managed, the school district may lose thousands of dollars in interest money that could be a saving to taxpayers, equip the building being financed or furnish other buildings. The superintendent, business manager, and the board of education may not fully realize the amount of money that can be involved.

Because of the financial condition of school districts today it is important that school districts get the lowest interest for the bonds, due to the limited number of dollars available. This study will determine if certain variables affect the number of bids and the interest rate. The results of this study would be beneficial to a superintendent or business manager in obtaining the lowest interest rate for the building bonds.

If one can determine the variables that would provide the greatest information for the local school district one would give the district the greatest possible opportunity to modify their present procedure or organizational plan so that they would be able to realize a substantial savings to the taxpayers in a reduced interest rate for the building bonds.

It is the further intent of the study to contribute to better understanding of principles, procedures and administrative practices which may be employed to improve interest rates on public school capital outlay indebtedness.

Methodology

The purpose of the study was to determine if relationships existed between selected variables related to the preparation of public school bond offerings for bid and net interest rates and number of bids received by Illinois school districts. The study was designed to examine selected factors which have been held by educators and bonding experts as having an impact on school bond interest rates to determine if school districts in which such practices are followed did, in fact, receive lower effective interest rates and a higher number of bids. The study was also designed to determine the validity of selected independent variables as predictors of interest rate and number of bids that might be expected.

The Population and the Study

The population for the study was defined as Illinois public school districts which market first mortgage revenue bonds during any calendar year.

The sample for the study was comprised of forty Illinois public school districts which approved school building bonds during the 1977
fiscal year. The sample, classified as an incidental sample\textsuperscript{12}, was used as an unbiased predictor for inferences concerning administrative bond practices for years other than the 1977 fiscal year in which comparable conditions are in existence.

**Development of Criteria**

Literature related to capital outlay financing of public schools including textbooks, dissertations, periodicals, reports and other written or published materials was reviewed. From the literature reviewed a list of administrative bonding practices called internal factors, that is factors under the direct control of the school administrator, was developed. An instrument from an earlier related study which contained all of the selected internal factors was discovered.

External factors were reviewed, but not considered to be under the control of school administrators.

**The Instrument**

The instrument used to collect data for the study was developed from the Basic Bond Issue Data Instrument developed by Ten Haken\textsuperscript{13} and also used by Ralph Ferguson.\textsuperscript{14}


The first section, Part I, of the instrument was designed to collect basic information relative to the bond issue and the school district. Items 1, 2 and 3 asked for the legal name of the school district, the legal number of the school district and the county as a means of identifying the individual school district. The remaining items of Part I were used as selected variables for the study. Included were equalized assessed valuation, amount of the issue, length of the issue, rating, place the bids were opened, date and time of sale, number of bids received, interest rate, range of interest rates on bids, name of successful bidder, number of prior bond issues outstanding and the bonded indebtedness outstanding at time of sale.

The net interest rate was the major dependent variable used in the analysis. In addition, the number of bids received was removed to serve as a dependent variable for one analysis. The review of earlier research indicated that a large number of bids usually reflects a lower interest rate on bonds sold. If such is true, it seemed important that the study should determine which of the selected independent variables could be used as predictors of the number of bids received.

Part II of the instrument contained five basic areas for evaluating Illinois school bond administrative practices: (1) Legal Services; (2) Financial Planning; (3) Credit Ratings; (4) Publicity and Notice of Bond Sale; and (5) Prospectus.

Validation Procedures

The modified basic bond issue data instrument was submitted to a group of recognized authorities in school finance. The group of
authorities were obtained by requesting suggestions from university professors, officials in the Illinois Office of Education as well as school administrators and investment agencies who were considered most competent and able to render judgement on matters relating to the administration of school bond issues.

The group of experts were asked to make an evaluation by means of the following questions:

1. Can this instrument be used effectively by a chief school administrator and his staff to evaluate past school bond practices?
2. Can a chief school administrator and his staff use this instrument effectively to stimulate improvements in school bond administrative practices?
3. Are there specific items which should be omitted?
4. Are there specific items which should be altered?
5. Are there specific items which should be added?
6. Are there specific items which should be reclassified into another section?
7. What further comments or suggestions can you offer to improve the instrument?

After the instrument was developed through the above procedure, an actual test of the instrument by administrators in the field was undertaken to determine its feasibility to be administered in the local school district.

The revised instrument was submitted for validation to a panel of seven recognized authorities in school bond marketing practices in
Illinois. The committee of experts who served as the validating panel included:


Mr. William Rutter, Superintendent of Valley View Community Unit 365U, Romeoville, Illinois.


Mr. Newell Jenkins, School Attorney representing the legal firm of Klein, Thorpe and Jenkins, Ltd., Chicago, Illinois.

Mr. Terry Barnicle, School Attorney representing the legal firm of Klein, Thorpe and Jenkins, Ltd., Chicago, Illinois.

Mr. Dan Johnson, Bond Attorney representing the legal firm of Chapman and Cutler, Chicago, Illinois.

The seven authorities were independently asked to evaluate the instrument by the following means: (See Appendix B)

1. Respond "yes" if you agree that the practice is important.
2. Respond "no" if you disagree with the practice or consider it irrelevant to bond marketing.
3. Delete any words or phrases which you believe are unnecessary.
4. Add words or phrases to the items where you deem that such additions would clarify.

All seven experts submitted suggestions and recommendations. Appropriate revisions were then made to the instrument.
Data Collection Procedures

On December 15, 1978, the instrument accompanied by a letter (Appendix C) was mailed to the superintendent of each school district in which a bond issue was passed and bonds marketed during the 1977 fiscal year. The letter requested the participation of each school district.

Three weeks later, a follow-up letter (Appendix D) was forwarded to each school district which had not yet responded. A second copy of the instrument was included with the letter. Cooperation in completing and returning the instrument was again solicited.

On January 15, 1979, a follow-up personal telephone call was made to the superintendent of each school district from which a response had not been received.

Table 1 reports the school districts submitting bond offerings for bid in the fiscal year 1977. Also included is the date of sale, amount of issue, net interest cost, ratings by Moody's Investors Service, Inc. and Standard and Poor, Inc. and the number of bids received.

A sample of the population was selected for an in-depth exploration and analysis. The sample included all districts in Cook (4) and DuPage (3) County who passed a bond referenda in fiscal year 1977.

An interview with each of the seven superintendents was conducted in order to validate the responses to the questionnaire and to seek to determine how the selected variables influenced the number of bids and interest rates and to determine specifically how the legal counsel
<table>
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<th>ISSUER</th>
<th>AMOUNT OF ISSUE</th>
<th>LENGTH OF ISSUE</th>
<th>NET INTEREST COST</th>
<th>RATINGS</th>
<th>MOODY</th>
<th>S &amp; P</th>
<th>NO. OF BIDS</th>
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<td>Union School District #81</td>
<td>$ 200,000</td>
<td>10</td>
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<td>--</td>
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<td>07 Nov. 1976</td>
<td>Winnebago C.U. School District #323</td>
<td>65,000</td>
<td>8</td>
<td>4.25</td>
<td>--</td>
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<td>4.45338</td>
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<td>375,000</td>
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<td>1,200,000</td>
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<td>4.16906</td>
<td>A</td>
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<td>15 Dec. 1976</td>
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<td>2,300,000</td>
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<td>R.O.V.A. Comm. Unit School Dist. #208</td>
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<td>18</td>
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<td>795,000</td>
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<td>447,500</td>
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<td>5.000</td>
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<td>19 Sept.1977</td>
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and financial consultants were utilized. A secondary objective while interviewing the superintendent was to inquire as to the various techniques used to garner public support for the bond issue. During the interview with the superintendent there were six major areas covered, with a series of questions about each area. An example of the type of areas covered and questions asked are listed below. "Did you utilize legal counsel to assist the Board of Education in the preparation of the various documents necessary to sell the authorized bonds?" If the answer was yes, then the following type of questions were asked. Did the attorney draw up the legal resolutions? Did the attorney draft the legal advertisement of the bond sale? Did the attorney place the legal ad in the Daily Bond Buyer? Was the attorney present at the bond sale? "Did the school district enlist the assistance of a financial consultant?" If the answer was yes, the following type of questions were asked. Did the consultant assist in the development of the prospectus for the sale of the bonds? Did the consultant assist in the arrangement for preparation and printing of the bonds and arrange for their delivery at the proper time? How did the consultant assist the district in obtaining the best credit rating warranted? How did the consultant assist in ascertaining the most favorable responsible bidder?

Determine the procedures utilized by the district for publicity and notice of the bond sale. If the superintendent indicated that open hearings were utilized for publicity, the following type of questions were asked. Who was involved in the hearings? How many hearings were held? How were they advertised? Were select groups invited to partici-
pate such as the parent-teacher organizations, booster or special interest groups, students, teachers and/or advisory councils?

**Data Analysis Procedures**

The data analysis techniques used were percentage distribution of the independent variables, frequency distribution comparisons of the independent variables with the dependent variables utilization of the mean value of the dependent variable when contrasting two independent variables and various indices developed to compare and contrast the dependent variables. By way of example, the effective interest rate distribution was developed to represent the range and frequency of interest paid by local school districts at the time of the sale of their building bonds. A percentage distribution of school districts that applied for and received Moody Investors Service rating or Standard and Poor's rating was also shown. A distribution of number of bids received (dependent variable) compared and contrasted with the Moody Investors Service Rating (independent variable) was developed from the data. The index of bonds outstanding was developed by dividing the bonds outstanding by the assessed valuation (numerator) and the amount of the bond issue by the assessed valuation (divisor), the range of this index was then compared and contrasted by the number of districts receiving bids, average number of bids received and the range of bids received were shown by specific indices.

The following questions to be answered were developed as a basis for drawing conclusions about relationships between the selected inde-
dependent variables and each of the two dependent variables, namely, the number of bids and the interest rate.

1. Does the Moody rating affect the number of bids received.
2. Does the assessed valuation of the district affect the number of bids received.
3. Does the amount of bonds bid in relation to the number of bonds outstanding affect the number of bids received.
4. Does the length of bonds affect the number of bids received.
5. Does the involvement on the part of outside legal services in advising the Superintendent and Board of Education in the preparation of bonds affect the number of bids received.
6. Is there a relationship between the employment of the service of a bonding attorney and the effective interest rate.
7. Is there a relationship between the development of the prospectus by an attorney and the effective interest rate.
8. Is there a relationship between the structuring of the advertising, the timing of the selling and issuance of bonds and the interest rate.

Experimental Design

The following variables identified from a review of the studies conducted by Ralph A. Ferguson, Lesli F. Greene, Charles C. Hudson, William C. Jones, Frederick Shore, Dewey H. Stollar, Halbert B. Tate and Richard E. Ten Haken have been held as important for receiving favorable school bond interest rates:
1. Assessed valuation.
3. Length of the bond issue.
4. Rating by Moody Investors Service, Inc. or Standard and Poor's Corporation.
5. Date of issue.
6. Number of bids received.
7. Interest rate.
8. Number of prior bond issues.
9. Amount of outstanding debt.
10. Number of bond bids received.
11. Legal services.
12. Financial planning.
13. Prospectus.
14. Publicity and notice of bond sale.
15. Actual bond sale.
16. Indebtedness ratio.

The data will be presented in a narrative form utilizing graphs, charts and tables where appropriate.

Means were computed for the selected experimental variables gleaned from the review of the literature which were considered important by experts in offering a bond issue for bid. The selected variables are reported in table form. Data for variables such as Moody rating, assessed valuation of the district, amount of the bond bid, etc., are shown in relation to their affect on the number of bids received.
Borrowed funds have played a significant role in public school capital outlay expenditures. The cost of borrowing has continually raised the issue of whether it is best for a school district to adopt a pay-as-you-go policy or to borrow funds through the sale of bonds. The state of Illinois through the General Assembly has provided for both methods of payment. The current bond limitation for school districts having an educational program for grades kindergarten through eighth grade or ninth through twelfth have a maximum bonded indebtedness limitation of 6% of the district's equalized assessed valuation. Districts having an educational program of kindergarten through twelfth grade have a bonded indebtedness limitation of 12% of the equalized assessed valuation. There are further limitations on the local school district in that the maximum interest rate a district is allowed to approve for the repayment of bonds is 7%. The denomination of the bonds must be not less than $100 or more than $5,000 and must meet specifications as outlined in Article 19 of the Illinois Revised Statutes. Therefore, it would be beneficial to review the financing of schools.

The State Constitution of 1818 did not contain a single word about education. There was no real need that it should, for the General
Assembly was invested with ample powers to implement education; this they did at a convention in Kaskaskia by adopting the Ordinance of 1818.

Whereas the Congress of the United States in the act entitled, "An act to enable the people of the Illinois territory to form a constitution and state government and for the admission of such state into the union on an equal footing with the original states, passed the 18th of April, 1818," have offered to this convention for their free acceptance or rejection, the following propositions, which if accepted by the convention are to be obligatory upon the United States, viz:

1st. That section numbered 16 in every township, and when such section has been sold, or otherwise disposed of, other lands equivalent thereto, and as contiguous as maybe; shall be granted to the state of the use of the inhabitants of such township for the use of schools.¹

The articles that have had such an important impact upon education are Articles 3 and 4. They state:

3rd. That 5% of the net proceeds of the lands lying within such state, and which shall be sold by Congress from and after the first day of January, 1819, after deducting all expenses incident to the same, shall be reserved for the purposes following, viz: Two-fifths to be disbursed under the direction of Congress, in making roads leading to the state; the residue to be appropriated by the legislature of the state for the encouragement of learning, of which one-sixth part shall be exclusively bestowed on a college or university.

