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STATE CAPITAL SPENDING AND BORROWING IN OHIO, 1947-1963

DISSertation

Presented in Partial Fulfillment of the Requirements for the Degree Doctor of Philosophy in the Graduate School of The Ohio State University

by

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* * * * * *

The Ohio State University
1964

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[Signature]
Adviser
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CHAPTER I

STATE CAPITAL EXPENDITURES AND DEBT IN OHIO: A PROLOGUE

Since World War II the magnitude of state governments' revenues and expenditures has grown tremendously. In 1946 total revenues of the states amounted to $8.6 billion and total expenditures equaled $7.1 billion.\(^1\) By the end of fiscal 1963 these figures had grown to $41.0 billion and $39.6 billion respectively.\(^2\) During the same period gross national product had increased from $210.7 billion\(^3\) to $585.1 billion.\(^4\) Thus, while gross national product has grown almost threefold, both state revenues and expenditures have grown about fivefold.

During the depression years of the 1930's, the states experienced serious financial difficulties as they faced a shrinking revenue base at the same time they were being called upon to cope with problems

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created by the depression. This calamitous situation created a series of fiscal crises for most states throughout the decade. Ironically, it was the war, the economic expansion it induced, and the concomitant scarcity of goods in the non-military sector of the economy which provided some measure of fiscal relief to the states. State revenues grew rapidly during this period, but the availability of goods and services for the states was quite limited. As a result, most states built up substantial surpluses.

This financial ease was short-lived. Soon after the war ended, the squeeze began once again. In part, the need for an expansion in state spending was to be expected merely because it had been reduced so much during the war. But this does not explain the reason for financial strain since, presumably, the states were putting away a portion of their increased revenues during the war in anticipation of the day when they would be required to make the postponed expenditures.\(^5\) New circumstances serving to raise the level of state expenditures more than proportionately above their prewar levels and which continue to exert pressure on state finances, almost twenty years later, were taking shape in the immediate postwar period. Population growth, a general demand for additional and better public services and facilities, urbanization, and inflation have accounted for much of the increase in state spending. Yet at the same time that residents demand new and improved services and facilities, many do not seem to expect to pay the increased

\(^5\)For a discussion of Ohio's postwar surplus see infra, Chapter II, pp. 51-52.
tax bills which may be a necessary consequence of program expansion.\textsuperscript{6} These two forces, greatly enlarged needs and desires for public services and facilities and a reluctance on the part of the taxpayers to provide the necessary funds, have been responsible for a new crisis in state finances.

Particularly troublesome and controversial in the postwar period have been state capital expenditures for such high-cost items as highways, educational facilities, office buildings, and welfare and correctional institutions. It sometimes appears that no sooner does a state complete a capital expenditure program designed to bring the quantity and quality of its capital facilities up to a minimum tolerable level than it is again faced with a new backlog of capital needs. Because such expenditures are so large, capital improvements may be deemed a principal cause of state financial stress in the postwar period. It is more or less axiomatic in public finance circles that the capital outlay sector of a state or local government's budget is the only one where substantial expenditure choices are open to policymakers.\textsuperscript{7} As a result of relative program rigidity current expenses are such that any significant variation is largely the result of factors outside the policy-making sphere. Consequently, the majority of real decisions are made, and the principal source of controversy involves

\textsuperscript{6}For a discussion of some data showing that people can expect substantial enlargement of the scope of government services at the same time they oppose tax increases, see V. O. Key, Jr., Public Opinion and American Democracy (New York: Alfred A. Knopf, 1961), p. 167.

\textsuperscript{7}See infra, Chapter III, pp. 66-67.
the size and composition of the capital improvement program and the source of funds to finance it. A corollary to the fact that capital outlays are subject to wider variations than are current outlays is that provision is frequently made for capital outlays on a residual basis. In other words, a common practice of states seems to be one of providing for current outlays out of the regular revenues (and, perhaps, any surplus revenues that may have accumulated), and then appropriating for capital outlays any balance remaining. Sometimes, if the funds available from current revenues for capital outlays are considered inadequate to provide what are considered to be minimum needs, borrowing might be used. In other cases, where capital needs are greater than available revenues and borrowing is thought unwise, some capital needs are not met.

A review of state finances between 1940 and 1963 reveals how important capital expenditures are in the overall state financial picture. In 1940 total state expenditures were $5.2 billion and total state capital outlays amounted to $737 million, or about 14 per cent of the total. By the end of fiscal 1963 state expenditures had increased to $39.6 billion and state capital outlays had grown to $8.1 billion, or almost 23 per cent of total state spending. Data such as these

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8See infra, Chapter III, p. 91.

9Historical Statistics, 1902-1953, pp. 19-20. Data for 1940 were used instead of 1946 because state capital outlays, greatly curtailed during the war, had not yet returned to their prewar levels by 1946.

show clearly that capital expenditures have become an increasingly significant component of state spending in the period since 1946.

Another important development in the state financial picture in the postwar period is the large growth in state debt. After decreasing from $15.8 billion in 1940 to $13.6 billion in 1946, long-term debt of the states increased to $22.8 billion in 1963. Thus, state long-term debt has increased almost 70 per cent in the postwar period. This is particularly interesting when it is recognized that federal debt—the debt which seems to be a cause for concern to so many—increased only $50.6 billion or about 19 per cent during the same period. Because long-term borrowing is almost never used by states to finance current outlays, it can be assumed that the majority of the additional state debt incurred since 1946 has been used to finance capital improvements.

