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# Forecasting Municipal Budgets

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# FORECASTING MUNICIPAL BUDGETS

Submitted to  
Center For Public Service  
Masters of Public Administration Program  
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By  
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A research project submitted in partial  
fulfillment of the requirements for the  
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## **I. INTRODUCTION**

“Although the management control system includes information found in the accounting system, it also provides two types of information not found in the accounting system: (1) estimates of what will happen in the future and (2) estimates of what should happen. The former are called forecasts and the latter called standards or budgets.” (Anthony, 1994, p. 8) The preparation of an annual municipal budget is very important to the economic health of the municipality. Most managers, finance officers and governing bodies are looking at only the picture in front of them at that particular time. They are usually asking and answering questions relative to that particular year.

- How much is the percentage increase in salaries?
- What are the increases in expenses for the police department?
- What is the cost of the capital projects for this year?
- How much interest is being paid on Bond Anticipation Notes?
- How much are taxes going up?

The answers to these questions are typically provided with ease and address the specific annual budget increases or decreases for a given year. However, how about the answers to the following questions?

- What year will we pay off our present debt?
- Can we afford to keep borrowing money for today’s capital projects and have future generations pay the loans?

- Where will our expenses and salaries be in 3 years?
- What effect does this year's tax rate have on future years' tax rates?

"In the private sector, the corporate hierarchy determines objectives and adopts the strategic plan, which is updated from time to time to reflect changing conditions both inside and outside the organization. In the public sector, however, the plan or budget that ultimately emerges is a reflection of a consensus reached and deals struck in extended negotiations among various participating parties. In other words, the discipline evident in private-sector expenditure patterns is often lacking in public sector, making forecasting very difficult."(Steiss, 1989, p. 89)

The reality of the situation is that unlike the private sector, municipalities often address the present moment. That is we focus primarily on the impact of this year's budget with little consideration for the future. How do we know the true effect of this year's annual budget on the entity's economic health if we are not looking at or forecasting for the future?

One of the areas that needs to be examined is that of borrowing funds for capital projects. "Pay-as-you-go" financing encourages a community or organization to "live within its income." (Steiss, 1989, p. 89) Municipalities are allowed to fund an annual capital project by placing only 5% in the present year's budget and borrowing the remainder. This means if an entity wants to do one million dollars (\$1,000,000) in road repairs, building construction, etc., they can place fifty thousand dollars (\$50,000) in the present budget and borrow nine hundred and fifty thousand dollars (\$950,000). The obvious question is if this practice is continued each year,

when do I start to pay off this debt? Better yet, what will be the interest charges? "Maintaining accurate debt records is vital to short-term and long-term fiscal operations."(Steiss, 1989, p. 89)

Political decisions are often made within a given year to lower increases in spending to keep the tax rate down. What impact does this have on the economic health? Let us say a particular mayor or councilman, who is chairman of the finance committee, wants to keep the increase in taxes down this year and decides we are going to pay less principal in Bond Anticipation Notes to do so. Yes, we do know we will pay more in interest; but what effect does this action have on future years? If the town council decides the annual municipal budget expenses are to be reduced to allow for additional debt service to be paid, what effect will this have on future years' budgets and that year's tax rate?

So you see there are a number of variables within a municipal budget: revenues, expenses, debt service, surplus, capital programs, etc. which are separate but very closely interrelated. If a decision is made in one of these areas, does it affect another; and if so, how does it affect the other? We have to not only look at the relationship between those areas in a specific time period, this year's annual budget, but also their relationship over a period of time. We need to know that we not only are addressing today's economic health of the municipality, but also how we are affecting tomorrow's economic health.

## **II. LITERATURE REVIEW**

In Financial Management in Public Organizations, Alan Walter Steiss states, "before any plan can be formulated, a view of the future or forecast is required. Because of the difficulty of predicting future conditions and events, sound professional judgment is an essential ingredient in the development of forecasts." (Steiss, 1989, p. 4)

Mr. Steiss provides a thorough discussion of why forecasting is important and why its relationship to strategic planning is vital to both the short-term and long-term economic health of the organization. He quotes a definition of "forecast" from Planning, Forecasting and Control by Hartley and Cash. "A forecast is no more than someone's belief in the future based upon certain assumptions that have been made regarding future events. If the assumptions subsequently prove to be wrong, then the forecast will not prove to be right either. For this reason, it is necessary to set down formally the key assumptions on which major parts of the forecasts are based." (Hartley, Cash, 1997, p. 56)

The author provides some key elements for consideration when performing municipal budget forecasting. These elements include decisions for operating, capital, credit, investment and financing. The author provides detail reasoning for the need to perform forecasting and the elements that should be used.

In "Financial Management and Control of Public and Non-Profit Organization: Study Guide for PSMA 6005", Dr. Philip Disalvio identifies forecasting techniques as a component of planning which is the first step in his Management Control Process. He states "good planning requires reliable forecasts of economic and social conditions for one or many years in the future. These conditions are likely to be diverse and impact on planning in diverse ways." (Disalvio p. 3-15)

Dr. Disalvio's uses forecasting in a number of areas within an organization's strategic plan. These areas of forecasting include, but are not limited to, economic, market, technological, investment, organizational, annual operating and political. He also discusses the various methods of forecasting. He identifies five methods or types of analyses that fall under two categories as described below:

- A. Qualitative & Time Series Analysis & Projection
  - 1. Delphi Method
  - 2. Extrapolative
  - 3. Trend-line Analysis
  
- B. Casual Methods
  - 1. Regression Analysis
  - 2. Econometric Models

Dr. Disalvio provides a description of each method, and identifies the accuracy for medium term forecast (3 months-2 years) as well as an evaluation of the method regarding trend identification, technological cost and time period to generate the forecast. He provides examples of models on how some of the methods are applied; however, the main reason for providing this



information in the study guide is to show the need for forecasting and its relationship to strategic planning for both public and non-profit organizations.

"Municipal Current Fund Accounting in New Jersey", Rutgers the State University of New Jersey, is a study guide for one of eight required courses for certification as a municipal finance officer. The publication has been developed over a period of almost 20 years since the first course offering in 1982.

This publication addresses state legislation for current fund accounting in the following areas: taxes, ledgers, registers, accounting theory, encumbrance system, internal control, budget make-up, federal and state revenue accounting, cash management, cash and change funds and chart of accounts. The chapter on budget includes a total of 65 separate areas or subsections.

It is obvious that the number of authors and the collective amount of information speaks to the fact that the budget process in the State of New Jersey is highly controlled by legislation and, therefore, extremely important. It is important to note that none of the material focuses on forecasting or identifies a model for the process of forecasting. Perhaps we, as CFOs and managers, are so involved in looking at the present annual budget that we are failing to look at the future. I should state that the State has passed legislation requiring the formation of a three to six year capital budget for all municipalities. This is an attempt at forecasting future capital programs; however, there is no requirement to translate or determine its effect on the economic health of the municipality.

An investigation of the State of New Jersey Laws, New Jersey Statutes Annotated, regarding the financial requirements for local government entities reveals that forecasting for municipalities is not a requirement. There is also no requirement for forecasting of budgets placed on municipal utilities.

A legislative review found only one area of the municipal budget process that requires long-range planning. State Statute 40-A requires that all municipalities with a population less than 10,000 provide a three-year capital budget program and those municipalities greater than 10,000 are required to adopt a 6-year capital budget program. The effectiveness is based upon how well local politicians are willing to listen to expert opinions.