4th. That 36 sections or one entire township, which shall be designated by the President of the United States together with the one heretofore reserved for that purpose, shall be reserved for the use of a seminary of learning, and vested in the legislature of the said state to be appropriated solely to the use of such seminary by said legislature.²

²Ibid., pp. 20-21.
seven representatives, assembled at Kaskaskia on the fifth day of
October, 1818. Shadrack Bond was the first elected governor. In his
first message to this first legislature he called the attention of the
members of the legislature to the importance of education, declaring
that "it is our imperious duty, for the faithful performance of which
we are amenable to God and to our country, to watch over this interest-
ing subject."3

This interest and support resulted in an act providing for the
establishment of free schools, which was approved by the legislature
on January 15, 1825.

The free school advocates were ahead of their times and their
opponents carried the day by pushing through an amendment in 1827. The
amendment follows:

Section IV. It was there provided that "no person shall hereafter
be taxed for the support of any free school in this state unless
by his own free will and consent, first has and obtained in writ-
ing. Any person so agreeing and consenting shall be taxed in the
manner prescribed in the act of which this is an amendment."4

With the power to enforce the collection of taxes taken away, the law
of 1825 was rendered futile by this amendment.

Permissive legislation in the Act of 1845 gave the legal voters
an opportunity to meet together and determine the feasibility of levy-
ing taxes for the support of schools, for the building and repairing
of school houses or for other school purposes. Two-thirds of the
registered voters in each district had to vote in favor of a proposition

3John Williston Cook, Educational History of Illinois, (Chicago:

4Ibid., p. 38
before it could be enacted. All measures pertaining to taxation could now be defeated by mere absence from the elections.⁵

In the early years of the newly formed state of Illinois there was a very low priority on the construction of school facilities, in many cases the school house was not much more than a rustic log house with a dirt floor and furniture made by the local citizens. As the new state began to develop with the growth of the westward movement of the railroad there were changes in the educational programs within many communities.

In 1909 there was a law passed that fixed the maximum allowable indebtedness to two and one-half percent of the value of the taxable property within the district for the purpose of building and equipping buildings. This maximum indebtedness was amended by an act approved in 1957 from two and one-half percent to five percent of the value of the taxable property in the school district. The money realized from the sale of bonds could be used by the school district for acquiring or improving a site or sites, constructing, extending, improving and equipping school buildings.

Rationale for Borrowing

Barr in a national study relating to the financing of public elementary and secondary school facilities in the United States, ⁵Ibid., pp. 44-45.
presented various justifications for borrowing. Barr stated that traditionally elementary and secondary public school facilities have been financed with borrowed funds. The rationale for such borrowing is related to the microeconomic theory of public indebtedness which holds that the burden of indebtedness shifts to the future and increased tax rates are preferred; the burden of debt results in a transfer of funds from the private to the public sector at a later date. The microeconomic theory further contends that borrowing and subsequent repayment at a later time is reasonable in that the user in the future will ultimately share the cost. That is, intergeneration equity of financing is approached through borrowing and is considered a desirable outcome of public indebtedness.

Barr further stated that during an inflationary period it is reasonable to assume that borrowing will result in a saving to the taxpayer. Such a condition exists particularly when the labor and material costs of construction are increasing at a rapid rate. A project delay under such conditions may be more costly than paying the interest on debt over a period of years.

Benson summarized the rationale for borrowing as follows: 7

1. To defer the burden of unexpected expenditures to the future.

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2. To avoid sudden tax increases.

3. To counteract excessive discounting of future returns of social benefits.

**Pay-As-You-Go Programs**

Barr stated that financing of school facilities from current revenues is most feasible in large school districts. The method is not used extensively as the sole source of capital outlay funds because a broad tax base is required and because some districts have a philosophy which opposes financing solely from current revenues.

Barr explained that pay-as-you-go financing utilized current revenues and no provision is made for carrying funds from year to year. The method is desirable in that it avoids interest costs by eliminating the necessity of borrowing for capital outlay purposes while a major deterrent of a pay-as-you-go financing plan is the resulting sudden rise in the tax rate which may severely affect local financing. The procedure takes large sums of money from the local economy at one time, hence denying use of the funds to taxpayers of the community. The relative proportion of pay-as-you-go financing for public school facilities over the years has been minor when compared with the total amount expended for capital purposes in the United States. In other words, the major portion of funds acquired for capital outlay expenditures for public school facilities has been by means of borrowing.

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8Barr, "Financing School Facilities, "National Finance Project".
Barr also concluded that the use of building reserve funds in capital outlay programs incorporates several of the desirable features found in both pay-as-you-go and the borrowing methods of funding school construction. Building reserve funds result in lower interest costs since borrowing may be reduced or avoided and the bond leeway of the school district may be reserved for emergencies. The cost of the facility is spread over several years, since building reserve funds require a tax levy during the years preceding construction.

A total of 41 states allow school districts to establish building reserve funds; Delaware, Georgia, Hawaii, Maryland, Mississippi, New Mexico, North Dakota, South Carolina and Texas are the exceptions. Bonding and pay-as-you-go have been described in detail and the relative merits explored by Essex. Essex identified 99 cities with a population of more than 50,000. The relative merits and reasons for pay-as-you-go financing vs bonding were determined for 53 cities chosen for further study. Essex concluded that neither pay-as-you-go nor bonding is completely satisfactory under all circumstances. The pay-as-you-go plan was found to be less expensive because of a tendency toward preventing extravagance and the elimination of interest costs.

Essex stated that pay-as-you-go is feasible only in communities in which building is annually recurrent or nearly so or when the

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9 Ibid.
10 Ibid.
property value is sufficiently high so as not to cause an excessive burden imposed by capital cost over a longer period of time. However, according to Essex, bonding is proper procedure only in communities in which buildings are constructed at relatively infrequent intervals. This 1931 concept assumes a great stability, the baby boom prior to the 1950's and 1960's could not have provided sufficient school houses under the pay-as-you-go plan.  

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Understanding Bond Principles

Tate concluded that public school administrators need to be familiarized with the procedure of school bonding because the need for obtaining capital funds will continue for many years. 13 According to Tate, school administrators need to understand the factors that make for advantageous marketing of school bond issues. The process is an important execution in school finance and must be executed with effectiveness and efficiency.

Variations in Bond Interest Rates

Barr and King stated that a bond is the promise of the issuer to pay the specific amount of money at a specific date and to pay period-

12 Ibid., p. 67.
ically the specified rate of interest. 14

School bonds are a part of the group called "municipal bonds", which group is generally understood to include bonds issued by a state, county, city, town, township, school district, or other public authority. Bonds may be term bonds, where all the bonds in the issue mature at the same time, or serial bonds, which mature gradually over a period of several years. Most school bond issues are serial bonds. 15

A review of the literature on public school bonding further revealed that limited research has been reported with regard to factors related to variations in school bond interest rates.

Halsey concluded that the credit rating of the school district was important. The following conclusions were drawn:

1. Assessed valuation of a community is not the sole determinant of district credit.
2. The character as well as the number of the people are an important factor.
3. The intelligence and education of the people have an affect upon municipal credit.
4. The location and age of the community, type and extent of

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15 Ibid.

industry, and net debt of the community all have a bearing on credit.

5. Investors generally prefer the securities of such local governments as are able to meet their obligations promptly and without undue effort.

**Obtaining the Lowest Possible Interest Rate**

A study by Castetter revealed that the greater incidence of school bonding and the highest average rates of interest were in the smaller districts where the technicalities of debt administration were entrusted largely to lay officials, elected for short terms, who entered office with little or no fiscal training or experience. 17

Castetter concluded that:

1. The lower interest rates were paid by the school districts that most closely followed accepted marketing criteria.

2. Large financial centers purchased the majority of the bond issues and on the average bid lower interest rates.

3. Extra legal advertising had produced, on the average, lower bond interest rates.

4. There had been a tendency for school districts with the greatest financial ability to receive the lower interest rates on their bond issues.

Castetter indicated that bond marketing procedures were needed

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especially in small school districts.\textsuperscript{18} Deering placed marketing skill of the seller as the most important factor in determining the interest rate. Marketing skill encompasses communication about the quality of the bond issue plus knowledge of the bond market, merchandise, marketing methods, and of the prospective buyer.\textsuperscript{19}

Deering stated that other major determinants of bond interest rates were the general interest rate level, supply and demand, quality, and term of maturity as setting an interest range. Within the range the marketing skill of the seller played the major role in determining a low or high price for a bond issue.\textsuperscript{20}

Greene appraised the factors that affect net interest costs of Michigan public school bonds. Greene attempted to determine the relationship between net interest cost and 14 selected factors as summarized below.\textsuperscript{21}

1. The relationship between the amount of the issue and the net interest cost. No attempt was made to qualify the relationship, but Green expressed the opinion that the data indicated larger issues received lower interest rates.

\textsuperscript{18}Ibid., pp. 85-86.


\textsuperscript{20}Ibid.

2. The relationship to the number of bids received to the net interest cost. Greene made the observation that bond buyers develop bids on the merits of each issue without regard for competitive bids.

3. The relationship of the debt to assessed valuation ratio to net interest cost. Greene stated that some underwriters refuse to submit bids when the debt ratio exceeds 10 percent and that on the average the higher the debt ratio the higher the interest rate bid.

4. The relationship of the percentage of callable bonds in an issue to net interest cost. The data gathered showed that most bond issues contained a call feature. The median percent of callable bonds within the issues was 74 percent. Greene concluded that it would be very difficult to determine the degree of affect of the callable feature on net interest cost because of other variables at work but the data indicated that the higher the percent of callable bonds in an issue the greater the interest rate charged.

5. The relationship of the length of the issue to net interest cost. Data indicated that on the average, higher interest rates were carried by the longer term bond issues.

6. The relationship of present debt to net interest cost. Greene found no relationship between present debt and interest cost. Data indicated that the present debt in itself did not significantly affect bond interest costs.
7. The relationship of debt history to net interest cost. The data were too limited for a definite conclusion. Greene expressed the opinion that debt history does affect buyer interest in the same sense that the debt record of any lender affects loan interest rates.

8. The relationship of current tax collections to net interest costs. Greene stated that bond buyers demanded an accounting at the time of sale if tax collections were below 90 percent. He expressed the opinion that the percent of taxes collected is of major importance to bond buyers and is reflected in the bids.

9. The relationship of surplus taxable year to net interest cost. In Michigan it is common practice to establish a tax levy for a certain number of years for the retirement of a particular bond issue. The years by which the approved levy exceeds the maturity date of the bond issue are termed surplus taxable years. Data indicated that the number of surplus taxable years is significant only when there is some reason to doubt the financial ability of the school district.

10. The relationship of type of district to net interest cost. School districts were classified as industrial, residential, farm or resort in the study by Greene. Above median bond interest rates were paid most often in farm and residential districts.

11. The relationship of affirmative notes on issue to net interest cost. Greene concluded that there was no direct effect on the
percentage of affirmative votes cast in bond elections on the
net interest cost of a bond issue.

12. The relationship of attorneys employed to net interest cost.
There were four legal firms recognized by bonding companies
for legal opinions on bond sales in Michigan. Greene could
not measure a difference between the firms but concluded that
interest rates were higher if other than recognized attorneys
were employed.

13. The relationship of earmarked mileage to net interest cost.
Greene found that most Michigan school bond issues had a
specifically earmarked mileage for retirement. Issues that
were not so secured had high interest rates. It was con-
cluded that not having mileage earmarked for a particular
issue increased the net interest cost.

14. The relationship of bond and opinion fees to net interest
cost. Greene found that when the buyer was designated to
pay bond costs and opinion fees the buyer transferred the
charge to the school district via higher bond interest rates.
Greene concluded that the total cost to the school district
for bond and opinion fees was about the same whether the
school district paid them directly or had the buyer do so
and transfer the cost to the school district through higher
interest rates.

Greene stated that the criteria by which bond buyers judged the
quality of a bond issue were attitude of the school board toward its
creditors, default record of the school district, percentage of tax collections, legal and extra-legal construction of the debt instrument and type of school district including any racial or religious problems that might affect the district's ability to meet its debt obligation.  

Jones identified factors within the control of the Oregon Public school boards which affect public school bond interest rates. The controllable factors studied were:

1. The quantity and quality of information in the prospectus.
2. The financial rating assigned the district.
3. The nature of the bond (call features, who determines coupon rates, amortization schedule, bond denomination, lots in which bonds are offered, and bond registration options).
4. The bond attorney employed.

Jones concluded that buyers considered the prospectus the single most important source of information for determination of bids. When required data were not included in the prospectus the cost of acquiring the information was transferred to the school district by higher interest rate bonds.

Jones concluded that financial advantage could be gained for the school district by shortening the amortization schedule as much as

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22 Ibid., p. 136.
24 Ibid., pp. 220-221.
possible. Buyers were found to dislike maturity schedules that contain bonds maturing in other than $5,000 multiples. Blocks of bonds less than $5,000 were determined odd lot bonds. Such bonds were more difficult for the original buyer to resell and consequently were assigned higher interest rates.

Jones indicated that optional call dates may result in high bond interest rates unless the option is used. School boards were admonished to carefully consider present interest rates and the probability of exercising the call option before including it in the issue.

Jones advised the bidders be permitted to set the coupon rates and the school board should judge the bids on the basis of net interest cost. Bidders preferred non-registered $1,000 bonds according to the study by Jones.

Only one legal firm is nationally recognized for school bond opinions in the state of Oregon. Jones concluded that school districts in Oregon which did not utilize the services of the recognized legal firm paid increased bond interest rates since buyers purchased the recognized legal firm opinion separately and transferred the cost to the school district in the form of higher interest rates.

Stollar in his study of factors affecting the marketability of Ohio school bonds, found a number of conditions existing which held

25 Ibid., pp. 221-222.
26 Ibid., p. 222.
27 Ibid., p. 222.
28 Ibid., p. 221.
implications for public school officials. Stollar stated that many school administrators had public relations problems with bond attorneys, buyers and rating houses. Bond attorneys were often hired late in the planning stage of a bond issue and were misused by school administrators. Many school administrators did not appreciate the value of a high credit rating, met only minimum legal requirements in preparing a notice of sale and lacked organization in getting statistical materials to potential bidders.