The data discussed above demonstrate in a general way just how prominent a role capital improvements expenditures have played in state finances in the postwar period. Their importance in the state of Ohio has been no less significant either. The point can be demonstrated by looking at the growth in expenditures in Ohio since 1940. In 1940 Ohio

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14 Probably the principal non-capital outlay financed by debt in the postwar period has been veterans' bonuses. In 1963, approximately $.8 billion of such debt was outstanding. See Compendium, 1963, p. 39.
had total expenditures of approximately $318 million and capital improvements expenditures of about $26.5 million.\(^{15}\) Thus, about 8 per cent of Ohio's total spending went for capital outlays. By 1963 Ohio's total expenditures were $1.9 billion and its capital expenditures were about $356 million, or approximately 19 per cent of total expenditures.\(^{16}\) Another development in Ohio which is related to the growth in capital improvements spending is the growth in state debt. In 1946 Ohio had no long-term debt outstanding which was guaranteed in any way by the general credit of the state, and revenue debt of state agencies and commissions—legally nonguaranteed by the state—amounted to only $2.6 million.\(^{17}\) By 1963, however, bonded debt guaranteed by the state of Ohio totaled $435 million\(^{18}\) and nonguaranteed state debt had increased to approximately $400 million.\(^{19}\) Furthermore, as a result of two amendments to its Constitution in 1963 and 1964, Ohio now has an additional $750 million in borrowing authority to finance additional


\(^{16}\)Compendium, 1963, p. 21.

\(^{17}\)Compendium, 1946, p. 42.


\(^{19}\)Compendium, 1963, p. 38. Actually the Compendium shows $120 million guaranteed debt and $716.4 nonguaranteed debt. The $315 million of state highway construction debt payable only from highway user taxes is treated as nonguaranteed in the Compendium. In the text the $315 million has been subtracted from nonguaranteed debt and included in guaranteed debt because it is legally a debt of the state. For further discussion of guaranteed and nonguaranteed debt in Ohio see Chapter V, passim.
capital improvements and definite programs to be financed under this borrowing authority.20

The objectives of the study are to determine the nature and significance of capital improvements expenditures made in Ohio during the period 1947-1963, the methods used to finance these expenditures and the problems encountered in carrying out the financing, and to discover solutions for the problems which will facilitate future capital improvements programming and financing. This last point is particularly important. Unlike the federal government with its ability to engage in deficit financing for extended periods, states have relatively little latitude in financing their programs and they are quite limited in how often and to what extent they can resort to deficit financing. The record of what can happen to states which forget the importance of financial responsibility is well known.21

The following chapter will be concerned with the general pattern of capital improvement spending in Ohio during the years 1946-1963. Particular attention will be given to the overall growth of such expenditures vis-à-vis other expenditures, the relative importance of various components of total capital improvement spending, and the sources of funds used to finance the expenditures. In addition, the analysis will identify the nature of the major developments in the state's capital improvements financial policy during the period as revealed in statements of public officials and in actual financial data.

20Ohio Constitution, Article VIII, Secs. 2f and 2g.
21See, for example, B. U. Ratchford, American State Debts (Durham: Duke University Press, 1941).
In Chapter III the nature of capital budgeting, in general and as applied in Ohio, will be examined. Terminology in this area is not well standardized and precisely what a state can expect to accomplish with a capital budget is not always specified. Regardless of the definition, however, capital budgeting implies some form of planning for future capital improvements. When a state is spending more than $350 million a year on capital outlays as Ohio is doing, it is essential that it have a well-designed mechanism by which the projects to be constructed are selected and scheduled for construction. For this reason, the process as it is used in Ohio is examined and appraised.

As soon as the question of capital improvement expenditures has been broached, it is necessary to consider the manner in which they should be financed. The principal question encountered involves a consideration of the relative merits of financing such asset-creating expenditures on a cash or pay-as-you-go basis or, alternatively, by means of long-term borrowing. Precisely what role each of these revenue sources should play in financing a state's capital improvements program is a question which is difficult to answer and which is a perennial source of debate. This controversy is hardly new and there are emotional factors inherent in it which defy the usual tools of economic and fiscal analysis. It seems by no means unreasonable to assume that the existing body of theory can supply some guidelines which might be useful in the future. In the fourth chapter the major theoretical contributions to the question of borrowing versus pay-as-you-go finance (at the state and local government level) will be reviewed and evaluated.
Assuming prudent fiscal policy will permit some use of borrowing, at least occasionally, to finance Ohio's capital improvement program, one must then consider the fact that Ohio's Constitution prohibits borrowing in excess of $750,000 except to repel invasion, suppress insurrection, or to defend the state in time of war. Any additional borrowing on the credit of the state can be done only as a result of a constitutional amendment. What are the consequences of such a requirement? Because this limit has existed for more than one-hundred years and because few amendments permitting additional borrowing authority have been added to the Constitution, it can be assumed that many people accept it as a valuable check on irresponsible spending by the General Assembly. But there are others who share the ceiling advocates' desire for responsibility in the spending decisions of the legislators who also contend that such a ceiling does not do the job it was designed to do, that it is responsible for use of more costly and less desirable methods of borrowing, and that the record of states with no ceiling or a relatively liberal one is no worse—and, perhaps, better—than that for states with a restrictive ceiling. These claims and counterclaims

22Ohio Constitution, Article VIII, Sec. 1.

23Ibid., Sec. 2.

24Ohio's $750,000 debt limit—the state's first debt limit—was incorporated in the state's second Constitution, adopted in 1851. See Ernest L. Bogart, "The State Debt of Ohio," Journal of Political Economy XIX, No. 5 (1911), 390.

25One fiscal economist who holds this view and who would prefer to see no debt limits on the states is A. James Heins. See his Constitutional Restrictions Against State Debt (Madison: University of Wisconsin Press, 1963).
will be reviewed and analyzed in Chapter V. In addition, the nature and significance of the increasing use of nonguaranteed debt will be analyzed in this chapter. Knowledge of this form of debt is important because it makes up such a large portion of the total debt of the state of Ohio. It is also important because the ability to authorize such borrowing gives the General Assembly more latitude in raising money than is suggested by the $750,000 debt limit.