Additionally, it is important to note that the capital budget plan, while part of the budget in that it is used to calculate the line item expense "Capital Improvement Fund", is really a stand-alone budget document within the municipal or county budget. This means that we could project 3 or 6 years of capital programs, but still would not know the effect of the program on the municipality without looking at the debt service generated by the annual capital program.

In summary, although budget forecasting is important for municipalities to perform, there has been little written that aids or assist municipal officials to perform it effectively.

### **III. METHODOLOGY**

The goal of this research is to determine whether or not the practice of municipal or county budget forecasting is used within the State of New Jersey.

In order to obtain data on forecasting, I selected five municipalities from each county from the "State of New Jersey's 2001 Guide to Government", as written by the New Jersey League of Women Voters. Five municipalities would provide a sample that could be generalized due to the fact that each county has a Certified Municipal Finance Officer's Organization and a Municipal Managers Organization (some are informal) that share information among its members. Only municipalities that had municipal managers or finance officers were chosen and then sent a questionnaire.

The survey contains several questions that permit us to determine the existence of forecasting on the municipal level. The variables include or seek to determine if the municipality is forecasting for revenues, expenses, capital budget, BAN interest rates, bond interest rates, taxes and tax rate.

The next source of information was the twenty-one county governments in the State of New Jersey. A direct telephone contact was attempted with the person responsible for each of

the twenty-one county budgets. The telephone contact was necessary to insure the complete collection of data since the data would come from a census of all of the twenty-one county governments. The survey is exactly the same as the one for the municipalities.

The last source of data was New Jersey State Division of Local Government Services. The data were collected through a direct telephone call to Assistant Director Judy Tripodi. The same survey was used; however, instead of directing the questions toward a specific government entity, I was asking her for her knowledge as to what types of forecasting were being performed by the 21 county governments and the 566 municipal governments.

## **IV. RESULTS**

### **A. Municipal Survey**

The survey was sent to one hundred and five or 18% of the municipalities in the State of New Jersey. The municipalities were chosen from the "State of New Jersey's 2001 Guide to Government" as written by the League of Women Voters. I chose five municipalities from each of the 21 counties using no specific criteria. Forty-three or 41% of the municipalities responded. One to three respondents represented each of the 21 counties.

The questions in the survey simply asked the respondents to check "yes" or "no" to their municipality's practice regarding forecasting of the seven areas of the municipal budget: revenues, expenses, capital budget, ban interest, bond interest, taxes, and tax rate. Studying the numbers in "Table I" below we see that there were a total of 301 responses from all of the respondents, 1/3 of which were answered negatively.

In looking at the percentage of "yes" responses (Table I), we see that five of the seven budget areas reported having a "yes" response rate of 65% or more. These five budget areas are revenues, expenses, capital budget, taxes, and tax rate. Additionally there is one budget area, bond interest reporting a slightly lower percentage of positive responses (56%). The only budget area that reported a percentage of positive responses that was less than 50% was ban interest with 40%. Ranking the categories or budget areas by percentage of municipalities that perform

forecasting, we see that revenues (81%), capital budget (81%), and expenses (71%) are forecasted by over 3/4th of the municipalities. The budget areas tax rate (67%), taxes (65%), and bond interest (56%) are forecasted by about 2/3rds of the municipalities, while, ban interest only is forecasted by less than half (40%) of the municipalities. The average "yes" response rate was 76%. It appears that a large majority of the municipalities are performing forecasting for municipal budgets.

**"TABLE I"**

105 Surveys sent: 5 Municipalities in each of the 21 Counties in the State of New Jersey: 43 Responded				
<b>MUNICIPAL BUDGET FORECAST AREAS</b>				
	<b>NUMBER OF NO RESPONSES</b>	<b>NUMBER OF YES RESPONSES</b>	<b>PERCENTAGE OF NO RESPONSES</b>	<b>PERCENTAGE OF YES RESPONSES</b>
<b>REVENUES</b>	8	35	19%	81%
<b>EXPENSES</b>	10	33	23%	77%
<b>CAPITAL BUDGET</b>	8	35	19%	81%
<b>BAN INTEREST</b>	26	17	60%	40%
<b>BOND INTEREST</b>	19	24	44%	56%
<b>TAXES</b>	15	28	35%	65%
<b>TAX RATE</b>	14	29	33%	67%
<b>TOTAL</b>	100	201	33%	67%
	<b>N = 301</b>			

The next set of questions in the survey ask the respondents to identify the number of years forecasted for each of the seven budget areas or categories. The data in the Table II show the number of years forecasted by category.

We see that ban interest (60%) and bond interest (47%) have a mode (highlighted in gray) of "0 years". Revenues (47%), expenses (44%), and tax rate (37%) have a mode of "1 year". Capital budget (28%) is reporting a mode "6+ years". Taxes (35%) is bimodal, showing the highest number of responses for both "0 years" and "1 year". That means that the great majority of respondents forecast those budget areas no more than one year.

Summarizing the data in Table II (highlighted in red), "0 years" (33%) and "one year" (31%) year both received about 1/3<sup>rd</sup> of the responses, while "3 years" received 14%. The categories of "2 years", "5 years", and "6+ years" received 8%, 8%, and 6% respectively. There was one category "4 years" which received no responses.

It is important to note that when a municipality sells bonds it typically sets the interest rate for the life of the bonds. If a municipality sells bonds for ten years at 5% then the forecast should be 5% over the next 10 years. It is hard to believe that such a large number of respondents are not aware of this procedure. I believe it is reflective of not understanding how to forecast bond rates, or that since it is a fixed rate for the life of the bond, they simply do not perceive it as forecasting.

The number of responses for "1 year" shows that I probably should have included a definition of forecast on the survey. The answer of one year was given 94 out of a possible 301,

31% of the time. Is one year a forecast? I would like to refer to the very first paragraph of this paper for a definition from Robert Anthony of "forecasting". " Estimates of what will happen in the future and estimates of what should happen. The former are called forecasts and the latter are called budgets." (Anthony, 1994, p8) Perhaps, some of the respondents confused the budget process with forecasting.

**"TABLE II"**

105 Surveys sent: 5 Municipalities in each of the 21 Counties in the State of New Jersey: 43 Responded														
<b>MUNICIPAL FORECAST REPORTED BY YEARS</b>														
YEARS	0 year		1 year		2 years		3 years		4 years		5 years		6+ years	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%
<b>REVENUES</b>	8	19%	20	47%	7	16%	6	14%	0	0%	2	5%	0	0%
<b>EXPENSES</b>	10	23%	19	43%	5	12%	6	14%	0	0%	3	7%	0	0%
<b>CAPITAL BUDGET</b>	8	19%	2	5%	1	2%	11	26%	0	0%	9	21%	12	28%
<b>BAN INTEREST</b>	26	60%	10	23%	1	2%	4	9%	0	0%	1	2%	1	2%
<b>BOND INTEREST</b>	19	43%	12	28%	1	2%	3	7%	0	0%	3	7%	5	12%
<b>TAXES</b>	15	33%	15	35%	4	9%	6	14%	0	0%	3	7%	0	0%
<b>TAX RATE</b>	14	33%	16	37%	5	12%	6	14%	0	0%	2	5%	0	0%
<b>TOTAL</b>	<b>100</b>		<b>94</b>		<b>24</b>		<b>42</b>		<b>0</b>		<b>23</b>		<b>18</b>	
<b>PERCENTAGE OF TOTAL</b>	<b>301</b>													



As we finish studying the survey results in Table II we have to ask the question, "what length of time or times for forecasting can we look at to better explain our data?" In order to provide a better analysis of the data, I grouped the years into ranges and named the ranges, "0-1 years" (budget decisions), "2-3 years" (short term forecasting), "4-5 years" (long range forecasting), and "6+ years" (extended forecasting).