Stollar found a lack of planning in school districts for long range capital outlay. Stollar concluded that the Ohio sample of school administrators studied did not understand fully the role of the bond attorney, were not familiar with the value financial publications could provide for bond issues and often harmed the local school district image with underwriters by improper handling of bid openings. School administrators in Ohio showed a general lack of knowledge of the factors affecting school bond rates over which some control could be exercised.

Stollar stated that the amount of existing debt and the ratio of such debt to taxable wealth is an important factor in bond sales. If the total debt approaches 10 percent of the true value of property, interest rates are likely to be relatively high, and investors scarce. Overlapping existing debt of other governmental agencies, as well as probable future capital needs of both school and civil governmental

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agencies of the community were also reputed as factors which are likely to affect interest rates.  

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Stollar stated that the ability to retire debt is dependent upon sources of revenue available to the school district.  

31 State grants for debt service or state guarantees of debt reduce the risk to investors, and should favorably influence interest rates. If the local property tax provides debt service funds, the size of the tax base related to the number of pupils and the total population is quite important. The composition of taxable wealth with respect to diversification among personal property, industrial, residential, commercial and agricultural elements was another influence on interest rates. The trend of tax rates indicates whether the community is fiscally conservative, willing to support schools and other governmental functions, or is perhaps overextending itself. Rates are analyzed with respect to assessment procedures to determine effective tax rates, or the ratio of the tax burden to true value of property.

Hudson found that interest rates on 20 year bond issues averaged three-tenths of a percent less than those incurred when the issue was for a 30 year period.  

32 Not only are interest rates likely to be higher as the length of term of the bond issue increases, but interest


31 Ibid., p. 42.

costs are considerably greater as the maturity schedule is lengthened.
For example, the net interest cost on an issue of one million dollars
repaid in equal annual installments at an interest rate of four percent
is $220,000 on a ten year issue, $422,000 for 20 years and $624,000
over 30 year bonds.

The Texas Education Agency has stated that a practical and effective means of dealing with high interest costs is stimulating greater
interest among investment dealers in the bond sale as a means to increase competition for the bonds. 33

The report by the agency further recommended, when selling bonds,
school authorities should give careful consideration to the following
items: 34

1. Plan financial matters with the bond market in mind, aim to
   improve credit standing as much as possible.
2. Prepare a complete prospectus if there is to be a large issue
   of bonds and one of interest to the general market.
3. Make certain all information placed in the prospectus is
   correct.
4. Send copies of prospectus to interested bond dealers and
   financial institutions at least two weeks prior to the date
   of sale. Make copies of prospectus available to successful
   bidder.

33 Bond Issue - What Shall We Do, (Austin, Texas, Texas Education
34 Ibid.
5. Requests for information from financial institutions, investors and bond rating agencies should be answered promptly and accurately.

6. If the district bonds are not rated, investigate the possibility of getting a rating on the bonds.

7. Advertise the sale in the Bond Buyer.

A study by Ten Haken related selected factors to school bond interest rates in the state of New York. Ten Haken's recommendations for school administrators and board of education in securing the best interest rate on bond issues were as follows:

1. School administrators should be better informed about and use the factors that relate to low interest rates.

2. Administrators should actively cooperate with local and area municipal finance officers in planning bond issues.

3. Administrators should engage the services of a financial consultant when planning to sell bonds.

4. A bond attorney with a national reputation should be obtained early in the planning stages of a proposed bond issue.

5. School districts should develop and widely distribute a detailed and accurate prospectus.

6. School districts should advertise extensively to encourage many bidders.

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7. School districts should watch the bond market and try to sell early in the calendar year.

8. School districts should keep the maturity of the bonds as short as possible.

Hudson analyzed net interest costs of selected bond issues of Indiana school corporations in 1966. Major conclusions by Hudson regarding school bond interest costs were as follows:

1. Many Indiana taxpayers are paying excessive net interest costs on bond issues for schools.

2. Longer lengths of terms are a major cause of most Indiana school building corporations bond issues having higher net interest costs than general obligation bond issues.

3. Local school officials can significantly influence net interest costs for school purpose bonds in Indiana.

4. The responsibility of local school officials in Indiana to understand long term debt programs has increased in recent years as the size and total amount of bond issues for schools increased.

5. More guidance in bond marketing techniques is needed by Indiana school officials. Differences in the level of understanding of bond marketing and rating procedures, prospectus preparation and local determinants of net interest cost contribute to variances in net interest costs. The lack of ratings on many

large bond issues is an indication of failure on the part of local school officials to assume responsibility for obtaining the best possible credit rating for school purpose bond issues.

6. The state has made little or no effort to aid local school districts in obtaining lower net interest cost by guaranteeing payment of bond obligations or by purchasing bonds of fiscally weak school districts.

Hudson recommended that:

1. Local school superintendents should assume responsibility for the bonding programs for schools. Boards of trustees of school building corporations as well as of school districts should look to superintendents and their staffs for financial leadership. The Indiana Association of Public School Superintendents should plan and sponsor a study to determine the best means of providing school officials with the information and assistance needed when selling bonds.

2. School districts officials should plan for future capital needs. Within this plan the following recommendations for debt management are made in order to reduce net interest costs of bonds:

   a. Issue general obligation bonds of school districts in preference to school building corporation bonds, if possible, under Indiana's constitutional two percent debt limitation.

   37 Ibid., pp. 98-100.
b. The length of term of bond issues should be as short as possible without curtailing funds for the educational program or requiring excessive tax levies.

c. Bonds should not be issued in peak tax years.

d. Bonded debt for schools should be reduced as much as possible before new bonds are issued.

e. The sale of the bonds should be timed to a favorable market. Tuesdays, Wednesdays, or Thursdays are the best days of the week to sell. Bond market trends should be checked to determine the best time of the year for a bond sale.

f. A bond prospectus should be prepared and a bond issue rating should be requested from both Moody's Rating Service, Incorporated, and from Standard and Poor's Corporation. Districts new to the bond market should engage a financial consultant to help prepare the prospectus.

3. A study should be made of the feasibility of supplementing local bond issues with issues of an authority, commission, or agency of the state. Programs of this nature in operation in several states are of particular benefit to the fiscally weak school district.

4. A study should be made of the feasibility of state guarantees of bond obligations and lease-rental obligations of school districts.
Stover noted an increasing and constant need on the part of Pennsylvania school officials for legal counsel and services in 1960. The chief finding confirmed the need of legal counsel for the orderly development of an educational program for a growing population, to assist school boards and boards of authorities to operate legally, for the protection of liability of school officials from illegal actions, for technical advice to the superintendent on all matters of law and for guidance in preparing bond issues for bid.

Castetter stated that one of the initial and most important steps in the development of a bonding program is the selection and employment of an attorney skilled in handling municipal bond issues. Several good reasons have been offered for why a recognized municipal bond attorney should be employed in preference to the school district attorney. The issuance of school bonds is a complex technical procedure, one for which the majority of school attorneys have not had the requisite training and experience. Frequently boards of education employ an educational consultant for advice in connection with the educational program and the school plant. Similarly, a board of education should employ a technically competent bond attorney to execute the legal details of the

38 Kermit M. Stover, School Board Attorney: Friend In Need, (paper presented at annual meeting of the National School Board Association, Miami Beach, Florida, April 15, 1969).

bonding program because of the specialized legal competence which the program requires. An argument presented for employing a municipal bond attorney was that a wider market can be obtained if the bonds carry an approving opinion of a nationally recognized municipal bond attorney. Bonds approved by a municipal bond firm usually sell at a lower price than those accompanied by a local opinion. Bonds handled by municipal bond attorneys are more likely to be free of legal technical errors, which if permitted to occur, may involve the school district in embarrassing legal and financial difficulties.

At one time bond attorneys were employed by the purchaser of the bonds, but little by little, municipalities began to retain the bond attorney and offer the bonds for sale subject to an approving opinion. Municipalities found it advantageous to employ the bond attorney because of continued advice from the time preceding the bond issue to the time the bonds are instituted. In many cases the bond attorney prepares the original drafts of these precedings, or examines drafts prepared by local counsel before the resolutions or ordinances are formally adopted. The bond dealers approve of the practice, because of assurance of prompt receipt of an opinion acceptable in the investment markets, approving the validity of the bonds being purchased. The distribution of bonds is thus expedited by eliminating the delay in securing the approving opinion after the purchase of the bonds from the municipality.

Stollar emphasized that competent legal guidance from the very

beginning of the preparation of an issue cannot be overemphasized.\textsuperscript{41} Once the decision to issue bonds instead of financing by pay-as-you-go, the first step should be selection of an attorney skilled in handling public bonds. Many problems will be avoided if the best bond attorney available is hired. Since fees are fairly well standardized the better the attorney, the more money he is likely to save the school district offering the issue.

As stated earlier, the selection of an attorney with national reputation can be important. Stollar indicated that a study of many bond sales on the regional and national level indicated that bonds which attract bidders representing nationwide clientele are likely to have a marketing advantage.\textsuperscript{42} Englehart stated that he believed that the bonding attorney played an important role in the bond issue procedure. The preparation of the transcript of the complete procedure preparatory to the issue of school bonds is a precise and technical task. It should be done or supervised by an attorney expert in the field. Otherwise, some technicality may be omitted which may invalidate the issue or handicap the sale.\textsuperscript{43}

Ten Haken concluded that school administrators and boards should obtain a bonding attorney with a national reputation early in the planning stages of a proposed bond issue and use the attorney only for

\textsuperscript{41}Stollar, \textit{School Indebtedness}, p. 17.

\textsuperscript{42}Ibid., p. 25.

legal advice.

Financial Planning

According to Shore, the importance of detailed financial planning in the preparation of a bond issue has been held as a factor not to be underestimated. Shore advised that lower interest charge on bond issues may be obtained by careful planning of bond issue details, careful observation of market conditions, widespread advertising and dissemination of accurate and complete information and fullest cooperation with credit rating agencies, bond dealers and investors, including prompt and complete response to inquiries for data.

Because of the need for increasing large expenditures for capital improvement, prudent management of indebtedness has become more imperative than ever before. Financial errors in bond preparation are long lasting. The Municipal Finance Officers Association provided the following cautionary statement:

When a municipality sells a bond issue, it creates a large fixed obligation for a long term of years. Errors or extravagances in ordinary operations can be changed from year to year. But contracts for the payment of principal and interest on bonds are long-term obligations affecting the municipal expenditures for twenty to forty years in the future. The chief argument for extreme care in the planning and sale of municipal bond issues is the fact that such sales create inflexible obligations for long periods of time.

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44 Ten Haken, "School Bond Interest Rates", p. 189.
Special Bulletin 1946E, published by the Municipal Finance Officer Association of the United States and Canada, cited the following information for issuers of marketing bonds.\textsuperscript{47} Choosing the market is an important factor in the planning of a bond issue. Bond experts have advised against new issues more than twice a year by the same municipality unless it is a large city and unless dealers have sold the most recent issue they purchased. Frequent small issues are not desirable; neither are very large issues by a municipality for which the market is limited. Bond issues should be anticipated as far as possible so that publicity may make the market receptive for new issues. A long-term continuing policy of publicity will be extremely helpful in building a good market.

Zelip reported the following steps for planning a building bond issue:\textsuperscript{48}

1. The first step in planning a building bond issue is to employ competent counsel.

2. The second step in planning a building bond issue is to determine the type of loan sought by the district. This is an area where the advice of the financial consultant should be sought since the financial advisor has knowledge of the type of loan or bond that is more attractive in the market place.

\textsuperscript{47} Ibid., p. 30.

3. After careful preparation of the issue, the next step is the sale of the bonds. This is normally administered by the school business official. Notice of the proposed sale and date of the offering should be given to prospective buyers as far in advance as possible.

4. The final step is that of receiving the bid. The mathematical computations involved in computing a bid may take anywhere from fifteen minutes to several hours, depending upon the bidding conditions that are specified in the notice of sale. After the district has received the money from the sale of the bonds, the money should be accounted for in a manner prescribed by the laws of the state and the rules and regulations of the district. The money must be safeguarded for the purpose for which it was intended. If the law permits, investment of the money in short term U.S. government securities is advisable until such time that the funds are needed for actual construction.49

The recommendation has been made in a publication of the American Association of School Administrators that the superintendent and board of education become familiar with the best possible advice on financing and handling the capital outlay program.50

The publication further carried the recommendation that a financial advisor assist the district on a number of other financial problems

49 Ibid., p. 12.

such as: 51

1. timing of the sale
2. current financial data
3. preparation of prospectus and advertisement
4. opening of bids
5. sponsorship of sale
6. reinvestment.

Credit Rating

The credit rating was judged as very important to the school dis­
trict planning a bond issue. The school district with a favorable rat­
ing may attract more investors and pay lower interest rates.

Rating Agencies and Symbols

The credit rating received from one or more of the national rating
agencies has been reported by Stollar as being of prime importance in
securing the best possible interest rate on a bond sale. 52 Stollar
predicted the ratings applied by bond rating firms, usually prior to
public sale by the issuer to the bond underwriter, will almost auto-
matically determine, within broad limits, the interest rate the issuer
will pay on his bonds.

Three rating agencies were reported by Stollar as significant.