Once permission to borrow has been granted, either by means of constitutional amendment or by legislative approval, the borrowing program must be managed. Decisions must be made as to the specific attributes of the bonds sold, in terms of what best suits the state's needs and what the market will accept. Once the bonds have been sold, the regular service charges must be paid and, eventually, the debt must be retired. If the importance of debt management is ignored, however, the borrowing state may suffer in terms of inferior credit ratings and higher administrative and interest expenses. Laws may exist which limit unduly the debt managers' discretion and the overall process of debt management may be fragmented excessively if too many state agencies are involved. In Chapter VI the structure of Ohio's debt, the organization for managing the debt, and the nature of the laws and policies

26 That these nonguaranteed forms of debt are in fact debt of the state, in the opinion of many authorities, will be discussed in Chapter V.

27 Just how important sound debt management can be to a state is articulated in the series of papers under the general title "Principles of State Debt Financing," in National Tax Association, Proceedings of the Fifty-Fifth Annual Conference, 1962 (Harrisburg, 1963), pp. 87-139.
controlling debt management in Ohio will be examined and evaluated in terms of the factors just mentioned.

On the basis of the analysis presented in the first six chapters, Chapter VII will be concerned with possible revision in certain Ohio laws and policies relating to capital improvements planning and financing. More specifically, attention will be given to the development of a long-range capital improvements financial policy, to revision in the state's debt limit, and to the arrangements for managing the debt of the state and its agencies, commissions, and universities.
CHAPTER II

STATE CAPITAL IMPROVEMENTS EXPENDITURES AND THEIR FINANCING IN OHIO, 1947-1963

This chapter analyzes the capital improvements program of the state of Ohio in the period 1947-1963 in terms of the following: (1) its growth measured in actual dollars expended; (2) its relation to other state spending programs, to the growth in the states population and income, and to a changing price level; (3) the nature or types of improvements provided; (4) the sources of the funds which financed it; and (5) the nature of and changes which have occurred in the state's capital improvements financial policy during the years 1947-1963.

Although some reference to Ohio politics is necessary, no attempt is made here to explore all the political minutiae which have helped to shape the financial policies of the state. Instead, the political aspects of Ohio's capital financing policy are considered only enough to facilitate an analysis of changes in financial policy. Similarly, no detailed description or evaluation of the state tax system has been made; references to it are confined principally to the section which identifies the sources of the funds used to finance the improvements.¹ In short, this chapter is largely quantitative in nature

¹See infra, pp. 30-44.
and is directed toward accomplishing the five-part objective indicated above. No attempt has been made to evaluate the level of capital improvements expenditures relative to some particular program or group of programs which might seem desirable, to the amounts expended by the state for purposes other than capital improvements, to the distribution of the outlays among the various components, or to the efficacy of the methods used to finance them.²

The scope of state capital improvements

Capital improvements expenditures of the state of Ohio, as reported in the official records of the state, are comprised of outlays made by the state's operating departments, agencies and, to a lesser extent, by its universities. Almost all such improvement expenditures must be approved and appropriated for by the state legislature. These are the improvement expenditures included in the annual financial reports issued by the Auditor, Treasurer, and the Department of Finance.

There are, however, other expenditures for public improvements made by instrumentalities of the state of Ohio which are not included in the consolidated reports just mentioned. Certain capital improvement spending by the state universities and all such spending by the Ohio Turnpike Commission, the State Bridge Commission of Ohio, and the State Underground Parking Garage are excluded from the official state reports.

²The last of these questions is considered in Chapters IV-VI.
For purposes of this study, all capital improvement spending of the state universities and of the semi-autonomous turnpike, bridge, and parking garage commissions are included, along with similar spending done by state departments and agencies to obtain total "state of Ohio capital improvements." Although legally separate in most respects from the regular activities of the state (i.e., once legislation authorizing the particular activity has been enacted, the instrumentality operates on its own and seldom requires an appropriation to finance its activity), activities such as self-liquidating university improvements (e.g., dormitories, dining facilities, and athletic facilities), the Ohio Turnpike, the State Bridge Commission, and the Underground Parking Garage operate to serve the public purpose, were initially sanctioned by legislative enactment to carry out a public purpose, and remain under some degree of legislative scrutiny and control.

Data sources

This broader viewpoint of what constitute the activities of a state is followed by the Census Bureau in its annual compilation of state financial data, the Compendium of State Government Finances. For

Activities of the State Underground Parking Commission are not included in most of the financial data analyzed in this chapter although reference to them is made in subsequent chapters (see infra, Chapters V and VI). The Commission began selling bonds and constructing the Statehouse parking garage during 1963, but because it operates on a January 1-December 31 fiscal year (unlike most of the state's operations) it is not included here, because the terminal date for data included was June 30, 1963, in the case of those agencies reporting on a July 1-June 30 fiscal year and December 31, 1962, in the case of those reporting on a January 1-December 31 fiscal year. This practice is in conformity with that of the Census Bureau whose data are used here.
this reason, the *Compendium* has been particularly useful in this study and, in fact, it has been the primary source of data relating to state of Ohio capital improvements expenditures used in the following analysis. In addition to defining what constitutes state capital expenditures in the same manner as is done in this study, the Census Bureau has published in the annual *Compendium* detailed data regarding Ohio capital expenditures for most of the period from 1947 to 1963. When the Census Bureau changes its methodology, this is noted and attempts are usually made to revise data for earlier years so as to make them comparable to data derived by the changed methodology. Finally, the *Compendium* data are so arranged that they facilitate an analytical study of the type presented here (e.g., state capital outlays are reported on a functional or program basis), whereas most state reports are arranged more on a standard accounting or control basis and are less useful for a study of this type.