Studying the data in Table III, we see that the individual budget areas are reporting very similar data with the exception of Capital Budget (highlighted in gray). There are six budget areas, where approximately two thirds to three quarters of all of their responses are in the "0-1 years" range, i.e. ban interest (84%), bond interest (72%), taxes (70%), tax rate (70%), revenues (65%), and expenses (67%). In four of these budget areas, revenues, expenses, taxes, and tax rate approximately 1/4<sup>th</sup> of their responses fall in the range of "2-3 years". In the capital budget the data are more evenly distributed. The capital budget area recorded a similar number of responses (28%) in the "2-3years" and "6+years". This coincides with State Statute that requires municipalities with populations of 10,000 or more to prepare a six-year capital budget plan and those with less than a 10,000 population to prepare a three-year plan.

When comparing these data to the data in Table I we see that even though 67% of the respondents said they forecast (Table I) the large majority of municipalities are making budget decisions (0-1 years) rather than forecasting. Looking at the overall responses in the four ranges (highlighted in red) we see a clearer picture. Ranking the data we see that 64% of the responses are "budget decisions", 22% are "short range forecasting, only 8% are "long range forecasting, and 6% are "extended forecasting". If we were to add all of the data except that in the "budget

decision" range (0-1 year) we would see that only approximately 36% of municipal decisions are actually forecasts (2+ years).

**"TABLE III "**

105 Surveys sent: 5 Municipalities in each of the 21 Counties in the State of New Jersey: 43 Responded								
<b>MUNICIPAL FORECAST REPORTED BY TIME PERIOD</b>								
TIME PERIOD	Budget Decision		Short Range Forecast		Long Range Forecast		Extended Forecast	
	0-1 YEAR		2- 3 YEARS		4- 5 YEARS		6+ YEARS	
	#	%	#	%	#	%	#	%
REVENUES	28	63%	13	30%	2	5%	0	0%
EXPENSES	29	67%	11	26%	3	7%	0	0%
CAPITAL BUDGET	10	23%	12	28%	9	21%	12	28%
BAN INTEREST	36	81%	5	12%	1	2%	1	2%
BOND INTEREST	31	71%	4	9%	3	7%	5	12%
TAXES	30	68%	10	23%	3	7%	0	0%
TAX RATE	30	68%	11	26%	2	5%	0	0%
<b>TOTAL</b>	<b>194</b>		<b>66</b>		<b>23</b>		<b>18</b>	
<b>PERCENTAGE OF TOTAL</b>	<b>301</b>							

## **B. County Survey**

The survey was sent to the Chief Financial Officer in the 21 counties in the State and followed-up with a phone call. Seventy-two percent (15 of 21) of the Finance Officers responded. There were a total of 105 responses for all seven categories and the data shows 81 (77%) "yes" responses and 24 (23%) "no" responses (Table IV).

The data for the first section of the County Survey ( Table IV) are similar to the results of the Municipal Survey (Table I) since six of the seven budget areas or categories reported more "yes" responses when asked if they perform forecasting. Additionally, "ban interest" was again reported as the only category having more "no" responses, nine "no" answers out of a possible fifteen or 60%.

Looking at the seven categories we see that at least ten of the fifteen respondents reported forecasting (yes answer) for six of the seven categories. A greater percentage of the counties, as opposed to the municipalities, reported performing forecasting. Ranking the categories we report that one hundred percent of the counties forecast the capital budget, 93% forecast revenues and 93% forecast expenses, 73% forecast bond interest and taxes, 67% forecast tax rate, and 40% reported forecasting ban interest.

**"TABLE IV"**

21 Surveys sent: 1 to each of the 21 Counties in the State of New Jersey: 15 Responded

**COUNTY BUDGET FORECAST AREAS**

	NUMBER OF NO RESPONSES	NUMBER OF YES RESPONSES	PERCENTAGE OF NO RESPONSES	PERCENTAGE OF YES RESPONSES
<b>REVENUES</b>	<b>1</b>	<b>14</b>	<b>7%</b>	<b>93%</b>
<b>EXPENSES</b>	<b>1</b>	<b>14</b>	<b>7%</b>	<b>93%</b>
<b>CAPITAL BUDGET</b>	<b>0</b>	<b>15</b>	<b>0%</b>	<b>100%</b>
<b>BAN INTEREST</b>	<b>9</b>	<b>6</b>	<b>60%</b>	<b>40%</b>
<b>BOND INTEREST</b>	<b>4</b>	<b>11</b>	<b>27%</b>	<b>73%</b>
<b>TAXES</b>	<b>4</b>	<b>11</b>	<b>27%</b>	<b>73%</b>
<b>TAX RATE</b>	<b>5</b>	<b>10</b>	<b>33%</b>	<b>67%</b>
<b>TOTAL</b>	<b>24</b>	<b>81</b>	<b>23%</b>	<b>77%</b>
	<b>N = 105</b>			

The county respondents answered question number two ( Table V ) very similarly to the municipal respondents, with a few variations when looking at the highest frequency or mode for the seven budget areas by year (highlighted in gray). For the revenues (40%), taxes (40%), and tax rate (40%) categories the mode is "1 year." Expenses (33%) is bimodal in that it shows both "1 year" and "2years" with the same percentage. Ban interest (53%) reports its mode in the "0 year." The clearer variations occur in capital budget (60%) and bond interest (47%) that show the mode in "6+ years." This information shows that the county respondents clearly understand the capital budget process and the purchase of bonds and the resulting interest rate that occurs.

Summarizing the data in Table V (highlighted in red) the county data differ from the municipal data in that they are more evenly distributed throughout the yearly categories. Ranking by year we see "1 year" (26%) and "5 years" (25%) are about 1/4<sup>th</sup> of the responses, while "0 year"(18%) and "6+ years (17%) received about 1/6<sup>th</sup> of the responses. The categories "2 years" (9%) and "3 years" (6%) are each reporting less than 10% of the responses. The "4 year" category is reporting no responses; the same is true in the municipal survey.

**"TABLE V"**

21 Surveys sent: 1 to each of the 21 Counties in the State of New Jersey: 15 Responded														
COUNTY FORECAST REPORTED BY YEARS														
YEARS	0 year		1 year		2 years		3 years		4 years		5 years		6+ years	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%
REVENUES	0	0%	6	10%	4	27%	1	7%	0	0%	4	27%	0	0%
EXPENSES	0	0%	5	33%	5	33%	1	7%	0	0%	4	27%	0	0%
CAPITAL BUDGET	0	0%	1	7%	0	0%	0	0%	0	0%	5	33%	9	60%
BAN INTEREST	8	53%	3	20%	0	0%	1	7%	0	0%	2	13%	1	7%
BOND INTEREST	4	27%	0	0%	0	0%	1	7%	0	0%	3	20%	7	47%
TAXES	3	20%	6	40%	0	0%	1	7%	0	0%	4	27%	1	7%
TAX RATE	4	27%	6	40%	0	0%	1	7%	0	0%	4	27%	0	0%
TOTAL	19		27		9		6		0		26		18	
PERCENTAGE OF TOTAL	105													

Using the same categories as in the municipal survey, I grouped the data to provide a better analysis. The county data in Table VI differ from the municipal data in Table III in that the county data show greater variation. While 64% of the municipal responses were one or fewer years only 44% of the county responses fell in the budget decision category (0-1 year). Instead the latter covered the range of responses. In ranking the mode (highlighted in gray) in each budget area we see similar results. Revenues (40%), Ban interest (73%), taxes (60%) and tax rate (67%) are all showing the most responses in the "budget decision" (0-1 year) category. The expense budget area is reporting its highest frequency (40%) in "short range forecasting (2-3 years)." The modes of capital budget (60%) and bond interest (47%) fall into the extended forecast category (6+ years).