Dunn and Bradstreet. -- Dunn and Bradstreet uses an approach that
is different from other rating firms. The scale used includes:

51 Ibid., pp. 183-184.

52 Stollar, School Indebtedness, pp. 81-82.
prime, better good, and medium good. The terms are applied to four principal factors: economic and social, administration, debt obligation, and current operation. 53

Moody's Investors Service. -- Moody's which pioneered the rating system in 1909, uses nine categories which are to be viewed in perspective of the current and future marked value of a given bond, rather than the more prevalent practice of measuring quality of the bond in terms of likelihood of default. Moody's will not rate obligors having less than $600,000 of debt, projects under construction, enterprises without established earnings records and situations where current financial data are not available. 54

Moody's rating takes the form of alphabet symbols. The symbols range from Aaa, which is the finest quality through Aa, A, Baa, Ba, B, Caa, Ca, and C. Issues in the lower categories are regarded as having extremely poor prospects of obtaining any real investment standing. 55

Standard and Poor Corporation. -- Standard and Poor represents the largest rating service and while considered as being less conservative than Moody's has been credited for providing greater consideration to future prospects. The firm will apply quality symbols to bonds of all governmental bodies having outstanding debts of at least $1 million and presently sufficient financial data for adequate appraisal. 56

53 Ibid., p. 83.
54 Ibid., pp. 84-85.
55 Ibid.
56 Ibid., pp. 86-87.
The firm used the following symbols:

AAA Prime
AA High grade
A Upper medium grade
BBB Medium grade
BB Lower medium grade
B Slight degree of speculative risk
CCC & CC Increasing degree of speculative risk
C, DDD & DD Different degrees of default

Importance of Bond Ratings

Pfeiffer, a representative of Standard and Poor, stated that ratings for small or little known districts can be of vital importance as well as a strong factor in moderately large districts that do not sell bonds frequently. The reason given was that banks and insurance companies, as well as individual purchasers of municipal bonds, rely heavily on ratings. In many instances, a refusal is made by such agencies to buy a bond issue that does not command a medium rating.

Castetter indicated that the real value of a rating lies in the index which the rating furnishes to dealers by which to compare opinions with the rating. School district compliance with requests from statistical agencies for information concerning the financial history of the school district as well as the basic facts concerning the pro-

58 Castetter, Debt Administration, p. 100.
posed bond sale is most essential. Castetter advised that if a school district preparing a bond offering has not established an investment rating, such should be done.

The Investment Bankers Association of America noted that ratings have assumed considerable significance in determining the eligibility of bonds for purchase by certain types of investors and in the interest rates on bonds. The same service reported that one of the principal reasons for the importance of ratings is providing a source for determination of the eligibility of bonds for purchase by certain large investors.

According to Benson, institutional investors, especially commercial banks are more or less constrained by federal and stage regulatory authorities to confine purchases to the four highest grades of bonds. Insofar as the rating services do have an independent influence on interest rates, committees that determine the standing of the borrowers bear a responsibility for the allocation of many millions of dollars of public funds.

Engelhardt stated that:

No school system should be content with an unfavorable credit rating. In such a situation the factors that were used in establishing such a rating should be discovered. The public should be told how the rating has been established, what efforts have been made to improve the rating and the impact of the currently proposed bond

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issue upon the credit status of the community. The taxpayer is entitled to know why an additional 0.5 or 1.0 percent in interest rates has been found necessary.61

Stollar pointed out the necessity for the school administrator to cooperate with the officials of the rating services.62 Reportedly, some school officials have felt that once the issue is sold there is no further need to provide the rating bureaus with statistical information. According to Stollar such is not the case, but rather the school district will find it advantageous to provide annual information requested. Benefits will be received on the issuance of future bond issues.

A guide for marketing bonds published by the Investment Bankers Association of America stated that continuing efforts should be made to maintain and improve the credit standing of a municipality.63 After bonds have been issued, current financial reports should be sent regularly to investment bankers, newspapers, large investors, and credit rating agencies. The importance of regularly providing current financial information after bonds have been issued is further emphasized by the fact that national banks, which are large purchasers of municipal bonds, are required to maintain records supporting information and data which will enable the management to exercise informed judgement in determining whether each issue of securities should be purchased or


62 Stollar, School Indebtedness, pp. 87-88.

retained in the investment portfolio and to permit examiners to determine that the investment securities meet the requirements specified in the Investment Securities Regulations.

Barrera, of Moody's Investors Service, Inc., enumerated the following important factors in obtaining or improving a school bond rating:

1. **Basic requirements.** Full disclosure is important, in that a lack of pertinent information might just be the one point needed to arrive at a justifiable rating in time for a bond sale. It is important that the prospectus state the districts share of the debt of overlapping units of government since the taxpayers are liable for their share of the outstanding obligations incurred by such units. Further, any future capital needs of these overlapping units, such as water and sewer improvements, should be disclosed.

2. **Ability to pay.** A major factor on which the investor wants assurance is on the ability to pay. The bond buyer does not think of ability to pay only in terms of the legal ability to raise the tax rate as needs require. Taxes for the payment of bonds and interest commonly may be levied without legal limit as to rate. Hence, superficially, it may appear that bond security is never in question. However, while the debt service portion of the budget may be amply secured

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under the letter of the law, the whole structure of the govern­
mental budget must be healthy. Recurrent budget crises do not
lead to a high credit standing. Economic ability to pay is
just as essential as the legal ability. Economic circumstances,
as a group, probably bear the most weight upon credit determi­
ation.

3. Willingness to pay. This factor ties in with ability to pay.
Bonds are payable in the future. Hence, an issue's investment
worth is gauged by the anticipated ability and willingness of
its issuer to meet all debt service commitments on schedule.
The key to enlightened debt administration is the willingness
to face up to responsibilities, to meet todays costs today.
Aggressive debt retirement assures long range economy. An
aggressive debt retirement policy will result in lower total
interest costs, a great saving over the long term, the
interest will be paid for during a shorter span of time and
usually at lower rates than will be the case with protracted
maturities.

A stable debt structure is an attainable goal in our largest
units of government and it is strongly recommended. The
heart and soul of a stable debt structure is capital planning.
A five or ten year capital plan, reviewed and extended annual­
ly, is a method of both maintaining and improving credit.

5. Management and public relations. Management helps to shape
credit through its attention to public relations. Good financial reporting is essential. Rating bureaus must be kept informed through annual financial statements and periodic reports of significant economic and management changes. Conscientious reporting builds confidence and a close relationship with bondholders. This is absolutely essential, for satisfied investors are repeat buyers, forming a built-in market for successive bond issue of the same issuer.

In addition to the conventional pre-sale financial information a letter from Moody's Investors Service reported the following information to be an important requisite to any rating study.

1. A retirement schedule of outstanding debt and a statement of balances in any related sinking funds.

2. A brief outline of any prospective financing (stating the estimated amount, purpose and method) being contemplated over the next five years, either by the subject borrower or overlapping taxing jurisdictions.

3. School enrollments by grade for June in each of the ten preceding years, the current enrollment and projected enrollment for the next five years with an explanation of the manner in which the projections were arrived at.

4. The grades (if any) that are on double sessions at present. The percentage of seniors going to college. A brief description of the academic program.

5. A brief description of present school structures and those
under construction, showing: (a) type of construction; (b) date of construction; (c) number of classrooms; (d) area, ceiling height, seating capacity of auditorium, gymnasium and cafeteria, (e) designed capacity.

6. If a sending or receiving district, give details and comment on the permanency of the relationship. If a receiving district, also list the total number of non-resident pupils in each of the years covered in items 2 and 3.

7. Approximately what percentage of the area is available for residential, commercial and industrial development? What are the minimum lot areas and frontages in the residential zones? Is there a building code, a zoning map?

8. A tabulation of building permits issued during each of the past ten years, stating the number, valuation, and purpose. What is the range and the median value of homes? Are home developments under construction or being planned? If yes: (a) What is the total number of homes to be built? and (b) What are selling prices?

9. An audit report for the past two years and a statement of receipts and disbursements for each of the preceding three years.

10. A brief description of existing water, sewer, gas, electric and transportation facilities and the areas served, including a comment on the adequacy of present facilities.

11. Annexation. What is the local procedure for annexation? Are
there any annexations being considered? Describe annexations since 1960.

12. Completion of the enclosed form regarding the 20 largest taxpayers with current employment. Are any of the industries expanding or relocating? Any public institutions? How many employed?

13. Tax levies, tax collections (both current and total), plus the assessed valuation and basis of assessment, and tax rates for all levels of government for each of the preceding five fiscal years.

14. Median family income. Average number of inhabitants in a dwelling unit. (Census of housing.) What percentage of homes are owned by occupants? Percentage of work force in manufacturing, professions, technical and managerial, unskilled labor, clerical.

15. Agriculture (if applicable). What are the principal crops? Soil type? Breakdown of agricultural production for the last five years (available from county agricultural agent). Economic class of farms.

16. Mineral resources (if applicable) and method of assessment.

17. Population: 1940

1950

1960

1965

1970
1975

1978 Estimated

18. Breakdown of overlapping and underlying indebtedness indicating the respective share of indebtedness.

19. Completion of the accompanying forms. To the extent that information is incorporated in a bond prospectus, audit report, or other publication, sources will serve as acceptable substitutes.

a. Breakdown of outstanding temporary debt, including, issue and maturity dates, interest rates, etc.

b. If outstanding temporary debt has refunded prior temporary debt, details of refunds prior issue or issues.

c. On what date or dates, if any, must outstanding temporary debt be legally refunded into permanent debt.

Prospectus

Castetter stated that one of the most important aids the school district has in securing a satisfactory interest rate is the prospectus. The word prospectus is defined as "any notice, circular, advertisement, letter or communication, written or by radio, which offers any security for sale". In simple words, a prospectus most commonly refers to a typed or printed summary of information relating to the securities to be sold, plus information about the school district which may not be found elsewhere. The prospectus is merely an elaboration of the facts con-

65 Castetter, Debt Administration, p. 112.
tained in the sale notice, including information about the financial and socioeconomic background of the school district. The purpose of a prospectus is to provide prospective bidders, newspapers and financial journals, and service organizations with complete information about the securities to be offered for sale.

Castetter recommended that the prospectus be designed to provide three types of information: 66

1. Information concerning the proposed bond issue, such as the notice of the sale, purpose of the proposed issue, nature of the security offered, terms of the bidding, and other details which may be necessary to describe the issue completely.

2. Financial status of the school district, including the current financial statement, history of assessed valuations and tax collections, debt service charges, sinking fund operations, current operating costs, overlapping debt, and tax levies.

3. General information about the school district including geographical location, data on industry, banking, public service facilities, education, population, and miscellaneous details which help to describe the nature of the community in which the school district is located.

Stollar elaborated further by indicating that the bond prospectus should include the following:

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66 Ibid., p. 114.

Financial statement. The financial portion of the prospectus should be designed to meet the needs of prospective investors. The statement is used by investment firms to rate the quality of management and the good faith of the district. A well prepared series of financial statements sets up a presumption that the administration is competent.

Bond information. A review of the notice of sale should be included in this section. School administrators should assume that the notice of sale is not available to the individual placing the bid for his underwriting firm and should provide this information again in the prospectus. Some points that should be covered are as follows:

1. Legal opinion and name of firm furnishing the opinion.
2. Place and time of delivery of bonds.
3. Period of market protection afforded dealers before another issue is to be offered.
4. Time, place and condition under which bids are to be opened, with specific details regarding exact hour and place of bid opening.
5. Amount required for the good-faith check and the name of the person to whom check is to be made out.
6. Information required on bid envelopes and name and address of person handling bid inquiries.
7. Redemption features of bonds, local tax exemption, place of payment of principal and interest, whether bonds can be registered, date of issue, and interest payment dates.
8. Place of payment of principal and interest.
9. Coupon rate features.
10. Amount, maturities and denominations of bonds, and whether bond underwriter has a choice of denomination.
11. Exact legal name of the district together with any detail necessary to identify the district quickly.

**Community structure.** The economic and social aspects of the community should be explained. Underwriters stress that the bond prospectus should include the following types of financial information.

1. Amount and maturity schedules of outstanding indebtedness of the school district and any overlapping units of government.
2. Percent of debt limitation committed for school district and other units of government.
3. Projected capital needs of school district, as well as capital needs of other governmental units, when possible.
4. Total inside and outside millage of local property tax.
5. Amount of local non-property tax.
6. Amount and type of state aid received by school district.
7. Amount and type of federal aid received by district.
8. Whether school district or overlapping government unit has ever defaulted, delayed payment, or refinanced in anticipation of financial difficulties.
9. Amount of tax levies for operating expenses of school district and overlapping units of government.
10. Assessed and full valuation of property taxable for school purposes, showing real and personal property separately.
14. Evidence of financial planning in overlapping governmental units.
15. Evidence of financial planning in school district.
16. Evidence of combined financial planning between school and overlapping governmental units.
17. Structural adequacy of present school buildings.
18. Bonding history of school district and overlapping units of government.

A similar list was found in the report of the Investment Bankers Association of America substantiating the statements made by Stollar regarding the bond prospectus.\(^68\)

A study by Stuart Halsey and Company, Inc., and reported by Ten Haken pointed out some interesting factors tending to influence the bidding of investment institutions and investors, which should be publicized in the prospectus.\(^69\)

1. The character and type of the community itself.
2. The financial condition of the district as determined by such things as the tax collection records, the debt history and overlapping debt.


3. Evidence of a balanced budget.
4. Evidence of balance bond maturities.
5. A statement of the debt restrictions and tax lien.
6. The legal safeguards.

In addition some conclusions were offered concerning the character of the community which should be considered:

1. An old community with a good record, is preferred to one which is relatively new because of the fact that much reliance is based upon prior experience.

2. A relatively new community enjoying a study and healthy growth may have much to recommend it over a well established community which has indications of being on the decline.

3. A city or district whose revenues are drawn from many basic industries is in a stronger position than one whose revenues are derived from a single industry or a small, closely related group of industries.

4. A community distinguished for the industry, responsibility and conservation of its people is more likely to benefit in financial matters than one whose population is deficient in these respects.

Conclusions were also drawn concerning financial statements:

1. The statements must be accurate and complete.

70 Ibid., p. 77.
71 Ibid., p. 77.
2. The financial statement and basic information about the community should enable the investor to decide whether or not the bonds offer the degree of security which he requires commensurate with the price.

3. The degree or extent of overlapping debt is carefully considered.

4. The tax collection history must be presented carefully in terms of several years past performance and in comparison with the general average.