Of course, all data in the *Compendium* are derived from state records and reports and, theoretically at least, it would be possible to use state records to obtain data exactly comparable to the *Compendium* data. For a single researcher, however, such an undertaking would be heroic and its contribution to the basic analysis would be of dubious value. Although specific aspects of the following analysis have required use of state of Ohio records, the larger part of the analysis is based on *Compendium* data and unpublished details made available by the Census Bureau.
State of Ohio Capital Improvements
Expenditures, 1947-1963

Trends in general expenditures

State "general expenditure" is defined by the Census Bureau to include all state expenditure (in the expanded sense already discussed) except those made by the state liquor monopoly and the various state insurance trusts. Thus, this measure of state spending is considerably larger than that reported in most state of Ohio consolidated financial reports.

Total general expenditures by the state of Ohio have grown substantially since 1947. This can be seen in Table 1. In 1947 they totaled $392 million. By 1963 they had increased to almost $1,400 million and were about 256 per cent larger than in 1947. Furthermore, their increase has been very regular, although the rate of increase has fluctuated, and in every year since 1950 the annual volume of expenditures has always exceeded that of the preceding year.

Of particular interest here is the large growth in expenditures for capital improvements since 1947. Beginning at a $37.3 million level in 1947, capital outlay increased to $356.3 million in 1963, an increase of more than 800 per cent. With the exception of the comparatively insignificant expenditures for interest on debt, capital outlay was the stellar performer in terms of growth among the components shown in Table 1. It is noteworthy, however, that capital expenditures actually reached their maximum annual level in 1959 when they totaled $392.9 million. After 1959 they fell back to as low as $335.5 million in 1961 and then they moved back up to $356.3 million in 1963.
### TABLE 1
GENERAL EXPENDITURES BY CHARACTER AND OBJECT, STATE OF OHIO, 1947-1963\(^a\)
(In Millions of Dollars)

<table>
<thead>
<tr>
<th>Year</th>
<th>Current Operations</th>
<th>Capital Outlay</th>
<th>Assistance And Subsidies</th>
<th>Interest on Debt</th>
<th>Intergovernmental Exp.</th>
<th>Total General Exp.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1947</td>
<td>$125.0</td>
<td>$ 37.3</td>
<td>$ 55.1</td>
<td>$.1</td>
<td>$174.5</td>
<td>$ 392.0</td>
</tr>
<tr>
<td>1950</td>
<td>141.0</td>
<td>93.6</td>
<td>76.2</td>
<td>3.9</td>
<td>220.8</td>
<td>535.6</td>
</tr>
<tr>
<td>1951</td>
<td>152.7</td>
<td>75.0</td>
<td>63.1</td>
<td>3.7</td>
<td>248.7</td>
<td>543.1</td>
</tr>
<tr>
<td>1952</td>
<td>175.8</td>
<td>91.0</td>
<td>65.2</td>
<td>3.4</td>
<td>260.9</td>
<td>596.3</td>
</tr>
<tr>
<td>1953</td>
<td>186.1</td>
<td>93.0</td>
<td>63.8</td>
<td>7.6</td>
<td>256.4</td>
<td>607.0</td>
</tr>
<tr>
<td>1954</td>
<td>198.4</td>
<td>150.7</td>
<td>63.6</td>
<td>13.5</td>
<td>287.8</td>
<td>714.0</td>
</tr>
<tr>
<td>1955</td>
<td>208.9</td>
<td>283.4</td>
<td>64.1</td>
<td>13.6</td>
<td>326.6</td>
<td>896.7</td>
</tr>
<tr>
<td>1956</td>
<td>233.5</td>
<td>281.4</td>
<td>62.2</td>
<td>15.1</td>
<td>331.2</td>
<td>923.5</td>
</tr>
<tr>
<td>1957</td>
<td>257.7</td>
<td>246.1</td>
<td>65.7</td>
<td>17.0</td>
<td>376.7</td>
<td>963.3</td>
</tr>
<tr>
<td>1958</td>
<td>292.9</td>
<td>313.5</td>
<td>110.4</td>
<td>22.3</td>
<td>404.2</td>
<td>1,143.3</td>
</tr>
<tr>
<td>1959</td>
<td>301.3</td>
<td>392.9</td>
<td>65.0</td>
<td>26.0</td>
<td>419.6</td>
<td>1,205.1</td>
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<tr>
<td>1960</td>
<td>329.5</td>
<td>372.7</td>
<td>61.4</td>
<td>28.1</td>
<td>450.9</td>
<td>1,242.7</td>
</tr>
<tr>
<td>1961</td>
<td>364.4</td>
<td>335.5</td>
<td>66.1</td>
<td>27.6</td>
<td>466.9</td>
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<td>386.1</td>
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<td>64.3</td>
<td>27.5</td>
<td>499.4</td>
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<td>406.0</td>
<td>356.3</td>
<td>64.9</td>
<td>28.1</td>
<td>538.8</td>
<td>1,394.1</td>
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</tbody>
</table>

\(^a\)Data for years prior to 1950 for calendar year; 1950-1963 data are for fiscal year ending June 30. Data not available for 1948 and 1949.

\(^b\)Detail may not add to total because of rounding.

The growing importance of capital outlays in Ohio finances can also be seen in Table 2 which shows the percentage distribution of general expenditures by character and object since 1947. Again excluding interest on debt, the only component of general expenditures which increased as a percentage of general expenditures was capital outlay which increased from 9.5 per cent in 1947 to 25.6 per cent in 1963. In fact, capital outlay was greater than 30 per cent of state general expenditures on three occasions between 1955 and 1960. Of the remaining four components of general expenditures only one, interest on debt, increased (from less than .05 per cent in 1947 to 2 per cent in 1963) during the period. Thus although all five components of general expenditures grew absolutely larger between 1947 and 1963, among the major components (i.e., all except interest on debt) only the capital outlay component increased its relative position.