In the four ranges (highlighted in red) we see data that show a different picture from the municipal survey. Ranking the data we see 44% of decisions are "budget decisions" (0-1 years) not forecast. Twenty-five percent of the responses can be considered "long range forecasting" (4-5 years), "extended forecast" is reported 17% of the time, and "short range forecasting" reported 14% of the time.

In summary we see that 42% of the county respondents are actually forecasting for 4 or more years. These data differ from the municipal data where only 14% of the decisions are forecast for four or more years. The survey did not address the reason why the higher percentage exists among county respondents, however there are two reasons which come to mind. The first is that counties have larger staffs than municipalities to prepare budgets and to work on

forecasting. In addition, at the County level the Finance Department typically is charged with budget preparation, while at the municipal level the responsibility typically falls on the Administrator or Manager.

**"TABLE VI"**

21 Surveys sent: 1 to each of the 21 Counties in the State of New Jersey: 15 Responded								
<b>COUNTY FORECAST REPORTED BY TIME PERIOD</b>								
TIME PERIOD	Budget Decision		Short Range Forecast		Long Range Forecast		Extended Forecast	
	0-1 YEAR		2-3 YEARS		4-5 YEARS		6+ YEARS	
	#	%	#	%	#	%	#	%
REVENUES	6	10%	5	33%	4	27%	0	0%
EXPENSES	5	33%	6	100%	4	27%	0	0%
CAPITAL BUDGET	1	7%	0	0%	5	33%	9	60%
BAN INTEREST	11	73%	1	7%	2	13%	1	7%
BOND INTEREST	4	27%	1	7%	3	20%	7	47%
TAXES	9	50%	1	7%	4	27%	1	7%
TAX RATE	10	67%	1	7%	4	27%	0	0%
TOTAL	46		15		26		18	
PERCENTAGE OF TOTAL	105							

## **V. CONCLUSIONS AND RECOMMENDATIONS**

### **A. Summary Of Results**

The goal of this research is to determine whether or not the practice of municipal or county budget forecasting is used within the State of New Jersey.

In order to obtain data on forecasting, I selected five municipalities from each county from the "State of New Jersey's 2001 Guide to Government", as written by the New Jersey League of Women Voters

The survey contains several questions that permit us to determine the existence of forecasting on the municipal level. The variables include or seek to determine if the municipality is forecasting for revenues, expenses, capital budget, BAN interest rates, bond interest rates, taxes and tax rate.

The next source of information was the twenty-one county governments in the State of New Jersey. A direct telephone contact was attempted with the person responsible for each of the twenty-one county budgets. The telephone contact was necessary to insure the complete



collection of data since the data would come from a census of all of the twenty-one county governments. The survey is exactly the same as the one for the municipalities.

The results of the survey sent to the twenty-one county governments and the 105 municipal governments, show a lack of knowledge as to the difference between forecasting and budget decisions. The results of the survey showed that 44% of the County respondents and 64% of the municipal respondents are only making budget decisions. A municipal forecasting model should be developed that would be a guideline for decisions in charting the course for the economic health of the municipality. The type of forecasting that should be used is best defined as extrapolative, "a method of prediction that assumes that the patterns existed in the past will continue into the future, and that those patterns are regular and can be measured." (Patton, 1993, p. 318)

## **B. Recommendations**

The recommendation of this Capstone Project is to create a financial model to project the economic impact of a current municipal budget, because every municipal government unit in the State of New Jersey prepares a budget. In the process of preparing a forecast model, I investigated the existence of any forecast models being used presently. I contacted the State organization for municipal managers and administrators and the State organization for certified finance officers, and both reported that they are unaware of a model or method used for this

purpose. Additionally, the State Department of Community Affairs, which is responsible for certifying the municipal budgets of all 566 municipalities in the State of New Jersey, has no knowledge of a model for forecasting municipal budgets.

Forecasting should be accomplished for the two major divisions or sections of a municipal budget, which are expenses and revenues. First, a model should provide projections for both sides of a municipal budget, revenues and expenses. In order to be useful, the model will need to be realistic when charting the annual increases and decreases in revenues and expenses.

## REVENUES

Although the primary focus of government budgeting is on setting appropriations, there is another aspect of budget that should not be overlooked. This division or section is the revenue side of the budget. Here the various revenues are estimated and examined. These revenues are used to support the expenses or appropriations of the municipality's budget. On the revenue side, we will look at the areas, which comprise the anticipated revenues a municipality will collect and use for any given year:

- Available Surplus
- Retained Surplus
- Appropriated Surplus
- Other Surplus Used
- Delinquent Taxed Collected
- Other/Local/State/Federal/Revenues

## EXPENSES

It is not uncommon for budget expenses to be underestimated. Policy constraints may be made when adequate funds have been appropriated leading to frustration and administrative disruption. While persons involved in the budget process are only human, from a professional viewpoint, they should be concerned with realistically reflecting the needs and resources of the community, and should be aware of both long-range issues as well as this year's specific requests. In order for this model to be effective, it will need to be realistic when providing projections for capital and current expenses.

The operating expenses will include an analysis of the growth of annual expenditures within a municipal budget. This will allow us to not only take a look at the present year's spending level but also to chart where the spending levels of future budgets are headed. These expenses will be separated into the following categories:

- Salaries
- Other Expenses
- Capital Improvement Fund
- Debt Service
- Uncollected Tax Reserve
- Deferred/Other Charges

In addition, one of the major considerations in formulating this model will be the effect of the municipal debt service on both the model and the municipality's economic health. The debt service of the municipality is the result of funding capital projects through short-term bond anticipated notes or long-term municipal bonds. In order to develop a sound model, it will first

be necessary to develop a sound method for analyzing the debt service. In order to analyze the debt service, it will be necessary to devise a model that takes into effect present bonds and bond anticipated notes and their interest rates as well as their present payments. It will also be necessary for this model to allow us to project the annual debt cost.

An ideal and useful model should then take the analysis of debt service, revenue and expenses and develop projections for current taxes, municipal tax rate and the annual percentage of tax increase for the municipal portion of the tax bill.

Finally, the model should provide a format for tracking historical data. This will allow the municipality to identify trends or patterns as to annual increases or decreases in the tax rate, taxes, expenses and revenues.

### C. Municipal Budget Forecast Model

The attached appendix c. is a model that has been developed to provide municipal budget forecasting. The first page of the model is structured to allow us to look at a municipality's debt structure. The column "Debt Forecast" provides us with calculations that allow us to chart three years (1998, 1999 & 2000) of actual debt along with the present year (2001) and four years of projection (2002, 2003, 2004 and 2005). The debt forecast performs two major calculations. The first takes the "Opening Bond Debt" and subtracts the "bond Principal Payments" giving us the "Closing Bond Debt." The second calculation takes the "Opening BAN Debt" adding the

present year's "Capital Disbursements" (the sum total of the annual capital improvement program) and then subtracting the amount of "Capital Improvement Funds" (present year's annual budget line item) along with the annual "BAN Principal Payment." Then the calculation subtracts funds from other sources identified by footnote 3 as utility surplus, state grants, COAH funds and bond proceeds. The "Debt Forecast" column then provides a "Total Debt" for the year by adding the "Closing Bond Debt" and the "Closing Net BAN Debt."