It was further concluded that individuals who are responsible for issuing municipal bonds have little or no control over factors such as the soundness of the individual issue, supply and demand for investments generally, the prevailing money rates and the tax exemption feature of the bonds. It was also concluded, however, that control may be exerted over secondary factors which determine the interest rate. Such factors included:

1. Coupon rate of the bond.
2. Amortization period.
3. Inclusion or exclusion of the call feature.
4. Title or purpose of the bond.
5. Denomination of the bonds.
6. Interest payment dates.
7. Place of payment.
8. Registration or non-registration of the bonds.

72 Ibid., p. 78-79.
9. The lots in which the bonds are offered.
10. Legal opinion of a nationally recognized attorney.

Publicity and Notice of Sale

The uniform bond laws of most states require that a school district advertise a bond offering in one or more newspapers of general circulation in the county for a specified number of times over a specified period of time. Singularly such advertisement may have a very minimal effect on making the issue attractive to a great number of bidders.

Illinois State Statute

According to the laws of Illinois as established in Chapter 122, Section 19-3, the following law has been enacted concerning the financing of buildings for school purposes. 73

Any school district governed by a board of education and having a population of not more than 500,000 inhabitants, and not governed by a special act may borrow money for the purpose of building, equipping, altering or repairing school buildings or purchasing or improving school sites, or acquiring and equipping playgrounds, recreation grounds, athletic fields, and other buildings or land used or useful for school purposes or for the purpose of purchasing a site, with or without a building or buildings thereon, or for the building of a house or houses on such site, or for the building of a house or houses on the school site of the school district, for residential purposes of the superintendent, principal, or teachers of the school district, and issue its negotiable coupon bonds therefor signed by the president and secretary of the board, in denominations of not less than $100 nor more than $5,000, payable at such place and at such time or times, not exceeding 20 years from date of issuance, as the board of education may prescribe, and bearing interest at a rate not to exceed 7% per annum, payable annually, semiannually or quarterly, but no such bonds shall be issued unless the proposition to issue them is submitted to the voters of the district at a regular or special election duly called and held for such purpose in such district and a majority of all

73 Illinois Acts 1969, Ch. 122, Sec. 19-3.
the votes cast on the proposition is in favor of the proposition nor shall any residential site be acquired unless such proposition to acquire a site is submitted to the voters of the district at some regular or special election called for such purpose and a majority of all the votes cast on the proposition is in favor of the proposition. Nothing in this act shall be construed as to require the listing of maturity dates of any bonds either in the notice of bond election or ballot used in the bond election.

Advertising the Sale

All news media should be used to promote positive aspects of the bond issue according to Stollar. 74 Stollar further recommended that a notice of sale for an issue involving a million dollars or more should be printed in The Daily Bond Buyer and The Weekly Bond Buyer which specialize in advertising bond issues of one kind or another. For the issue of less than a million dollars, a "spot ad" should be placed in The Daily Bond Buyer and The Weekly Bond Buyer, giving the size of the issue, the purpose, and the name and address of the person from whom additional information may be requested.

Stollar concluded that the following factors should be identified in the content of the notice of sale. 75

1. Legal name of issuing body plus law of statutes under which it is organized.

2. Total dollar amount of bond issue and intended purpose.

3. Date, hour and place of bid opening.

4. Provision for payment of principal and interest.

5. Denomination of bonds.

74 Stollar, School Indebtedness, p. 33.
75 Ibid., pp. 40-48.
6. Person to contact for additional information.
7. Option dates for recalling bonds.
8. Detailed statement concerning who shall pay costs.
10. Default record.
11. Type of sale.
12. Rejection or acceptance of bids.
13. Explicit directions concerning submittal of good-faith checks.
15. No litigation certificate.
17. Whether bidder must use standardized bid form.

Castetter stated that favorable bids on a bond issue are contingent upon the extent to which investors have been familiarized with the details and conditions governing the particular issue.\(^76\) The requirement that certain information relating to the bond sale be published in local or state newspapers, does not insure that such information will come to the attention of investors beyond the area in which the school district is located. If the bond sale is widely advertised locally and regionally, as well as in leading financial centers, the number of bidders for the issue is likely to increase appreciably.

It was further stated by Castetter that the official notice of sale must not be released until certain essential steps have been com-

\(^76\)Castetter, \textit{Debt Administration}, p. 108.
The legal course of state statutes must be complied with strictly. Legal technicalities relating to the resolution or ordinance, public elections, debt limitations, and the form of bonds and coupons to be issued should be reviewed by a municipal bond attorney. When the bond attorney is satisfied that the legal requirements have been fully complied with, and when school officials have investigated the bond market for proper timing of the sale, then the advertisement may be released. The sale notice should not be released too far in advance of the actual date of sale. If the amount of bonds to be issued is not unduly large, two weeks notice will give bidders ample time to submit their bids. If the issue is a sizable one, more time should be given to dealers to investigate the credit of the school district and to organize a syndicate.

Castetter also concluded that one of the most important publications in which municipal bond sales are ordinarily advertised is The Daily Bond Buyer. The kind of information that should be placed in the sale notice was similar to the recommendation of Stollar. Further general agreement was discovered in work reported by Barr and Garvue, 79

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77 Ibid.
78 Ibid.
Bond Sale

Hudson stated that the lower the term of the bond issue the better the interest rate received.\textsuperscript{83} Bond ratings received are related to interest cost although most factors which determine a bond rating are beyond the control of school officials.

Ten Haken stated that legal services, credit rating and publicity and notice of sale are significantly related to a lower net interest cost.\textsuperscript{84} Legal services are the most significant.

Moody's also suggested that school officials become familiar with the conditions that affect the bond market.\textsuperscript{85}

Stollar stated that a school system may be well paid for being deliberate in planning a bond sale.\textsuperscript{86} Each detail should be checked

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\textsuperscript{81} "Practical Suggestions for Issuers Marketing Municipal Bonds", Municipal Bonds, pp. 35-36.


\textsuperscript{83} Hudson, "Net Interest Costs", pp. 91-98.

\textsuperscript{84} Ten Haken, "School Bond Interest Rates", pp. 174-175.

\textsuperscript{85} Pitfalls in Issuing Public Bonds, p. 46.

\textsuperscript{86} Stollar, School Indebtedness, p. 92.
carefully to see that it will not have an unfavorable effect on the final legal opinion. If at all possible, a date should be chosen when no unusually large issues are coming to market. If a deluge of bond issues are upon the market, the school officials should delay the sale for a time.

Jones concluded that there are some factors that are subject to administrative control which may have an effect on the school bond interest rate. 87

1. A positive attitude of the school board toward creditors and prompt payment of obligations.

2. Cooperation between buyer and seller, so that the necessary information is furnished as it is needed.

3. Organization of the bond issue to meet legal requirements.

4. Request assistance from experts in the field in planning the sale.

5. Timing of the bond issue.

6. Determination of coupon rate left to the buyer.

7. Careful determination of the length of the amortization schedule.

8. Inclusion of purpose of the issue in bond sale notice.

9. Inclusion or exclusion of the call feature.

10. Determination of the denomination of the bonds.

11. Determining of interest payment dates.

12. Determining place of payment.

Summary

The need for bonding as well as the frequent use of bond sales for capital financing of school districts facilities was clearly established by the literature review. The state of Illinois as well as most other states, has a sizable body of legal bases for such bonding practices.

The literature further established various justifications for borrowing as opposed to pay-as-you-go financing programs. Over the years the major portion of funds acquired for capital outlay expenditures for public school facilities has been by means of borrowing.

Research has been limited with regard to factors related to variations in school bond interest rates.

The following identify some of the more significant conclusions drawn in previous studies:

Ten Haken reported the following findings in the study of selected factors to school bond interest rates in the state of New York.  

1. Legal services were determined to be the greatest in importance of all areas studied.

2. The areas of financial planning, credit rating, prospectus, publicity and notice of bond sale, and bond sale seemed only significant when combined with legal services.

Ten Haken offered the following recommendations for local school administrators and boards of education.  

1. School administrators should be better informed about and use

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89 Ibid., p. 189.
those factors that relate to lower interest rates.

2. They should actively cooperate with local and area municipal finance officers in planning bond issues.

3. They should engage the services of a financial consultant when planning to sell bonds.

4. They should obtain a bonding attorney with a national reputation early in the planning stages of a proposed bond issue and use him only for legal advice.

5. They should develop and widely distribute a detailed and accurate prospectus.

6. They should advertise extensively to encourage many bidders.

7. They should watch the bond market and try to sell early in the calendar year.

8. They should keep the maturity of the bonds as short as possible.

Ten Haken did not consider such variables as assessed valuation, amount of the bond issue, length of bond issue, date of issue, number of bids received, outstanding debt and actual date of sale.

Greene appraised the following factors that affect net interest cost.

90

1. Larger bond issues received lower interest cost.

2. Bond buyers develop bids on the merits of each other.

3. The higher the debt ratio the higher the interest rate bid.

4. The higher the percent of callable bonds in an issue the

greater the interest rate charged.

5. Higher interest rates were carried by the longer term bond issues.

6. Debt history does affect buyer interest.

7. The percent of taxes collected is of major importance to bond buyers.

8. The number of surplus taxable years is significant only when there is reason to doubt the financial ability of the school district.

9. Above median bond interest rates were paid most often in farm and residential districts.

10. Interest rates were higher if other than recognized attorneys were employed.

11. Not having millage earmarked increased the net interest cost.

Jones reported findings of factors which are directly controllable by board and administrative action. Decisions on the following may have an effect on the bond interest rate:

1. The quantity and quality of information in the prospectus.

2. The financial rating assigned the district.

3. The nature of the bond.

4. The bond attorney employed.

Hudson in analyzing net interest cost recommended the following:

1. Indiana taxpayers are paying excessive net interest costs on

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school bond issues.
2. Local school officials can influence net interest cost on school bond issues.
3. School officials need to understand long term debt programs.
4. School officials need more guidance in bond marketing techniques.

Moody's Investors Service, Inc. indicated the following as important in obtaining and improving a school bond rating:

1. Ability to pay.
2. Willingness to pay.
3. Capital planning.
4. Management and public relations.

Some findings which Stollar made are as follows:

1. School administrators generally furnish inadequate statistical data concerning school and community.
2. Often school administrators do not employ competent legal counsel in the initial stage of planning bond issues.
3. School administrators tend to rely too heavily on local publicity in advertising bonds.
4. Some communities show a lack of long-range planning in relation to capital outlay.
5. Some school administrators lack efficiency and know-how in planning bond sale procedures.
6. Many school administrators do not appear to consider the

93Stollar, Marketability of Ohio School Bonds, p. 106
attainment of a high credit rating an important long-range goal.

Previous studies mentioned above have considered various internal and external factors relating to school bond interest rates, but have not contributed significantly to the effect that other independent variables may have on the net interest rate of school bonds.
CHAPTER III

PRESENTATION AND ANALYSIS OF DATA

The data for the study were secured by responses to an instrument administered to school administrators representing school districts which passed bond referenda in fiscal 1977 and sold building bonds shortly thereafter for the construction of facilities. The instrument is included in Appendix D.

School administrators were asked in Part I of the instrument to supply basic bond issue data concerning the bonds sold as a result of the fiscal 1977 bond referenda. In Part II of the instrument, information was solicited by a "yes" or "no" response. If the response was yes, the school administrator was requested to continue and check the specific duties that were identified as the activities performed. The statements to be identified were possible activities that may have been used in preparing for a bond offering.

The population consisted of Illinois public school districts which passed school building bond referenda and may market first mortgage revenue bonds during any fiscal year following the approval of the referendum. The sample for the study was comprised of Illinois public school districts which issued school building bonds as a result of passing a building bond referendum during fiscal 1977. The 40 school districts which sold bond issues following the bond referenda held in fiscal 1977 were sampled. Thirty-two school districts responded. The
response represented an 80 percent return.

The frequency distribution of bond sales by effective interest rate intervals for Illinois public school districts which issued school building bonds as a result of passing a building bond referenda during fiscal 1977 is reported in Table 2.

### Analysis of Selected Variables

For the purpose of this study the range of Moody Investors Service ratings were divided into three groups. The divisions were made as follows: all Moody ratings of A, Aa and Aaa were classified as high Moody ratings and those ratings of Baa or lower are classified as low Moody ratings. A third grouping was made of those districts that did not have a Moody rating.

Part I of the questionnaire asked if the district had a Moody rating or a Standard and Poor rating at the time of the sale of the building bonds. The results of those districts responding indicated that 70% of the districts had a Moody Investors Service rating while 30% of the districts did not have a Moody Investors Service rating and all thirty-two districts responded they did not have a Standard and Poor rating as reported in Table 3.

The range of bond bids received by the districts of the sample were one to twelve. Table 4 depicts the distribution of bond bids by those districts that had a high Moody rating, low Moody rating and no Moody rating. The highest number of bids was received by a district with a high Moody rating and the lowest number of bids received was by a district that did not have a Moody rating. Therefore, districts without
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<th>Effective Interest Rate</th>
<th>Frequency Distribution</th>
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</tr>
<tr>
<td>5.5 - 5.99</td>
<td>1</td>
</tr>
<tr>
<td>5.0 - 5.49</td>
<td>9</td>
</tr>
<tr>
<td>4.5 - 4.99</td>
<td>9</td>
</tr>
<tr>
<td>4.0 - 4.49</td>
<td>10</td>
</tr>
<tr>
<td>3.5 - 3.99</td>
<td>1</td>
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</tbody>
</table>

TABLE 2
EFFECTIVE INTEREST RATE DISTRIBUTION OF BONDS SOLD BY SCHOOL DISTRICTS IN ILLINOIS IN FISCAL 1977
TABLE 3

SCHOOL DISTRICTS WITH BOND RATINGS (N = 32)
TABLE 4
NUMBER OF BIDS BY MOODY RATING

- H - High Moody Rating (A or better)
- L - Low Moody Rating (Baa or lower)
- N - No Moody Rating
a Moody rating can expect to receive fewer bids on their bond issues. The fact that a district has a Moody rating signifies to the prospective buyer that particular standards have been met and that the higher the Moody rating the more stable financial position of the district. It is very important that a school district take the necessary steps to apply for and receive a Moody rating regardless of the size of the bond issue that is being offered for sale. Within each of the subunits that contained representatives of all three options, high Moody rating, low Moody rating or no Moody rating, districts with a high Moody rating received a larger number of bids.