Because there has been an increase in Ohio's population since 1947 and because prices have increased and economic activity in the private sector of the state's economy has expanded (measured in terms of personal income), one could reasonably expect an increase in state general expenditures during the period. To maintain the same service levels in the face of population and price increases usually necessitates a higher expenditure level. Moreover, as the residents of a state experience growth in their annual income it is likely that they will demand more and better services from their government.4

<table>
<thead>
<tr>
<th>Year</th>
<th>Current Operation</th>
<th>Capital Outlay</th>
<th>Assistance And Subsidies</th>
<th>Interest on Debt</th>
<th>Inter-governmental Exp.</th>
<th>Total General Exp.(^a)</th>
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</thead>
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<tr>
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<td>9.5</td>
<td>14.1</td>
<td>b</td>
<td>44.5</td>
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<td>10.9</td>
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<td>10.5</td>
<td>1.3</td>
<td>42.2</td>
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<td>1.9</td>
<td>40.3</td>
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<tr>
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<td>7.1</td>
<td>1.5</td>
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<td>1.6</td>
<td>35.9</td>
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<td>26.8</td>
<td>25.5</td>
<td>6.8</td>
<td>1.8</td>
<td>39.1</td>
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<td>9.7</td>
<td>2.0</td>
<td>35.4</td>
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</tr>
<tr>
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<td>32.6</td>
<td>5.4</td>
<td>2.2</td>
<td>34.8</td>
<td>100.0</td>
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<td>1960</td>
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<td>30.0</td>
<td>4.9</td>
<td>2.3</td>
<td>36.3</td>
<td>100.0</td>
</tr>
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<td>1961</td>
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<td>5.2</td>
<td>2.2</td>
<td>37.0</td>
<td>100.0</td>
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<td>2.1</td>
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<td>1963</td>
<td>29.1</td>
<td>25.6</td>
<td>4.7</td>
<td>2.0</td>
<td>38.6</td>
<td>100.0</td>
</tr>
</tbody>
</table>

\(^a\)Detail may not add to 100 per cent because of rounding.

\(^b\)Less than .05 per cent.

Source: Derived from data in Table 1.
Changes in per capita general expenditures and capital outlay and changes in general expenditure and capital outlay per $1,000 of personal income are shown in Table 3. Ohio's population has grown from 7,705,000 in 1947 to 10,173,000 in 1963. During the same period per capita general expenditures have increased from $50.88 to $137.04, or about 69 per cent. Coincidentally, per capita capital outlays went from $4.84 to $35.03, an increase of more than 623 per cent. Although per capita capital outlays have had a greater growth than have per capita general expenditures, the growth of the former has been more erratic and in eight years between 1950 and 1963 they fell below the level of the preceding year. On the other hand, general expenditures, while growing less, have displayed a much steadier upward trend and in all but two years between 1950 and 1963 they have been larger than the total for the preceding year.

Personal income in Ohio has grown from $10.9 billion in 1947 to $25.3 billion in 1963. On a per capita basis the relevant figures are $1,412 in 1947 and $2,483 in 1963. Looking at Table 3 again it can be seen that both general expenditures and capital outlay have been increasing relative to the state's personal income. During the period 1947 to 1963 general expenditures per $1,000 of personal income increased from $36.03 to $55.18 or about 53 per cent. At the same time, capital outlay was increasing from $3.43 in 1947 to $14.10 in 1963 or 311 per cent. Particularly interesting here is the erratic behavior of both series. General expenditures declined below their level of the preceding year on eight occasions between 1950 and 1963 and they
<table>
<thead>
<tr>
<th></th>
<th>Per Capita General Expenditure</th>
<th>Per Capita Capital Outlay</th>
<th>General Expenditure Per $1,000 of Personal Income</th>
<th>Capital Outlay Per $1,000 of Personal Income</th>
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<td>$36.03</td>
<td>$ 3.43</td>
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<td>41.55</td>
<td>7.26</td>
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<td>9.42</td>
<td>36.47</td>
<td>5.04</td>
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<tr>
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<td>5.37</td>
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<tr>
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<td>1955</td>
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<td>47.97</td>
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<td>1960</td>
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<td>38.40</td>
<td>54.69</td>
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<td>127.64</td>
<td>33.97</td>
<td>54.60</td>
<td>14.53</td>
</tr>
<tr>
<td>1962</td>
<td>130.35</td>
<td>33.53</td>
<td>54.48</td>
<td>14.02</td>
</tr>
<tr>
<td>1963</td>
<td>137.04</td>
<td>35.03</td>
<td>55.18</td>
<td>14.10</td>
</tr>
</tbody>
</table>

*1947 data are for calendar year; 1950-1963 data are for fiscal year ending June 30.

increased only five times. Capital outlay declined seven times between 1950 and 1963 and increased six times.

When account is taken of price increases between 1947 and 1963 the growth of general expenditures and its capital outlay component become quite modest. Table 4 shows the amounts expended on each of these items between 1947 and 1963 in constant (1954) dollars. Recalling the preceding discussion in connection with Table 1, it was seen that in current dollar terms general expenditures increased 256 per cent and capital outlay increased 855 per cent between 1947 and 1963. When these expenditures are deflated, however, the relevant increases are only 96.3 per cent for general expenditures and 409 per cent for capital outlays.

Capital improvement programs in Ohio

As was shown above, capital improvement expenditures by the state of Ohio have increased more than eightfold between 1947 and 1963, and as a percentage of total general expenditures made by the state they have grown from 9.5 per cent in 1947 to 25.6 per cent in 1963, while the other three major components have remained relatively constant or even declined slightly in percentage terms. At this point it will be useful to look behind the aggregate figures for capital expenditures to discover what purposes or functions have been served and how the relative importance of the various programs has changed between 1947 and 1963.