It is very important to note that during the "Debt Forecast" function, there is only one assumption being made, that of "BAN Principal Payments." The assumption is that the municipality would like to pay-as-they-go. Footnote 1 at the bottom of the first page addresses this assumption by requiring the BAN principal payment to be at least 10% of the opening BAN debt. This assumption is based upon State Statute 40A which allows BANS to be financed for 10 years before permanent bonding is required. Please note that this particular community did not adopt this policy until 2001. The use of the model will allow a municipality to chart its BAN payments so that it can discipline itself to pay as it goes and not push off debt to future years.

The next section on page one of the forecast model calculates the "Debt Service Cost". This is the actual amount of monies budgeted for any given year. The amount of "Bond Principal" payment will come from the municipality's bond payment schedule within the municipal audit. The bond interest payment is taken from the same schedule. The "BAN Principal Payment", according to footnote 1 on the first page, should be at least 10% of the opening BAN debt for that same year. The "BAN Interest" payment is calculated by taking the

previous year's closing Ban debt and multiplying it by the previous year's interest rate and then dividing by One hundred.

The estimated interests rates are actual rates for the three historical years (1998, 1999 and 2000) and the present year (2001). When estimating interest rates for future years, it is recommended to be conservative, leaving room for increase of the time period.

The last calculation on page one shows the Borough's present borrowing position as it relates to the maximum borrowing capacity of 3.5% allowed all municipalities by the State of New Jersey. This formula works by taking the "Total Debt" and dividing it by the "Average Equalized Value" within the Borough, this will give you the percentage of total borrowing that must be less than 3.5%.

On page two of the model, we perform calculations for "Total Expenses" and "Total Revenues" which provides us with the "Current Taxes" needed to balance the annual budget (expenses minus revenues equals taxes). In preparing the numbers for this section of the forecast model we need to remember that any future plans for programming, staffing, and capital programs will effect the future and the validity of the model. " A variety of organizational factors, including competitive strategy, technology, structure, and productivity can influence the demand for labor." (Sherman, Bothlander, Snell, 1996, p. 161)

During these calculations, there are a number of assumptions made which need to be both conservative and realistic. They are as follows:

Salaries: 4% annual increase  
Other Expenses: 4% annual increase  
Uncollected Tax Reserve: 3% annual increase  
Available Surplus: 5% annual increase  
Delinquent Taxes Collected: 5% annual increase  
Other Local/State/Fed. Reserves: 4% annual increase

The above assumptions should be based on charting the municipality's historical data. It is important to note what "Dilbert" has to say about assumptions. "First, assume that any positive trends will continue forever and any negative trends will turn around soon. Then run the numbers thru a computer spreadsheet. The result is the future." (Adams, 1996, p. 163)

Upon completion of computing the "Current Taxes" the model then takes the "Property Assessment by Million" and calculates the "Municipal Tax Rate." It should be made clear that this is the municipal tax rate, and does not include the Board of Education or County portion of the tax rate. The % of tax rate increase vs. the previous year's tax rate is then forecasted. Lastly, an average of all forecasted years' % of tax rate increase is provided.

Page three is a summary page for important areas of municipal finance. This summary allows us to look at historical years and forecasted years to see if the forecasting is at or near the historical data. These areas include operating expenses, capital expenses, total debt, property tax base, annual increase, annual taxes, annual average tax per house, and tax rate.

## **D. Why Use A Forecast Model**

Using this model will help municipalities and county governments with the following.

- **Financial Control:** This will be the primary purpose of the forecast model. The model will provide the municipality with a plan that will assist in determining the amount of taxes to be levied and the amount of public funds to be spent.
- **Policy Instrument:** Whether or not it is stated, every budget reflects certain policy decisions by the various stakeholders. It will enable the stakeholders to make decisions that represent a plan for services translated into operations to deliver the services. The amount of capital spending, operating expenses, and retained surplus are just a few examples of policy decisions that the model will give direction toward.
- **Management Tool:** The way a budget is constructed and implemented provides the basis for management of the local government's operations. The forecast model will provide direction to management that will give guidelines for setting budget patterns.
- **Economic Tool:** The forecast model will assist the management and the governing body in setting the course for sound economic health of the government unit.



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**Appendix a**

**SURVEY**

**MUNICIPAL BUDGET FORECASTING**

1. Name of Municipality or County \_\_\_\_\_
2. Name of person completing form \_\_\_\_\_
3. Title of person completing form \_\_\_\_\_
4. Do you prepare your municipality's/county's annual budgets? \_\_\_\_\_
5. If not, then what is the title of the person performing this function \_\_\_\_\_
6. What areas of the municipal budget does your municipality/county provide forecast or predictions for?

- | Yes   | No    |  |
|-------|-------|--|
| _____ | _____ | A. Revenues                                    |
| _____ | _____ | B. Expenses                                    |
| _____ | _____ | C. Capital Budget                              |
| _____ | _____ | D. BAN Interest Rates                          |
| _____ | _____ | E. Bond Interest Rates (Bond Payment Schedule) |
| _____ | _____ | F. Taxes                                       |
| _____ | _____ | G. Tax Rate                                    |

7. How many years in advance is forecasting predicted in the following areas:

- |       |       |                        |
|-------|-------|------------------------|
| _____ | _____ | A. Revenues            |
| _____ | _____ | B. Expenses            |
| _____ | _____ | C. Capital Budget      |
| _____ | _____ | D. BAN Interest Rates  |
| _____ | _____ | E. Bond Interest Rates |
| _____ | _____ | F. Taxes               |
| _____ | _____ | G. Tax Rate            |