The average number of bids received in each of the three Moody rating categories were compared with the variable of those districts that did or did not use a school attorney to assist in the preparation of the bond bids. As shown in Table 5, there were more bids received by those districts that used an attorney than those districts who did not use an attorney with one exception, those districts that had a high Moody rating whether they used an attorney or not received larger numbers of bids. Table 6 reports the utilization of school attorneys by the districts that responded to the questionnaire. From the response of the districts who used attorneys to assist in the preparation of the bond sale the most important factor was the Moody rating obtained by the school district. It is noted that regardless of the utilization of the services of an attorney those districts that had a high Moody rating received more bids, thus it is very important to the local school district to take whatever steps necessary to receive the highest Moody
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<th></th>
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</tr>
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<td>High Moody Rating</td>
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</tr>
<tr>
<td>Low Moody Rating</td>
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<td>.00</td>
</tr>
<tr>
<td>No Moody Rating</td>
<td>3.55</td>
<td>1.00</td>
</tr>
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Average Number of Bids

High Moody Rating -- Aaa Aa A
Low Moody Rating -- Baa
No Moody Rating --

TABLE 5
AVERAGE NUMBER OF BIDS
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<th>Moody Rating</th>
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<td>2</td>
<td>0</td>
</tr>
<tr>
<td>No</td>
<td>9</td>
<td>1</td>
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</table>

High Moody Rating -- Aaa Aa A  
Low Moody Rating -- Baa  
No Moody Rating --

**TABLE 6**

MOODY RATING/USE OF SCHOOL ATTORNEY
rating possible. The district that is growing or must replace or re-model present buildings, it is very important that the district receive the most favorable interest rate. It has been shown from the data submitted for inclusion in this study that the larger numbers of bids received the lower the interest rate paid by the district and thus saving money for the local taxpayers.

Many school districts use the services of financial consultants in addition to or instead of the school attorney. When the use of an attorney by a school district to prepare necessary papers for the sale of school building bonds was compared with those districts that used the services of a financial consultant to assist in the preparation of a sale of school bonds, it was found that in both instances that the districts had a higher Moody rating than those districts that did not use an attorney or financial consultant. Eighteen of the thirty-two districts that had high Moody ratings used a school attorney and fifteen of the thirty-two districts that used a financial consultant had a high Moody rating (Table 7). Of the districts that had Moody ratings, two districts had an Aaa rating, four districts had an Aa rating, twelve districts had an A rating, three districts had a Baa rating and nine districts did not have a Moody rating (Table 8). The utilization of the services of either a school attorney or financial consultant is one way that will help the local school district receive the most favorable Moody Investors Service rating. The Moody rating of a district is an important factor in the number of bids that are received by a school district. The assistance of an attorney or financial consultant in
<table>
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<td>Low</td>
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<td>0</td>
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<tr>
<td>No</td>
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<td>8</td>
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</table>

High Moody Rating -- Aaa Aa A  
Low Moody Rating -- Baa  
No Moody Rating --

TABLE 7  
MOODY RATING/USE OF CONSULTANT
TABLE 8

NUMBER OF SCHOOL DISTRICTS BY MOODY RATING (N=32)
obtaining a high Moody rating is essential to the school district if they are trying to receive a large number of bids. The larger the number of bids received by a school district, the greater possibility of receiving a more favorable bid for the building bonds. With the cry by the citizenry for more closer scrutiny of the school budget it is essential that the Board of Education and the local school administration take the necessary steps to secure the lowest interest rate for the building bonds sold. The length of time that taxpayers will be repaying the bonds should also be considered in the overall consideration. Many times the shorter term issues bring lower interest rates; the longer term commitment of the people may bring about failure of future bond referenda or tax rates. The local administrator must be aware of all of the ramifications of the bond issue being sold.

The assessed valuation of the districts in the sample ranged from six million to greater than three hundred twenty-four million. Table 9 depicts the assessed valuation of the school district in relation to the number of bids received. The hypothesis that the assessed valuation of the district is important in the ability of the school district to receive the largest number of bids possible was shown to be an important factor in obtaining the largest number of bids possible. The data shows that there was a wide range in the assessed valuation of the districts that received a specific number of bids; for example, those districts who received three bids had a range in assessed valuation from eight million to over two hundred seventy-six million. The mean number of bids received by the districts in the sample was five. Those districts
TABLE 9

NUMBER OF BIDS RECEIVED BY EACH DISTRICT IN SAMPLE (N-32)
that in fact received five bids had a range in assessed valuation of slightly greater than twenty-four million to greater than three hundred and twenty-four million. The stability and ability of the local district appears to be very important in receiving large numbers of bids. The stability of the district is reflected in the Moody Investors Service rating, the higher the rating the larger the number of bids received and the lower the interest rate, thus in the end bringing a substantial saving to the district. The smaller the district in assessed valuation makes it more difficult to receive a high Moody Investors Service rating and in the main makes it more difficult to receive larger numbers of bids and in turn higher interest rates.

The bonds outstanding index was developed using the following data provided by the responding school districts. The index was developed by dividing the amount of the bond issue by the assessed valuation of the district and that product being divided by the product of the building bonds outstanding divided by the assessed valuation of the district. The indices developed for each school are reported in Table 10. The range of the index was 0 to greater than 7.5. Eleven of the districts had an index of less than 0.5, while sixteen or 50% of the sample had an index of less than 1.5. The index depicts those districts with a small amount of bonds outstanding in relation to the assessed valuation in relation to the bonds sold were in a better position to receive and did in fact receive a greater number of bids on the building bonds that were offered for sale. The mean number of bids received was five and those districts with an index of less than two received greater than
<table>
<thead>
<tr>
<th>INDEX OF BONDS OUTSTANDING</th>
<th>NUMBER OF DISTRICTS RECEIVING BIDS</th>
<th>AVERAGE NUMBER OF BIDS RECEIVED</th>
<th>RANGE OF BIDS RECEIVED</th>
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<td>0 - .49</td>
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<td>5.27</td>
<td>2-10</td>
</tr>
</tbody>
</table>

**TABLE 10**

BONDS OUTSTANDING INDEX/NUMBER OF BIDS RECEIVED, NUMBER OF DISTRICTS RECEIVING BIDS AND THE RANGE OF BIDS
five bids per proposal offered for sale. The solvency of the district is important to the prospective buyer. The greater the issue offered and the larger number of bonds outstanding tends to drive down the number of bids received and ultimately higher interest rates and more cost to the district. When planning a sale of bonds, it is very important to be aware of all of the maturing bonds so that a district would have the fewest bonds outstanding. Most districts sell serial bonds but many times it may be more important and less costly to consider offering callable bonds.

Another variable considered in this study was the length of the bond issue. The length of the bond issue in relation to the number of bids received is shown in Table 11. The mean number of years for the issues reported in this survey was twelve. The most bids received by a district with an eighty year pay off of the bond issue was five. When data were presented by Moody Investors Service rating and the independent variable of use of an attorney (Table 12), the districts that used an attorney to assist in the sale of the bond issue, recommended sale of bonds for a shorter period of time than those districts that did not use an attorney. Also noted in Table 12 is that the use of an attorney by a school district resulted in a shorter average length of the bond issue regardless of the Moody Investors Service rating. The assistance of the attorney in reviewing all of the financial aspects of the sale in relation to the ability of the district to finance the issue resulted in the recommendation for shorter length of time for the bonds offered. The shorter repay schedule reduces the amount of interest the district
TABLE 11
LENGTH OF TIME FOR BOND ISSUE (YEARS)
<table>
<thead>
<tr>
<th>Moody Rating</th>
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<th>Without Attorney</th>
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<td>High</td>
<td>11.93</td>
<td>12.5</td>
</tr>
<tr>
<td>Low</td>
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<td>.0</td>
</tr>
<tr>
<td>No Moody Rating</td>
<td>10.375</td>
<td>15.0</td>
</tr>
</tbody>
</table>

Average Length of Bond Issue in Years

High Moody Rating -- Aaa Aa A
Low Moody Rating -- Baa
No Moody Rating --

TABLE 12
AVERAGE LENGTH OF BOND ISSUE
must pay but at the same time increases the annual payments for principle and interest. The attorney in conjunction with the local administration must determine the financial position of the district when offering the bonds for sale. Some districts must by necessity pay larger amounts of interest over a longer period of time because they cannot produce the revenue necessary to redeem the bonds for a shorter period of time.

Part II of the questionnaire asked those districts that utilized the services of a legal counsel to assist the school district in the sale of building bonds to identify those specific activities. Ninety percent of the districts that responded to the questionnaire used the services of the attorney to draw up the legal resolutions while sixty-nine percent of the districts utilized the services of the attorneys to draft the legal advertisement of the bond sale. The attorney was least used (34% of the time) in the placement of the notice of the sale in the Daily Bond Buyer. It must be noted that the statutes do not require the district to advertise the sale of the bonds, thus many of the districts either prepare their own advertisement locally or in the Daily Bond Buyer or do not advertise, thus saving money for the local district. In addition, about one-third of the districts responding used their attorney to assist the district in obtaining the most favorable Moody Investors Service rating warranted by the district and to assist the district in ascertaining the most favorable responsible bidder. From the data presented in this study the use of an attorney by a limited number of districts to obtain the most favorable Moody Investors Service rating is a tactical error. There may be a possible
explanation that some districts have an attorney on retainer and did not consider the attorney reviewing documents prepared by the school administrators as the attorney securing the most favorable Moody Investors Service rating. With the fact that districts receiving larger numbers of bids and lower interest rates having high Moody Investors Service ratings it is essential that every district large or small make every effort to get the highest Moody Investors Service rating possible.

The attorney was used by 85% of the respondents to check all aspects of the sale for legality. The assistance in the development of the prospectus for the sale of bonds was performed by the attorneys for 47% of the districts. Many of the larger districts had employees with the expertise to prepare the prospectus or the district hired a consultant or bond counsel to prepare the prospectus. Many times a consultant or bond counsel can be of more assistance than the school attorney because of their specialization and daily contact with the market. The attorney was present at the bond sale for only 47% of the districts but did assist 62% of the districts in the preparation and printing of the bonds and their delivery at the proper time. The attorneys did represent 43% of the districts in giving the approving opinion that was printed on each bond, did represent 47% of the districts in providing various certificates for review by the bond counsel and did attend the bond closing for 57% of the school districts. Table 13 gives a graphic presentation of the specific activities conducted by the legal counsel.
TABLE 13

UTILIZATION OF LEGAL COUNSEL TO ASSIST THE BOARD OF EDUCATION IN SALE OF BUILDING BONDS
Legend of Specific Activities of the Legal Counsel (Table 13)

a) drew up legal resolutions.

b) drafted legal advertisement of bond sale.

c) placement of notice of sale in the Daily Bond Buyer.

d) assisted in developing the prospectus for the sale of bonds.

e) assisted in arrangements for preparation and printing of the bonds and their delivery at the proper time.

f) school attorney was present at the bond sale.

g) assisted in obtaining best credit rating warranted for the district.

h) assisted in ascertaining the most favorable responsible bidder.

i) checked all aspects of the sale for legality.

j) approving opinion of bond counsel was printed on each bond.

k) prepared various certificates for review of bond counsel.

l) attended bond closing.
Many of the districts utilized the services of a financial consultant in addition to or in lieu of an attorney. The specific activities of the financial consultant are found in Table 14.

Sixty-one percent of the districts utilized the services of the consultant to draft the legal advertisement of the bond sale even though the Illinois statutes do not require the bonds to be advertised. The advertising of the bonds gives a wider range of prospective bidders and in the long run provide the districts with more bidders. Seventy-seven percent of the districts utilized the services of the consultant to contact Moody's Investors Service, Inc., Standard and Poor's Corporation and for the Municipal Service Division of Dun and Bradstreet, Inc. for advisory service and information relative to the issue. Eighty-five percent or more of the school districts that utilized the services of the financial consultant used the consultant for the following types of services: to check with the underwriters and representatives of other issues to determine the most favorable time to bring the bonds to market, to assist in developing the prospectus for the sale of bonds, to assist in arrangement for preparation and printing of the bonds and their delivery at the proper time, to assist in filing financial information for rating, to assist in obtaining the best credit rating warranted for the district, to assist in ascertaining the most favorable responsible bidder, to inform prospective investors that bonds are being prepared by a responsible banknote company which certified that proper safeguards would be taken and to attend the bond closing. When districts utilize the services of a consultant, they usually get a complete package of
TABLE 14

UTILIZATION OF FINANCIAL CONSULTANT TO ASSIST THE BOARD OF EDUCATION IN SALE OF BUILDING BONDS
Legend of Specific Activities of the Financial Consultant (Table 14)

___ a) drafted legal advertisement of bond sale.

___ b) checked with underwriters and representatives of other issues to determine the most favorable time to bring the bonds to market.

___ c) assisted in developing the prospectus for the sale of bonds.

___ d) assisted in arrangement for preparation and printing of the bonds and their delivery at the proper time.

___ f) assisted in obtaining best credit rating warranted for the district.

___ g) assisted in ascertaining the most favorable responsible bidder.

___ h) informed prospective investors that the bonds were being prepared by a responsible banknote company which certified that proper safeguards would be taken.

___ i) contacted Moody's Investors Service, Inc., Standard and Poor's Corporation and/or the Municipal Service Division of Dun and Bradstreet, Inc. for advisory service and information relative to the issue.