Trends in highway construction spending

The actual dollar volume of capital outlays made for various programs by the state of Ohio between 1947 and 1963 is shown in Table 5,
TABLE 4  
ESTIMATED REAL GENERAL EXPENDITURES BY CHARACTER AND OBJECT, STATE OF OHIO, 1947-1963a  
(In 1954 Dollars)

<table>
<thead>
<tr>
<th>Year</th>
<th>Current Operationsb</th>
<th>Capital Outlayb</th>
<th>Assistance and Subsidiesc</th>
<th>Interest on Debtc</th>
<th>Inter-governmental Exp.b</th>
<th>Total</th>
</tr>
</thead>
<tbody>
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<td>$174.8</td>
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<td>$.1</td>
<td>$244.1</td>
<td>$536.3</td>
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<td>269.6</td>
<td>646.8</td>
</tr>
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<td>175.5</td>
<td>86.2</td>
<td>67.6</td>
<td>4.0</td>
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<td>619.2</td>
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<tr>
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<td>67.1</td>
<td>3.5</td>
<td>281.7</td>
<td>640.4</td>
</tr>
<tr>
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<td>192.8</td>
<td>96.4</td>
<td>64.7</td>
<td>7.7</td>
<td>265.7</td>
<td>627.3</td>
</tr>
<tr>
<td>1954</td>
<td>201.6</td>
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<td>63.9</td>
<td>13.6</td>
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<td>724.8</td>
</tr>
<tr>
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</tr>
<tr>
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<td>995.8</td>
</tr>
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<td>305.0</td>
<td>56.1</td>
<td>25.7</td>
<td>369.0</td>
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<tr>
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<td>59.8</td>
<td>25.0</td>
<td>371.1</td>
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<td>57.6</td>
<td>25.0</td>
<td>401.8</td>
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</table>

aFor 1947, calendar year deflators were used; for 1950-1963, quarterly deflators coinciding with the fiscal year were averaged.

bImplicit price deflator for state and local government purchases was used.

cImplicit price deflator for personal consumption expenditures was used.

<table>
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<tr>
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<th>Health</th>
<th>Other</th>
<th>Total</th>
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<td>State</td>
<td>Total</td>
<td>Resources</td>
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<td>-</td>
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<td>18.3</td>
</tr>
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<td>1.2</td>
<td>321.9</td>
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<td>27.9</td>
</tr>
</tbody>
</table>

uConsists of outlays by the Turnpike and the Bridge Commissions. Both are on a Jan. 1-Dec. 31 fiscal year and data shown are for preceding calendar year. Of the totals shown, approximately $73.5 million was spent by the Bridge Commission and the balance of $312.2 million was spent by the Turnpike Commission.

"Ohio changed from calendar year to July 1-June 30 fiscal year on July 1, 1949. Data for 6 months ending June 30, 1949, unavailable from Census Bureau reports. Estimates (excluding an undetermined amount of university outlay) for 1949 were obtained from State of Ohio, Department of Finance, Annual Report, 1955, p. VII. Details of the 1949 non-highway outlay of $35 million are not available.

In 1951 the Census Bureau revised its methods of reporting state government financial data and reported revised (and larger) totals for capital outlay in 1947 and 1950. The totals shown are the revised figures; however, most of the details shown are those reported under the old Census Bureau method and any discrepancies between the sums of details and the revised totals have been accounted for in "other and unallocable" which was derived as a residual.

Source: Derived from data in the following: U. S. Bureau of the Census, Revised Summary of State Government Finances, 1942-1950 (Washington: U. S. Government Printing Office, 1953), p. 38; Compendium of State Government Finances, (various years); and unpublished records of the Bureau of the Census; State of Ohio, Department of Finance, Annual Report (various years); State Bridge Commission of Ohio, Annual Report (various years); and Ohio Turnpike Commission, Annual Report (various years).
and in Table 6 the same functional breakdown is reported in percentage terms. Referring to Table 5 and looking first at highway expenditures, one sees that expenditures for highways have grown from $23 million in 1947 to almost $322 million in 1963 for an increase of about 1300 percent. For the entire period these outlays totaled more than $2.9 billion.

Highway outlays have been divided into those made for regular (toll-free) facilities and those made for toll facilities. The regular highway program, under the direction of the Ohio Department of Highways, has accounted for the largest share of total highway construction done by the state since 1947. Between 1947 and fiscal 1952 all highway expenditures went for regular highway construction.

Particularly after 1953 and continuing until 1956, very large amounts of highway outlays went for construction of the Ohio Turnpike, an east-west toll-highway which crosses the northern part of the state. A relatively small amount was spent in 1953, the year when turnpike construction began, but during the three years 1954-1956 turnpike outlays

5The figures for capital outlay in Table 5 are in some cases slightly larger than those contained in Table 1. A portion of the difference results from the inclusion in the former of capital expenditures made by the state liquor monopoly. In addition, some minor adjustments of Census Bureau data are reflected in the Table 5 figures and these are explained in the notes which accompany the table and in a subsequent section of the text.

6As indicated in note 2, supra, the majority of the data used in this chapter are on the basis of a July 1-June 30 fiscal year. However, the toll facilities report on a calendar year basis and, following the Census Bureau practice, outlays and other transactions of toll facilities are reported here as having taken place in the following year. Thus although some toll facilities outlay occurred in 1952, it is reported here as occurring in fiscal 1953.
totaled almost $288 million or about 46 per cent of the total highway outlays made in these years. After 1956 capital outlays for toll-facilities declined substantially and now account for only a small portion of highway outlays.\(^7\)

It is interesting to note that initiation of turnpike construction had the effect of quickly boosting total highway outlays to unprecedented levels. But contrary to what one might expect, highway spending did not slump drastically after this and in all but one year (1957) after the major turnpike outlays were made, highway outlays were larger than in the two peak years of turnpike construction (1955 and 1956). Thereafter, outlays declined temporarily (in 1960 and 1961) and then began moving upward again to a point almost equal to the peak spending level reached in 1959. Events such as the adoption in May, 1964, of an amendment to the Ohio Constitution which authorizes borrowing up to $500 million by the state for additional highway improvements\(^8\) would seem to indicate that the highway program may continue to grow for some time.