8. Please provide copies of forecast models that you are presently using.

# SURVEY DATA

Municipality Responding	Respondent	Title	Revenue		Expenditure		Capital Budget		BMM Interest		Bond Interest		Taxes		Totals		
			Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	
1. New Milford	Gene Vinci	Adm./ Treasurer	1		1		1		1		1		1		1		
2. Harding Township	Rob Whedman	Adm./ Treasurer	1		1		1		1		1		1		1		
3. Burlington Township	Kevin McLeann	Administrator	1		1		1		1		1		1		1		
4. Clark Township	John Leotta	Administrator	1		1		1		1		1		1		1		
5. Borough of Mountaineers	James Debbie	Administrator	1		1		1		1		1		1		1		
6. Brunen Township	Ronald Gatti	Manager	1		1		1		1		1		1		1		
7. Little Silver	Michael Blum	Administrator	1		1		1		1		1		1		1		
8. Newton	Camille Furlan	Manager/CFO	1		1		1		1		1		1		1		
9. South River	Brian Velazquez	Adm./ Treasurer	1		1		1		1		1		1		1		
10. Jamesburg	Dennis Jignozik	CFO	1		1		1		1		1		1		1		
11. Hardborne	Gregory Frara	Administrator	1		1		1		1		1		1		1		
12. Wall Township	James Varni	Adm. Instrator	1		1		1		1		1		1		1		
13. Leno Township	John Adams	Adm./ Treasurer	1		1		1		1		1		1		1		
14. Wright	Marie Gobbe	CFO	1		1		1		1		1		1		1		
15. Guttenberg	William Scoukos	CFO	1		1		1		1		1		1		1		
16. Stone Harbor	James Nicola	CFO	1		1		1		1		1		1		1		
17. National Park Borough	Bob Dougherty	Chief/Adm.	1		1		1		1		1		1		1		
18. Upper Deerfield	Louis Joyce	Adm. Instrator	1		1		1		1		1		1		1		
19. Plainfield Township	Allan Pleieress	Adm./ Treasurer	1		1		1		1		1		1		1		
20. Carleton	Patrick DeBasso	Adm./ Treasurer	1		1		1		1		1		1		1		
21. Dennis Township	Albert Knoll	Chief/Adm.	1		1		1		1		1		1		1		
22. Borough of Clayton	Rick Deville/Adm.	Administrator	1		1		1		1		1		1		1		
23. Clamans Point	Mary Stout	CFO	1		1		1		1		1		1		1		
24. Manalapan	Mary Hancock	Chief/Adm.	1		1		1		1		1		1		1		
25. Cumbury	Kathleen Kovach	CFO	1		1		1		1		1		1		1		
26. Abasco Township	Jeanette Gerock	Administrator	1		1		1		1		1		1		1		
27. Sparta Township	Henry Underhill	Manager	1		1		1		1		1		1		1		
28. Middle Township	Jim Alessi	Administrator	1		1		1		1		1		1		1		
29. Ocean City	Rick Deiner	Adm. Instrator	1		1		1		1		1		1		1		
30. Phillipsburg	Joseph Hirsch	CFO	1		1		1		1		1		1		1		
31. Limerick Township	Ruth Dawson	Chief/Tax. Col.	1		1		1		1		1		1		1		
32. Trenton	Jefor Eagan	Administrator	1		1		1		1		1		1		1		
33. Franklin	Kenneth W. Daly	Manager	1		1		1		1		1		1		1		
34. Oak Jordan	Christina Calvert	CFO	1		1		1		1		1		1		1		
35. Clinton	Robert Cutler	Administrator	1		1		1		1		1		1		1		
36. Cedar Grove	Thomas Tucci	Manager	1		1		1		1		1		1		1		
37. Lenoir	Dana Johnson	Accountant	1		1		1		1		1		1		1		
38. Hopewell	Ted Ritter	Chief/Adm.	1		1		1		1		1		1		1		
39. Pleasantville	Ted Freedom	Treasurer	1		1		1		1		1		1		1		
40. Moorestown	Thomas Merchel	CFO	1		1		1		1		1		1		1		
41. Darville	Ellen Sandman	Administrator	1		1		1		1		1		1		1		
42. Bellville	Thomas Barker	Manager	1		1		1		1		1		1		1		
43. Ridgecroft	James Ventrova	CFO	1		1		1		1		1		1		1		
TOTALS			34	6	33	10	38	8	17	26	18	24	18	28	18	29	14
PERCENTAGE			61%	19%	77%	23%	81%	18%	40%	60%	44%	60%	38%	67%	33%	33%	33%
Responses																	
Yes																	
No																	
Total																	

SURVEY DATA

106 Surveys sent: 5 Municipalities in each of the 21 Counties in the State of New Jersey  
 Number of Years Municipal Budget Areas Forecasted

Municipality Responding	Respondent	Title	Revenue	Expenses	Capital Budget	Bond Interest	Bond Interest	Taxes	Fee Rate
1. New Milford	Gene Vinc	Adm / Treasurer	1	1	0	0	0	0	0
2. Harding Township	Rich Madman	Adm / Treasurer	1	1	3	1	1	1	1
3. Burlington Township	Kevin McManen	Administrator	3	3	6	0	1	3	3
4. Clark Township	John Lesca	Administrator	0	0	6	0	0	0	0
5. Borough of Mountaineer	James Debbie	Administrator	0	0	0	0	0	0	0
6. Byron Township	Ronald Gatti	Manager	0	0	0	0	0	0	0
7. Little Silver	Michael Blah	Administrator	0	0	0	0	0	0	0
8. Newton	Camille Furtvela	Manager/CFO	1	1	3	1	1	1	1
9. South River	Brian Valentino	Adm / Treasurer	2	5	10	0	3	3	3
10. Jersaint	Dennis Lewicki	CFO	1	1	3	1	1	1	1
11. Hawthorne	Gregory Frans	Administrator	5	5	5	0	1	1	1
12. West Township	James Vignari	Administrator	2	2	6	0	0	2	2
13. Lapa Township	John Adams	Adm / Treasurer	1	1	1	0	0	0	0
14. Wharton	Maria Goble	CFO	2	2	2	2	2	2	2
15. Galloway	William Boucous	CFO	1	1	3	1	1	1	1
16. Stone Harbor	James Noods	CFO	1	1	3	0	0	1	1
17. National Park Borough	Bob Dougherty	Clerk/Adm.	1	0	0	0	0	0	0
18. Upper Deerfield	Louis Joyce	Administrator	0	0	0	0	0	0	0
19. Barren Township	Allen Pridmore	Adm / Treasurer	2	0	5	1	2	0	0
20. Caltens	Patrick DeBasso	Adm / Treasurer	3	3	6	3	3	6	6
21. Dennis Township	Albert Knoll	Clerk/Adm.	2	2	5	0	10	3	3
22. Borough of Clinton	Rick Devissante	Administrator	1	1	3	1	1	1	1
23. Carmels Point	Maria Spout	CFO	1	1	3	0	0	1	1
24. Marlinton	Mary Hancock	Clerk/Adm.	1	1	3	0	0	1	1
25. Cranbury	Kathleen Kovach	CFO	0	0	0	0	0	0	0
26. Pleasanton Township	Jennette Gerlock	Administrator	1	1	1	0	0	5	5
27. Sparta Township	Henry Lindenhil	Manager	1	1	3	3	3	0	0
28. Middle Township	Jim Abble	Administrator	3	3	6	3	3	3	3
29. Ocean City	Rick Deaver	Administrator	1	0	10	5	1	1	1
30. Phillipsburg	Joseph Hiczak	CFO	0	0	6	0	10	0	0
31. Lawrence Township	Ruth Dawson	Clerk/Tax Col.	1	1	3	0	0	1	1
32. Trenton	Alec Eason	Administrator	3	3	5	1	1	3	3
33. Frijoles	Kenneth W. Daly	Manager	1	1	6	1	1	1	1
34. Old Tappan	Christina Cevala	CFO	1	1	3	10	0	0	0
35. Clinton	Robert Gutter	Administrator	1	1	5	0	0	0	0
36. Cedar Grove	Thomas Tucci	Manager	2	2	6	0	0	0	0
37. Lumbago	Dana Johnson	Accountant	0	0	0	0	0	0	0
38. Hopewell	Ted Ritter	Clerk/Adm.	1	1	6	0	0	1	1
39. Flemington	Ted Freedom	Treasurer	3	3	6	15	2	2	2
40. Macungton	Thomas Marchal	CFO	3	3	6	3	3	3	3
41. Denville	Ellen Bergman	Administrator	1	1	15	1	1	1	1
42. Bethel	Thomas Blaker	Manager	2	2	6	0	0	2	2
43. Ridgewood	James Terhaves	CFO	5	5	6	5	5	6	6