___ j) attended the bond closing.
services that assures the district that they have received the greatest opportunity to receive the largest number of bids possible thus the lowest interest rate possible. When districts consider using the services of a financial consultant, they generally have a number of consulting firms to choose from and like the selection of a school attorney the district reviews the past record of the organization and selects the organization that they feel will help them the most for the money they have to spend to secure the needed services.

The ability of school districts to secure the most favorable bid for the building bonds is very important to the taxpayers of the school district. Some districts elect to use the school attorney to assist in the preparation of materials for the sale of the building bonds while others use a financial consultant and still others do not use either the attorney or the financial consultant. Table 15 represents the average interest rate received by the school districts that use the services of an attorney or did not use the services of an attorney. Those districts that had a high Moody Investors Service rating (Aaa, Aa or A) regardless if they used an attorney or not received a lower average interest rate than a district with a low Moody Investors Service rating or a district that did not receive a Moody Investors Service rating. The district that paid the highest average interest rate was the district that did not have a Moody Investors Service rating and did not utilize the service of a school attorney. Districts that want to have the greatest opportunity to receive the lowest interest rate for building bonds should strive for a high Moody Investors Service rating (Aaa, Aa or A)
<table>
<thead>
<tr>
<th>Moody Rating</th>
<th>With Attorney</th>
<th>Without Attorney</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>4.720</td>
<td>4.698</td>
</tr>
<tr>
<td>Low</td>
<td>4.865</td>
<td>.000</td>
</tr>
<tr>
<td>No</td>
<td>4.982</td>
<td>6,750</td>
</tr>
</tbody>
</table>

High Moody Rating -- Aaa Aa A  
Low Moody Rating -- Baa  
No Moody Rating --

TABLE 15  
AVERAGE INTEREST RATE RECEIVED
and utilize the services of a school attorney to assist the local administrators and the board of education in the developments of the prospectus for the sale of bonds.

Table 16 further illustrates the variation and distribution of the interest rates received for the sale of a bond issue when a school district either uses the services of an attorney or financial consultant or does not utilize the services of an attorney or financial consultant in the development of the prospectus for the sale of bonds. Twenty-seven of the thirty-two districts utilized the services of either an attorney or financial consultant or both to prepare the prospectus for the sale of bonds while five districts reported they used neither. The interest rates for those districts who used outside professional help in the development of the prospectus ranged from 3.5 to 5.99 while those who did not utilize outside professional help in the development of the prospectus had a range of interest rates of 4.0 to 6.99. The lowest interest rate was received by a school district that utilized the professional services of a school attorney and/or financial consultant, while the highest interest rate of greater than 6.5% was paid by two districts that did not utilize the professional services of a school attorney and/or financial consultant.

Some districts solicited assistance from local banking officers in the sale of building bonds while other enlisted the cooperation of local or area municipal finance officers in planning the sale of bonds. Table 17 shows that the majority of the districts did not utilize the services of local financial advisors in the planning and sale of
### TABLE 16

**EFFECTIVE INTEREST RATE DISTRIBUTION BY USE OF ATTORNEY AND/OR FINANCIAL CONSULTANT IN DEVELOPMENT OF THE PROSPECTUS FOR SALE OF BONDS**

<table>
<thead>
<tr>
<th>Rate Range</th>
<th>Attorney and/or Financial Consultant</th>
<th>No Attorney and/or Financial Consultant</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.5 - 6.99</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>6.0 - 6.49</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>5.5 - 5.99</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>5.0 - 5.49</td>
<td>8</td>
<td>0</td>
</tr>
<tr>
<td>4.5 - 4.99</td>
<td>9</td>
<td>0</td>
</tr>
<tr>
<td>4.0 - 4.49</td>
<td>8</td>
<td>2</td>
</tr>
<tr>
<td>3.5 - 3.99</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

Total: 27 and 5
<table>
<thead>
<tr>
<th>Per Cent of School Districts</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solicit Suggestions from</td>
<td>24%</td>
<td>76%</td>
</tr>
<tr>
<td>Local Banking Officers in</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sale of Building Bonds</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enlisted Cooperation of</td>
<td>12%</td>
<td>88%</td>
</tr>
<tr>
<td>Local or Area Municipal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Finance Officers in</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Planning the Bond Issue</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
building bonds but did rely on the professional attorney or financial consultant to assist the district in planning and sale of building bonds. Five districts did not utilize the services of the professional attorney or financial consultant but did utilize the services of the local advisors. School districts that have local experts available to them should utilize their service both for the expertise the individuals have but also for the public relations value.

An important role played by the professional advisors to the school districts is the publicity and notice of bond sale. Table 18 identifies the procedures utilized by the school districts for the publicity and notice of bond sale. Eighty-six percent of the districts used the local newspaper to advertise the "legal" ad for the sale of the bonds, although the school districts are not legally required to advertise the sale of the bonds the majority of the districts reported that they did advertise for the public relations value and to make the local taxpayers aware of what they were doing and when the district was going to sell the bonds that had been approved. By knowing when the bonds were going to be sold the local taxpayers would then know when his tax bill would be going to increase. The effective timing of the sale as to have the money available to the district but yet not provide an excessive burden to the local taxpayer is very important.

Sixty percent of the districts advertised in the Bond Buyer and eighteen percent advertised in the Wall Street Journal. When districts advertise in publications that are not considered local they are increasing the opportunity to secure more bids and in addition, if
SPECIFIC ACTIVITIES OF PUBLICITY AND NOTICE OF BOND SALE

TABLE 18

PROCEDURES UTILIZED FOR PUBLICITY AND NOTICE OF BOND SALE
Legend of Specific Activities of Publicity and Notice of Bond Sale (Table 18)

___ a) local paper was used for the "legal" ad.
___ b) The Bond Buyer.
___ c) public hearings.
___ d) school administrative bulletins.
___ f) other financial publications.
___ g) was a prospectus or notice of sale sent to potential bidders? If so:
   1. in the Chicago metropolitan area [ ]
   2. in the State of Illinois [ ]
   3. in the United States [ ]
their Moody Investors Service rating is high, the length of the issue is short and their index of bonds outstanding is low they are sure to receive large numbers of bids and low interest rates. Many of the school district (26%) held public hearings to publicize the sale of the bonds.

Eighteen percent of the school districts responding advertised thru local school administrative bulletins while forty percent of the schools advertised in other financial publications. The prospectus was sent to potential bidders in the Chicago metropolitan area by eighty-six percent of the bidders while seventy percent sent a prospectus or notice of sale to institutions in the State of Illinois. Forty-six percent of the districts sent the prospectus or notice of sale to other states. The average number of notices of sale or prospectuses sent to potential bidders was 103. As stated before, the wider the distribution of the bid notice or prospectus by the local district the greater the opportunity to receive a larger number of bids and a lower interest rate. When the district employs a consultant to prepare the bond issue for sale, the consultant sends the prospectus to approximately 200 bidders throughout the United States. From the study it appears that the expertise of the financial consultant is somewhat better in that the results obtained in the way of more bids and lower interest rates than the school attorney.

Table 19 provides the summary of average interest rates paid by Illinois school districts that sold bonds resulting from the passage of bond referenda during fiscal year 1977. The average interest rate for this fifteen month period was 4.83 percent. Only the months of
<table>
<thead>
<tr>
<th>Month</th>
<th>Year</th>
<th>Average Net Interest Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>October</td>
<td>1976</td>
<td>5.95</td>
</tr>
<tr>
<td>November</td>
<td>1976</td>
<td>4.25</td>
</tr>
<tr>
<td>December</td>
<td>1976</td>
<td>4.66</td>
</tr>
<tr>
<td>January</td>
<td>1977</td>
<td>5.22</td>
</tr>
<tr>
<td>February</td>
<td>1977</td>
<td>4.29</td>
</tr>
<tr>
<td>March</td>
<td>1977</td>
<td>4.37</td>
</tr>
<tr>
<td>April</td>
<td>1977</td>
<td>--</td>
</tr>
<tr>
<td>May</td>
<td>1977</td>
<td>5.14</td>
</tr>
<tr>
<td>June</td>
<td>1977</td>
<td>4.90</td>
</tr>
<tr>
<td>July</td>
<td>1977</td>
<td>4.90</td>
</tr>
<tr>
<td>August</td>
<td>1977</td>
<td>5.00</td>
</tr>
<tr>
<td>September</td>
<td>1977</td>
<td>4.10</td>
</tr>
<tr>
<td>October</td>
<td>1977</td>
<td>--</td>
</tr>
<tr>
<td>November</td>
<td>1977</td>
<td>4.94</td>
</tr>
<tr>
<td>December</td>
<td>1977</td>
<td>5.09</td>
</tr>
</tbody>
</table>

**TABLE 19**

MONTHLY AVERAGE INTEREST RATE PAID BY SCHOOL DISTRICTS THAT SOLD BONDS RESULTING FROM THE PASSAGE OF BOND REFERENDA DURING FY77
November 1976, December 1976, February 1977, March 1977 and September of 1977 had an average interest rate below the fifteen month average. The range of interest rates paid for the fifteen month period was a low of 4.10 percent paid in September of 1977 to a high of 5.95 percent paid in October of 1976. From the summary of the fifteen month period it appears the best time to consider selling school building bonds would be the last two months of the calendar year and the months of February, March and September. The larger amount of money available for investment near the end of the calendar year would account for the lower interest rates paid in November and December but the other three months are not as clear. One possible explanation would be the availability of money prior to the filing of the federal income tax.

Even though large banks or combinations of banks bid on the school building bonds the banks in turn sell the bonds to individual investors.

A number of variables had been analyzed separately to see if there is a relationship to the number of bids and the interest rates; however, the inter-relationship of the variables was not analyzed and the effect of any one variable should be concluded with caution.
CHAPTER IV

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

The purpose of the study was to examine relationships between school bond interest rates and number of bids received by school districts in Illinois and selected factors related to the preparation of a school bond offering for bid. Selected factors that were designated by the literature reviewed as affecting school bond interest rates were examined to determine if such factors did, in fact, contribute to more favorable effective interest rates and a higher number of bids received by a sample of Illinois public school districts that passed a school building bond referendum during fiscal year 1977.

Summary

The population for the study was defined as Illinois public school districts which passed school building bond referenda and may market first mortgage revenue bonds during any fiscal year following the approval of the referendum. The sample for the study was comprised of Illinois public school districts which issued school building bonds as a result of passing a building bond referendum during fiscal 1977.

Literature related to capital outlay financing of public schools including textbooks, dissertations, periodicals, reports, and other written or published materials was reviewed. Ferguson reported that
two of the major predictors of the number of bids received were the amount of the issue and the Moody Investor's rating. In addition, independent studies conducted by Ferguson, Hudson and Stollar reported the date of the bond sales, the debt obligation of the district and the length of the bond issue as significant predictors for determining the interest rate. Ten Haken stated that legal services, credit rating and publicity and notice of sale are significantly related to a lower net interest cost with legal services being the most significant.

Data were collected by an instrument composed of two parts. Part I of the instrument was designed to collect basic information relative to the bond offering and the school district. Data obtained included name of the school district, legal number of the school district and the county. The remaining items of Part I were selected variables used in the study. The variables included were identified from the literature as being important factors. The variables included were equalized assessed valuation, amount of the issue, length of the issue, the Moody Investor's rating, date of the issue, number of bids received, interest rate, range of the interest rates on bids, outstanding indebtedness and the number of bond issues outstanding.

Part II of the instrument contained six basic areas for evaluating Illinois school bond administrative practices. A list of the practices was submitted to a panel of recognized authorities on marketing school bonds in Illinois and found to be considered important. The administrative practices include: (1) utilization of legal counsel, (2) solicitation of suggestions from local banking officers, (3) enlistment of local
or area municipal finance officers, (4) enlistment of assistance of financial consultant, (5) credit rating and (6) publicity and notice of bond sales. The sixth administrative practice listed above, although not legally required by the State of Illinois, was thought to be important by the panel of experts.

The studies of Ten Haken in New York state and Ferguson in Indiana were used as sources in selecting the variables the panel of experts reported as being important for receiving favorable school bond interest rates and largest number of bids. Using the selected variables identified above, the data received from the districts were presented in a narrative form utilizing graphs, charts and tables where appropriate.

Findings

A number of significant findings were revealed by the study and are listed below:

1. The ratings received from Moody's Investors Service, Inc., showed a significant relationship with the number of bids received. Those districts that had "high" Moody ratings (ratings of A, Aa or Aaa) received more bids than districts that had a "low" Moody rating (ratings of Baa or lower). Also districts that had a "low" Moody rating received more bids than districts that did not have a Moody rating.

2. The number of bids received by school districts that used a school attorney to assist in the preparation of the bond bids was greater than those districts that did not use an
attorney in the preparation of bond bids. Twenty-nine of the thirty-two districts reported in the study used a school attorney to assist in the preparation of bond bids. With the exception of the two districts that did not use an attorney and had a high Moody rating all school districts received higher number of bids when they used an attorney regardless of the Moody rating.

3. School districts that had a high Moody rating received greater number of bids regardless if the school used or did not use an attorney in the preparation of bond bids. When the number of bids received was compared with the Moody rating of the district and the use of an attorney, the results showed that there was a relationship between the Moody rating and the use of the attorney by the school district. As reported in statement one, the type of Moody rating played an important role in the number of bids received. The use of an attorney produced more bids for each bond sale but those schools that used a school attorney and had a high Moody rating received more bids than a school district that did not use an attorney and had a high Moody rating. The school districts that had a low Moody rating and used an attorney received more bids than a school district that had a low Moody rating and did not use an attorney. Also a school district that did not have a Moody rating and used an attorney received more bids than a school district that had no Moody rating and did not use an attorney.
School districts received more bids that had a high Moody rating and no attorney than school districts that had a low Moody rating or no Moody rating and used a school attorney. Even though the use of an attorney is important in getting larger number of bids, it is more important to have a high Moody rating. A high Moody rating is an indication of district financial stability to those seeking to purchase school building bonds.