Trends in expenditures for education facilities

For most of the years since 1947 and for all seventeen years taken together, the second largest capital outlay program has been for

\(^7\)Of the $319.5 million spent on toll-facilities, approximately $298.2 went for turnpike construction, $14.0 has been expended for later turnpike improvements, and $7.3 million was used for improvements to a toll-bridge and the purchase of a bridge.

\(^8\)For a discussion of the amendment, see infra, Chapter VI, pp. 201-202.
educational facilities, principally at the state universities. From a low of $3.5 million spent in 1947, outlays for educational facilities rose to as high as $31.9 million in 1961. They then fell slightly in 1962 to $26.2 million and at the end of 1963 they amounted to $27.9 million. Between 1947 and 1963 the fluctuations have been substantial—as between 1950 when outlays were $18.6 million and 1953 when they had fallen to $6.6 million. Despite the fluctuations education outlays did display a very gentle upward trend between 1947 and 1959. Since 1959, however, they appear to have reached a plateau from which they had not moved at the end of 1963.

Trends in capital outlays for other programs

All of the remaining components of capital outlays have fluctuated substantially in amounts expended annually during the postwar period. For example, natural resource outlays grew from $1.7 million in 1947 to $5.2 million in 1957, but with two downturns along the way. Since 1957 their movement has been quite irregular and in 1963 they had declined to $1.4 million or less than their total in 1947. The same general pattern has been displayed by the other three categories shown in Table 5. Particularly noteworthy have been health and welfare outlays. From a $2.3 million level in 1947 they quickly increased to $14.7 million in 1950 after which they declined to as low as $4.1 million in 1954 and then grew to $20.8 million in 1959. Since 1959, however, health and welfare outlays have declined steadily to a low of $1.9 million in 1963.
The relative importance of the various capital outlay programs

Looking very briefly now at Table 6 which presents the functional or program breakdown of capital expenditures, the predominance of the highway program in the state's overall capital outlay program is apparent. Never less than 53.2 per cent of total capital expenditures (in 1951), highway capital outlays have grown to a point where, in 1963, they accounted for more than 90 per cent of all money spent by the state of Ohio for capital improvements. Moreover, during the last ten years of the period (1954-1963) they were never less than 82 per cent of total outlays and for the entire seventeen-year period they accounted for 83 per cent of the state's capital expenditures.

Alongside highway outlays the other components, even expenditures for education, appear almost insignificant. In the late 1940's and early 1950's education usually accounted for more than 10 per cent of the total, but since 1952 it has always been less than 10 per cent and was actually a lower percentage of total capital outlay in 1963 (7.8 per cent) than in 1952 (7.9 per cent). For the entire period higher education has constituted 7.6 per cent of total capital outlays and all education has accounted for 7.8 per cent of the total. In the period from 1947 to 1953 some of the remaining programs, notably health and welfare, accounted for a substantial share of the total. After 1953, however, these programs took a relatively small portion of each dollar spent by the state for capital improvements. In fact, in no year after 1954 have all capital outlays except for highways and education amounted to as much as 10 per cent of the total capital outlay for
TABLE 6
PERCENTAGE DISTRIBUTION OF EXPENDITURES FOR CAPITAL
IMPROVEMENTS, STATE OF OHIO, 1947-1963