SURVEY DATA

NUMBER OF TOTAL RESPONDENTS									
YEARS	Revenue	Expenses	Capital Budget	BMI Interest	Bond Interest	Taxes	Year Rate		
0 YRS	0	10	3	20	19	15	14		
1 YRS	20	19	2	10	12	15	18		
2 YRS	7	6	1	1	1	4	6		
3 YRS	6	6	11	4	3	6	6		
4 YRS	0	0	0	0	0	0	0		
5 YRS	2	3	9	1	3	3	2		
6+ YRS	0	0	12	1	3	0	0		
TOTAL	35	33	38	17	34	38	28	18	14
PERCENTAGE OF TOTAL RESPONDENTS									
YEARS	Revenue	Expenses	Capital Budget	BMI Interest	Bond Interest	Taxes	Year Rate		
0 YEARS	15%	23%	13%	60%	44%	35%	32%		
1 YEAR	47%	44%	5%	28%	26%	35%	37%		
2 YEARS	16%	12%	2%	2%	2%	9%	12%		
3 YEARS	14%	14%	28%	9%	7%	14%	14%		
4 YEARS	0%	0%	0%	0%	0%	0%	0%		
5 YEARS	5%	7%	21%	2%	7%	7%	6%		
6+ YEARS	0%	0%	28%	2%	12%	0%	0%		
TOTAL	100%	100%	100%	100%	100%	100%	100%		
NUMBER OF TOTAL RESPONDENTS ADJUSTED									
YEARS	Revenue	Expenses	Capital Budget	BMI Interest	Bond Interest	Taxes	Year Rate		
0-1 YEARS	1	1	10	0	5	1	1		
2-3 YEARS	1	1	8	0	10	1	1		
4-5 YEARS	4	4	11	2	2	4	4		
6+ YEARS	1	1	3	0	18	0	0		
TOTAL	7	7	33	2	35	6	6		
PERCENTAGE OF TOTAL RESPONDENTS ADJUSTED									
YEARS	Revenue	Expenses	Capital Budget	BMI Interest	Bond Interest	Taxes	Year Rate		
0-1 YEARS	2%	2%	29%	0%	12%	2%	2%		
2-3 YEARS	2%	2%	21%	0%	23%	2%	2%		
4-5 YEARS	9%	9%	28%	5%	5%	9%	9%		
6+ YEARS	2%	2%	7%	0%	47%	0%	0%		
TOTAL	15%	15%	77%	5%	81%	14%	14%		

SURVEY DATA

County Responding		Respondent	File	21 Surveys sent, one to each of the 21 Counties in the State of New Jersey County Budget Areas Forfeited											
				Revenue		Expenses		Capital Budget		Bond Interest		Times		Tax Rate	
				Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
1. Atlantic County		Jane Lugo	Comptroller	1		1		1		1		1		1	
2. Bergen County		Alfred DiStasio	Treasurer	1		1		1		1		1		1	
3. Camden County		David McPeak	CFO	1		1		1		1		1		1	
4. Cape May		Edward Grant	Treasurer	1		1		1		1		1		1	
5. Essex County		Paul Hopkins	Treasurer	1		1		1		1		1		1	
6. Gloucester County		Gary Schwarz	Budget Director	1		1		1		1		1		1	
7. Hudson County		Charles Bishop	Treasurer	1		1		1		1		1		1	
8. Mercer County		Steve Zolinski	Treasurer	1		1		1		1		1		1	
9. Monmouth County		Mark Adler	Finance Director	1		1		1		1		1		1	
10. Morris County		Glen Rog	Treasurer	1		1		1		1		1		1	
11. Passaic County		Robert Cellie	Treasurer	1		1		1		1		1		1	
12. Salem County		Josanna Bial	CFO	1		1		1		1		1		1	
13. Somerset County		Brian Newman	Finance Director	1		1		1		1		1		1	
14. Sussex County		Patrick Bailey	Budget Director	1		1		1		1		1		1	
15. Warren County		Dan Olszewski	Fiscal Analyst	1		1		1		1		1		1	
		15	TOTALS	14	1	14	1	14	0	14	4	11	4	10	8
			PERCENTAGE	87%	7%	87%	7%	100%	0%	87%	27%	73%	27%	67%	55%
			Number												
		Yes	81												
		No	24												
		Total	105												

**SURVEY DATA**

County Responding	Respondent	Title	Revenue	Expenses	Capital Budget	BAI Interest	Real Interest	Taxes	Tax Rate
1. Atlantic County	Jane Lugo	Comptroller	1	2	5	0	6	5	5
2. Bergen County	Alfred Diacelo	Treasurer	2	2	5	0	10	1	1
3. Camden County	David McPeak	CEO	2	2	0	0	0	0	0
4. Cape May	Edward Grant	Treasurer	5	5	0	0	5	5	5
5. Essex County	Paul Hopkins	Treasurer	2	2	0	0	0	0	0
6. Gloucester County	Gary Schwetz	Budget Director	6	0	0	3	3	5	5
7. Hudson County	Charles Blough	Treasurer	1	1	0	1	10	1	1
8. Mercer County	Steve Zolinski	Treasurer	3	3	0	6	15	3	3
9. Monmouth County	Maria Acker	Finance Director	5	5	0	6	6	6	0
10. Morris County	Glen Roe	Treasurer	1	1	0	1	15	1	1
11. Passaic County	Robert Galles	Treasurer	2	2	0	1	15	0	0
12. Salem County	Joanna Bell	CFO	1	1	1	0	0	1	1
13. Somerset County	Brian Newman	Finance Director	5	5	5	0	5	5	5
14. Sussex County	Patrick Bailey	Budget Director	1	1	5	0	0	1	1
15. Warren County	Dan Overhaski	Fiscal Analyst	1	1	5	0	15	1	1
<b>NUMBER OF TOTAL RESPONDENTS</b>									

SURVEY DATA

YEARS	15 RESPONDERS	Revenue	Expenses	Capital Budget	BAH Interest	Bond Interest	Taxes	The Rate
1 YRS	6	0	5	1	3	0	8	6
2 YRS	4	0	5	0	0	0	0	0
3 YRS	1	0	1	0	1	1	1	1
4 YRS	0	0	0	0	0	0	0	0
5 YRS	4	0	4	5	2	3	4	4
6+ yrs	0	0	0	9	1	7	1	0
	15	0	15	15	7	11	13	11
PERCENTAGE OF TOTAL RESPONDENTS								
YEARS	15 RESPONDERS	Revenue	Expenses	Capital Budget	BAH Interest	Bond Interest	Taxes	The Rate
1 YEAR	40%	0%	33%	7%	20%	27%	20%	27%
2 YEARS	27%	0%	33%	0%	0%	0%	0%	0%
3 YEARS	7%	0%	7%	0%	7%	7%	7%	7%
4 YEARS	0%	0%	0%	0%	0%	0%	0%	0%
5 YEARS	27%	0%	27%	33%	13%	20%	27%	27%
6+ YEARS	0%	0%	0%	60%	7%	47%	7%	0%
TOTAL	100%	100%	100%	100%	100%	100%	100%	100%
NUMBER OF TOTAL RESPONDENTS ADJUSTED								
YEARS	15 RESPONDERS	Revenue	Expenses	Capital Budget	BAH Interest	Bond Interest	Taxes	The Rate
1-1 YEARS	2	2	2	1	3	0	5	6
2-3 YEARS	0	0	0	0	0	0	0	0
4-4 YEARS	0	0	0	0	0	0	0	0
5+ YEARS	2	2	2	9	9	5	5	6
TOTAL	2	2	2	9	9	5	5	6
PERCENTAGE OF TOTAL RESPONDENTS ADJUSTED								
YEARS	15 RESPONDERS	Revenue	Expenses	Capital Budget	BAH Interest	Bond Interest	Taxes	The Rate
1-1 YEARS	13%	13%	13%	7%	63%	32%	32%	32%
2-3 YEARS	0%	0%	0%	0%	0%	0%	0%	0%
4-4 YEARS	0%	0%	0%	0%	0%	0%	0%	0%
5+ YEARS	13%	13%	13%	7%	63%	32%	32%	32%
TOTAL	13%	13%	13%	7%	63%	32%	32%	32%