4. Twenty-two of the school districts responding to the questionnaire had a Moody rating of Baa or better, only ten districts did not have a Moody rating. Although a Moody rating is not a requisite for selling school building bonds the results showed that on an average those districts that had a Moody rating received larger numbers of bids and lower interests. Many of the districts that did not have a Moody rating were small districts with regards to assessed valuation per pupil and size of the bond issue.

5. Assessed valuation showed a highly significant relationship with the size of the existing debt obligation of the school district. Because of the change in the debt limitation from 5% to 6% for dual districts (those districts that have students enrolled in either grades K-8 or 9-12) and with the maximum debt limitation of 12% for unit districts (those districts that have students enrolled in grades K-12) the higher the assessed valuation of the district the greater the
possibility of a higher outstanding debt. Those districts with higher assessed valuation tend on the average to have larger bond issues. The smaller the debt obligation in relation to the assessed valuation the greater numbers of bids received and lower interest rates paid.

6. Assessed valuation was strongly related to the indebtedness ratio. The index that was developed to show the relationship of the bonds outstanding to the assessed valuation and the size of the bond issue to the assessed valuation revealed that one-third of the districts had an index of bonds outstanding of less than .5 and twenty-seven school districts had an index of bonds outstanding of less than 3.

7. Assessed valuation showed a significant relationship with the rating received by Moody's Investors Service, Inc. The districts that had larger assessed valuation applied for and were granted a Moody rating. The districts that responded to this questionnaire and had a relatively low assessed valuation in the main did not apply for a Moody rating. The districts that did not have a Moody rating for the most part paid higher interest rates and received fewer bids. In two of the cases the building bonds were not placed for bid but the school district negotiated with local banks to sell their bonds. The School Code of the State of Illinois does not require competitive bidding to sell the school building bonds as long as the district does not exceed the statutory limitation of 7% interest.
Two selected variables were found to be significant predictors of bids received on a bond offering. The predictors were the amount of the issue and the rating received from Moody's Investors Service, Inc. Many financial institutions do not bid on bond issues of less than $1,000,000. Those districts that proposed to sell bonds of more than $1,000,000 received more bids than those districts that sold a bond issue for less than $1,000,000. The most significant predictor of number of bids was the Moody rating, the higher the Moody rating the larger number of bids received and the lower interest rates.

Three selected variables were found to be significant predictors of the effective interest rate on a bond issue. The predictors were as follows in order of the amount contributed:

1. Moody Investors Service rating. The average interest rate received was compared by high Moody rating (A rating or better), low Moody rating (Baa or less) and no Moody rating by those districts that used and did not use an attorney. The lowest average interest rate was received by those districts that had a high Moody rating irregardless of whether the school district used or did not use the service of an attorney in the preparation of the bond sale.

2. Previous debt obligation. Those districts that had an outstanding debt of less than two percent of their assessed valuation received lower interest rates for the bond bid. The closer the district came to the maximum legal bonded indebtedness the higher the interest rate.
3. **Length of issue.** Districts that sold bonds with a maturity schedule of less than 10 years received interest rates lower than those districts who sold building bonds for a period of years greater than ten. The range of three to twenty years was reported.

The most important finding of the study showed that of all of the variables of the study the most important single variable was the Moody's Investors Service, Inc. rating. The study did not show the administrative practices in the areas of legal services, financial planning, prospectus, publicity and notice of bond sale, and actual bond sale to be significantly related to effective interest rates even though practiced by school administrators. This is not to say that the school administrator is not an important key in the overall operation of the district but the most significant variable is the Moody Investors Service rating.

**Conclusions**

1. The study did not support the notion that effective net interest rate received is affected significantly by selected administrative practices in areas of legal services, financial planning, prospectus, publicity and notice of bond sale and actual bond sale. The outside consultant and/or attorney played a more significant role in determining effective interest rate. The local administrator in most all cases provided the data from which the bonding attorney or consultant carried out the specific tasks needed to sell the building
bonds at the lowest interest rate. Since most of the districts used either a bonding attorney or consultant in the preparation of the bond issue for sale, the differences found may be attributed to other conditions related to the bond sale.

2. Low effective net interest rate can be obtained by keeping the length of the bond issue to a minimum number of years. The longer the term the higher the interest rate. Districts that sold bonds for a term of ten years or less received lower net interest rates than districts that sold building bonds for a term of more than ten years.

3. A lower effective net interest rate can be obtained by offering bonds for sale during the last quarter of the calendar year. In order to determine a trend and to confirm the data presented the study must be extended beyond one year. The study did in fact cover a fifteen month period containing two last quarters. The study should be continued for at least two years to determine if a trend has been developed.

4. Amount of previous debt obligation is a strong predictor of effective bond interest rate to be received on a succeeding issue. That is the lower the level of prior debt, the lower interest rate that may likely be received on a new issue.

5. The size of the issue is a strong predictor of the number of bids that may be anticipated for a given bond offering. The very small and the very large issues tend to reduce the number of bids that may be expected. In addition, the issues
that are less than $1,000,000 tend to receive higher interest rates than those issues that are greater than $1,000,000.

6. Ratings received by Moody's Investors Services Incorporated are reliable predictors of number of bids to be received. Higher ratings tend to illicit more interest by bidders.

7. Ratings received by Moody's Investors Services, Incorporated are reliable predictors of lower interest rates to be received. Higher ratings tend to illicit lower interest rates by bidders.

8. The use of legal advisors and/or financial consultants tend to product larger number of bids per issue and lower net interest rates. The way in which the specialists assist the local school board and school administrator in the preparation and sale of building bonds tend to illicit larger number of bidders and lower interest rates.

Recommendations for School Boards and Administrators

The basic findings and conclusions of the study point to a number of implications that may be of value to the school administrator. Among the more important findings is the need for the school administrator to develop strong, positive administrative practices that insure the highest possible Moody Investors Service rating. Strong fiscal management on the part of the board of education and the school administrator may mean significant saving when a school building bond issue is presented for sale. The board of education and school administrator must realize their limitations and secure the services of a competent bonding attorney
or financial consultant to assist them in securing the largest number of bids and the lowest effective interest rate possible.

School administrators may be giving attention to procedures that are not productive as procedures used by the bonding attorney or financial consultant when attempting to secure the lowest possible net interest rate on a bond issue. The administrator should use some of his energies in developing sound fiscal management in bond debt reduction and budget preparation. One of the major factors that the bond buyer looks for is the stability of the school district starting with the bond obligations, assessed valuation, interest rates, local attitude toward the school with regards to passing of tax rate and building referenda. Additional consideration should be given to the development of a strong viable community relations program pointing out to the taxpayer the advantages of short term bond issues and the use of outside consultants or attorneys in the overall preparation of bond issues.

Recommendations for Further Study

Further study is warranted on the variables which appear to affect the interest rates which school districts receive:

1. The study should be replicated covering at least a two year period to determine if the predictors identified in the study continue to be predictors and remain somewhat consistent with respect to predictability.

2. A similar study should be conducted including other states in the sample to determine if the predictors derived for Illinois
bond interest rates and number of bids received remain somewhat consistent across state lines.

3. A national study should be conducted which could randomly sample school districts throughout the nation, using the variables identified from the study, to determine the best set of predictors for achieving lower effective bond interest rates and a higher number of bidders.

4. A study should be developed to determine how does the "callable" feature of a bond affect the number of bids and the interest rate.
APPENDICES
November 15, 1978

Dear

For my doctoral dissertation I am attempting to identify administrative practices which may have a favorable affect on interest rates of Illinois school district building bond sales.

You have been selected as one of a committee of seven experts to validate the data collection instrument for the study. Please evaluate the instrument by the following means:

(1) Respond yes if you agree that the practice is important.

(2) Respond no if you disagree with the practice or consider it irrelevant to bond marketing.

(3) Delete any words or phrases which you believe are unnecessary.

(4) Add words and phrases to the items where you deem that such additions would clarify.

Thank you for your assistance.

Respectfully,

William P. Cote  
Doctoral Student
APPENDIX B

LETTER TO SCHOOL SUPERINTENDENTS
December 14, 1978

Dear

Records of the Illinois Office of Education show that your school district conducted one of 40 successful building bond referenda during FY 1977. The 40 issues totaled $64,765,500.

In any given year, school districts in Illinois which sell bonds for capital improvements have to pay widely varying rates of interest. The rate of interest received and, therefore, the amount of money expended for interest, affects markedly the total cost to the school district and taxpayers for the particular project for which the bonds were sold.

In an attempt to identify certain factors which may affect bond interest rates, I am conducting an in-depth study of these 1977 school bond sales. I am requesting your response to the enclosed instrument. Information gathered will be used to identify selected factors which affected the bond interest rates of the issues in question.

The study is being conducted for my doctoral dissertation under the direction of Dr. Robert Monks, Department of Educational Administration, Loyola University of Chicago.

Your prompt return of this completed instrument in the enclosed self-addressed, stamped envelope will be greatly appreciated.

Thank you for your assistance.

Respectfully,

William P. Cote
Doctoral Student

Enclosures
APPENDIX C

FOLLOW UP LETTER
January 9, 1979

Dear

Several weeks ago you received my questionnaire concerning school bond issues. Due to the small number of districts in the sample it is very important that I receive your response. I realize that your schedule is very busy at this time of year, but I would appreciate your taking a few minutes to complete the questionnaire. I will send a summary of the findings of the survey as soon as the project has been completed.

Thank you for your help.

Sincerely,

William P. Cote
Doctoral Student
APPENDIX D

BASIC BOND INSTRUMENT DATA INSTRUMENT
BASIC BOND ISSUE DATA INSTRUMENT

PART I

Please complete the following questions before continuing to Part II.

1. Legal Name of School District

2. Legal Number of School District

3. County(s)

4. Equalized Assessed Valuation for 1977-78

5. Amount of Bond Issue

6. Length of Bond Issue

7. Ratings, if any, at the Time of the Bond Sale:
   a. Moody
   b. Standard and Poor

8. Place Bids Were Received and Opened

9. Date of Sale: (Month) ________ (Day) ________ (Year) ________

10. Time of Sale (Hour of Day) ________

11. Length of Time

12. Total Number of Bids Received

13. Net Interest Rate of Bid Accepted

14. Range of Interest Rates on Bids

15. Name of Successful Bidder

16. How many prior bond issues were outstanding at the time of the sale?

17. What was the bonded indebtedness outstanding at the time of the sale?
1. Did you utilize legal counsel to assist the Board of Education?

YES ___  NO ___

If yes, check all duties performed by counsel.
If no, proceed to question #2.

___ a) drew up legal resolutions.
___ b) drafted legal advertisement of bond sale.
___ c) placement of notice of sale in the Daily Bond Buyer.
___ d) assisted in developing the prospectus for the sale of bonds.
___ e) assisted in arrangements for preparation and printing of the
     bonds and their delivery at the proper time.
___ f) school attorney was present at the bond sale.
___ g) assisted in obtaining best credit rating warranted for the
     district.
___ h) assisted in ascertaining the most favorable responsible bidder.
___ i) checked all aspects of the sale for legality.
___ j) approving opinion of bond counsel was printed on each bond.
___ k) prepared various certificates for review of bond counsel.
___ l) attended bond closing.
___ m) other ______________________________________________________

2. Did the school district solicit suggestions from local banking officers concerning the proposed bond issue and sale thereof?

YES ___  NO ___
3. Did the school district enlist the cooperation of local or area municipal finance officers in planning the bond issue?

   YES ____   NO ____

4. Did the school district enlist the assistance of a financial consultant?

   YES ____   NO ____

   If yes, check all duties performed by the financial consultant.
   If no, proceed to question #5.

   ___ a) drafted legal advertisement of bond sale.

   ___ b) checked with underwriters and representatives of other issues to determine the most favorable time to bring the bonds to market.

   ___ c) assisted in developing the prospectus for the sale of bonds.

   ___ d) assisted in arrangement for preparation and printing of the bonds and their delivery at the proper time.

   ___ e) assisted in filing financial information for rating.

   ___ f) assisted in obtaining best credit rating warranted for the district.

   ___ g) assisted in ascertaining the most favorable responsible bidder.

   ___ h) informed prospective investors that the bonds were being prepared by a responsible banknote company which certified that proper safeguards would be taken.

   ___ i) contacted Moody's Investors Service, Inc., Standard and Poor's Corporation and/or the Municipal Service Division of Dunn and Bradstreet, Inc. for advisory service and information relative to the issue.

   ___ j) attended the bond closing.

   ___ k) other ____________________________________________

   ____________________________________________
5. Did the district apply to the following for credit rating?
   a) Moody          YES ____    NO ____
   b) Standard and Poor   YES ____    NO ____

If the answer to #5 is no, please explain reasons for not obtaining a credit rating.

6. Check the procedures you utilized for publicity and notice of bond sale.
   a) local paper was used for the "legal" ad.
   b) The Bond Buyer.
   c) public hearings.
   d) school administrative bulletins.
   f) other financial publications.
   g) Was a prospectus or notice of sale sent to potential bidders?    
      If so:
      1. in the Chicago metropolitan area
      2. in the State of Illinois
      3. in the United States
      4. how many were sent?
   h) other

7. Would you please send me a copy of your prospectus and a copy of your sale notice.
BIBLIOGRAPHY
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A. Books


B. Periodicals and Handbooks


Stollar, Dewey Henry, "How to Prepare a Bond Prospectus", *Nation's Schools*, LXXVI, No. 3 (September, 1965), pp. 68-69.


C. Reports


D. Documentary References


E. Yearbook


F. Unpublished Materials


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APPROVAL SHEET

The dissertation submitted by William P. Cote has been read and approved by the following committee:

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The final copies have been examined by the director of the dissertation and the signature which appears below verifies the fact that any necessary changes have been incorporated and that the dissertation is now given final approval by the committee with reference to content and form.

The dissertation is therefore accepted in partial fulfillment of the requirements for the degree of Doctor of Education.

May 1, 1979  
Date  
Dr. Robert L. Monks  
Director's Signature