# MUNICIPAL BUDGET FORECAST MODEL

		Forecast Of Debt & Debt Service Costs									
		1998	1999	2000	2001	2002	2003	2004	2005	2006	
		ACT.	ACT.	PRELIM.	BUDGET						
<b>DEBT FORECAST</b>											
1	Opening Bond Debt	4000	3900	3785	3685	3570	3450	3325	3195		
2	Net Debt	3213	1637	2058	2815	3433	3740	4016	4284		
3	Payments	1206	1857	1639	1370	750	750	750	750		
4	Investment Funds	50	90	100	100	100	100	100	100		
5	-Bond Principal Payments	100	105	110	115	120	125	130	130		
6	BAN Payments (1)	61	138	157	285	343	374	402	428		
7	BAN Payments (3)	2670	1208	625	367	0	0	0	0		
8	Closing Bond Debt	3900	3795	3685	3570	3450	3325	3195	3065		
9	Closing BAN Debt	1637	2038	2815	3433	3740	4016	4284	4488		
	<b>TOTAL DEBT @ 12/31</b>	<b>5537</b>	<b>5853</b>	<b>6500</b>	<b>7003</b>	<b>7190</b>	<b>7341</b>	<b>7459</b>	<b>7553</b>		
<b>DEBT SERVICE COST</b>											
	Bond Principal	100	105	110	115	120	125	130	130		
	Bond Interest	204	199	194	188	182	176	170	170		
	BAN Principal	61	138	192	285	343	374	402	426		
	BAN Interests (2)	109	54	60	97	108	131	161	171		
	Other ( Deferred Charges)	0	0	0	0	0	0	0	0		
	<b>ANNUAL DEBT COST</b>	<b>474</b>	<b>496</b>	<b>556</b>	<b>685</b>	<b>752</b>	<b>806</b>	<b>862</b>	<b>897</b>		
(1) Min. 10% Of Opening BAN Debt.											
(2) Estimated Interest Rate- % Based On FY Closing BAN Debt.		4.0	4.0	4.1	3.1	3.5	4.0	4.0	4.5		
(3) Utility Surplus, State Grants, COAH Funds, & Bond Proceeds.											
<b>BORROWING CAPACITY 3.5% OF AVERAGE EQUALIZED VALUATION (Property Assessment)</b>		0.94	0.97	1.5	1.1						

# MUNICIPAL BUDGET FORECAST MODEL

FORECAST TAXES FOR MUNICIPAL GOVERNMENT									
	1998	1999	2000	2001	2002	2003	2004	2005	
	ACT.	ACT.	PRELIM.	BUDGET					
<b>EST. OPERATING EXPENSES</b>									
Salaries	1708	1718	1801	1933	2010	2081	2174	2261	
Other Expenses	1389	1467	1511	1440	1498	1558	1620	1685	
Capital Improvement Fund	50	90	100	100	100	100	100	100	
Debt Service	474	498	556	685	752	806	862	897	
Uncollected Tax Reserve	811	866	894	941	988	1037	1089	1144	
Deferred / Other Charges	49	33	34	9	5	2	0	0	
<b>TOTAL EXPENSES</b>	4461	4670	4896	5108	5353	5594	5846	6087	
<b>ESTIMATED REVENUES</b>									
Available Surplus	897	988	945	1256	1319	1385	1454	1527	
- Retained Surplus	100	105	45	130	130	140	140	140	
Appropriated Surplus	797	893	900	1126	1189	1245	1304	1357	
Utility Surplus Used	200	150	110	100	100	100	100	100	
Delinquent Taxes Collected	159	159	175	105	110	116	122	128	
Other Local / State / Fed. Revenues	1026	1070	1203	1194	1242	1291	1343	1397	
<b>TOTAL REVENUES</b>	2182	2272	2388	2525	2641	2752	2869	2981	
<b>CURRENT TAXES = ( EXPENSES - REVENUES )</b>	2279	2398	2508	2583	2712	2842	2977	3106	
<b>PROPERTY ASSESSMENT-MILLIONS\$</b>	589.0	605.0	608.8	617.0	623.2	629.4	635.7	642.1	
<b>MUNICIPAL TAX RATE - \$ / 100</b>	0.388	0.399	0.414	0.419	0.435	0.451	0.468	0.484	
<b>% TAX INCREASE VS. PREVIOUS YEAR</b>	4.0	3.5	3.8	4.2	4.0	3.7	3.7	3.3	
<b>AVERAGE FORECAST TAX INCREASE - %</b>			3.7	3.7	3.7	3.7	3.7	3.7	

# MUNICIPAL BUDGET FORECAST MODEL

	BOROUGH GOVERNMENT				SUMMARY				BUDGETED MUNICIPAL TAXES			
	OPERATING EXPENSES \$000	ANNUAL INCREASE %	CAPITAL EXPENSES \$000	TOTAL DEBT \$000	PROPERTY TAX BASE \$ MILLIONS	ANNUAL INCREASE %	ANNUAL TAXES \$000	ANNUAL INCREASE %	ANNUAL AVG. TAX \$/ HOUSE	TAX RATE \$/100	ANNUAL INCREASE %	
<b>HISTORY</b>												
1989	2837		121	1754	211.0		1400		947	0.684		8.1
1990	3356	18.3	220	1452	212.9	0.9	1612	16.1	1106	0.757		14.0
1991	3320	-1.1	432	1545	215.9	1.4	1737	7.6	1165	0.803		6.1
1992	3339	0.6	211	1573	217.8	0.9	1771	2.0	1207	0.813		1.2
1993	3538	6.0	103	1288	219.1	0.6	1805	1.9	1201	0.825		1.5
1994	4093	15.7	267	1203	220.2	0.5	1840	1.9	1231	0.836		1.3
1995	3847	-6.0	608	1484	222.6	1.1	1990	6.5	1310	0.882		5.5
1996	4361	13.4	2423	3318	226.5	1.8	2077	6.0	1387	0.917		4.0
1997	4229	-3.0	1235	7283	**593.2**	2.1	2167	4.3	1447	**0.367**		1.4
1998	4461	6.5	1206	5637	589.0	-0.1	2279	5.2	1522	0.386		5.5
1999	4670	4.7	1857	5853	606.0	2.7	2388	6.2	1602	0.399		1.4
2000	4896	4.8	1839	6500	608.8	0.6	2508	4.6	1675	0.414		3.8
2001	5108	4.3	1370	7003	617.0	1.3	2583	2.99	1725	0.419		1.2
AVG. / YR.		5.3%	525			1.2%		5.3%				3.2%
<b>FORECAST</b>												
2002	5353	4.8	750	7190	623.2	1.0	2712	6.0	1811	0.435		1.0
2003	5594	4.5	750	7341	629.4	1.0	2842	4.8	1898	0.451		3.7
2004	5846	4.5	750	7459	635.7	1.0	2977	4.8	1988	0.468		3.7
2005	6087	4.1	750	7553	642.1	1.0	3108	4.3	2074	0.484		3.3
AVG. / YR.		4.5%	750			1.0%		4.7%	1140			3.7%
** ** Revaluation												