<table>
<thead>
<tr>
<th>Year</th>
<th>Highways</th>
<th>Education</th>
<th>Total</th>
<th>Natural</th>
<th>Correction</th>
<th>Health</th>
<th>Other</th>
<th>And Un-</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Toll</td>
<td></td>
<td></td>
<td>Resources</td>
<td></td>
<td></td>
<td></td>
<td>allocable</td>
<td>Capital</td>
</tr>
<tr>
<td></td>
<td>Regular Facilities</td>
<td>Total</td>
<td>Higher Education</td>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td>8,800</td>
<td>100.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>9.4</td>
<td>9.4</td>
<td>4.6</td>
<td>1.1</td>
<td>6.2</td>
<td>17.2</td>
</tr>
<tr>
<td>1947</td>
<td></td>
<td>61.7</td>
<td>61.7</td>
<td>13.5</td>
<td>13.5</td>
<td>4.9</td>
<td>1.7</td>
<td>13.8</td>
<td>1.3</td>
</tr>
<tr>
<td>1948</td>
<td></td>
<td>64.7</td>
<td>64.7</td>
<td>19.7</td>
<td>19.7</td>
<td>3.6</td>
<td>1.1</td>
<td>15.7</td>
<td>4.8</td>
</tr>
<tr>
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<td></td>
<td>55.9</td>
<td>55.9</td>
<td>b</td>
<td>b</td>
<td>b</td>
<td>b</td>
<td>b</td>
<td>100.0</td>
</tr>
<tr>
<td>1950</td>
<td></td>
<td>54.9</td>
<td>54.9</td>
<td>14.8</td>
<td>15.3</td>
<td>2.1</td>
<td>2.7</td>
<td>15.1</td>
<td>1.6</td>
</tr>
<tr>
<td>1951</td>
<td></td>
<td>63.2</td>
<td>63.2</td>
<td>14.8</td>
<td>15.3</td>
<td>2.1</td>
<td>2.7</td>
<td>15.1</td>
<td>1.6</td>
</tr>
<tr>
<td>1952</td>
<td></td>
<td>72.2</td>
<td>72.2</td>
<td>5.0</td>
<td>7.9</td>
<td>3.5</td>
<td>2.4</td>
<td>12.1</td>
<td>1.9</td>
</tr>
<tr>
<td>1953</td>
<td></td>
<td>68.6</td>
<td>71.1</td>
<td>4.8</td>
<td>7.1</td>
<td>3.1</td>
<td>3.2</td>
<td>9.1</td>
<td>1.8</td>
</tr>
<tr>
<td>1954</td>
<td></td>
<td>57.0</td>
<td>27.0</td>
<td>5.2</td>
<td>5.6</td>
<td>2.7</td>
<td>3.8</td>
<td>2.7</td>
<td>1.1</td>
</tr>
<tr>
<td>1955</td>
<td></td>
<td>39.4</td>
<td>50.2</td>
<td>4.1</td>
<td>4.3</td>
<td>1.5</td>
<td>1.9</td>
<td>2.0</td>
<td>.7</td>
</tr>
<tr>
<td>1956</td>
<td></td>
<td>49.3</td>
<td>37.5</td>
<td>7.2</td>
<td>7.3</td>
<td>1.6</td>
<td>1.2</td>
<td>2.2</td>
<td>.9</td>
</tr>
<tr>
<td>1957</td>
<td></td>
<td>82.2</td>
<td>3.3</td>
<td>85.3</td>
<td>7.4</td>
<td>2.1</td>
<td>1.2</td>
<td>2.8</td>
<td>1.2</td>
</tr>
<tr>
<td>1958</td>
<td></td>
<td>84.0</td>
<td>2.8</td>
<td>86.9</td>
<td>5.8</td>
<td>6.0</td>
<td>1.0</td>
<td>1.3</td>
<td>1.8</td>
</tr>
<tr>
<td>1959</td>
<td></td>
<td>82.4</td>
<td>.6</td>
<td>82.9</td>
<td>7.8</td>
<td>.9</td>
<td>2.4</td>
<td>5.3</td>
<td>.8</td>
</tr>
<tr>
<td>1960</td>
<td></td>
<td>82.9</td>
<td>.4</td>
<td>83.3</td>
<td>7.4</td>
<td>7.5</td>
<td>1.0</td>
<td>2.0</td>
<td>4.2</td>
</tr>
<tr>
<td>1961</td>
<td></td>
<td>82.4</td>
<td>.2</td>
<td>82.6</td>
<td>9.4</td>
<td>9.5</td>
<td>1.2</td>
<td>2.1</td>
<td>2.6</td>
</tr>
<tr>
<td>1962</td>
<td></td>
<td>86.4</td>
<td>.2</td>
<td>86.5</td>
<td>7.7</td>
<td>7.7</td>
<td>.6</td>
<td>1.3</td>
<td>1.8</td>
</tr>
<tr>
<td>1963</td>
<td></td>
<td>90.0</td>
<td>.3</td>
<td>90.3</td>
<td>7.8</td>
<td>7.8</td>
<td>.4</td>
<td>.2</td>
<td>.5</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>74.0</td>
<td>9.0</td>
<td>83.0</td>
<td>7.6</td>
<td>7.8</td>
<td>1.5</td>
<td>1.7</td>
<td>4.1</td>
</tr>
</tbody>
</table>

a Detail may not add to total because of rounding.

b Ohio changed from calendar year to fiscal year on July 1, 1949. Data for six months ending June 30, 1949, are not available.

Source: Derived from data in Table 5.
the year. Similarly, for the entire period 1947-1963 capital outlays for other than highways and education only amounted to 9.2 per cent of total capital outlays.

**Financing Capital Expenditures, 1947-1963**

A question which follows logically from the preceding analysis and one which is particularly important here involves the methods by which Ohio has financed its capital improvements furnished in the post-war period. Unfortunately, the Census Bureau does not develop such information in connection with its annual compilation of state government financial data. Similarly, state of Ohio financial reports do not develop explicitly much in the way of source of funds data. Despite the absence of complete information directly related to the sources of funds for financing capital improvements, enough information does exist so that it is possible to piece together a rough estimate for Ohio capital expenditures between 1947 and 1963.

**Financing methods**

Three basic methods are available for financing Ohio capital expenditures. First, there are current revenues and accumulated surplus funds. This includes tax receipts, license fees, and miscellaneous revenues from commercial operations, gifts, etc. The second source is receipts from long-term borrowing. Finally there are federal grants which are a particularly important source of funds for highway construction.

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9 For the purposes of this study, it suffices to say that current revenues and balances are comprised of all revenues of the state except debt proceeds and federal aid.
Current revenues and balances

Table 7 reveals that current revenues and balances have been of varying importance as a source of funds for financing Ohio's capital improvements in the period 1947-1963. For the entire period Ohio spent about $3,566 million for capital improvements of which about $1,357 million or 38 per cent came from current revenues and balances.

But from year to year the amount obtained from this source has fluctuated widely within a range of 15 per cent (in 1958) to about 82 per cent (in 1948 and 1950). Moreover, subject to an occasional exception, this source has been relatively less important in the second half of the period under study. Between 1947 and 1953 at least 50 per cent of capital expenditures were financed from current revenues and balances in every year; in five of these years more than 70 per cent of the state's outlays were so financed. After this period, however, the share of outlays financed from this source has never amounted to as much as 51 per cent and in two years (1956 and 1958) it amounted to less than 20 per cent of outlays.

Borrowing

At the same time that current revenues and balances have become relatively less important as a source of funds, debt financing of capital improvements has grown in importance although its use from year to year has also fluctuated considerably. For the entire period $1,027 or about 29 per cent of total capital outlays have been financed by borrowing.

In the early postwar period the state of Ohio had substantial uncommitted surpluses with which to finance the bulk of capital
### TABLE 7
EXPENDITURES FOR CAPITAL IMPROVEMENTS, BY FINANCING METHOD, STATE OF OHIO, 1947-1963
(Dollar Amounts in Millions)

<table>
<thead>
<tr>
<th>Year</th>
<th>Borrowing</th>
<th>Federal Aid</th>
<th>Current Revenues</th>
<th>Totala</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Amount</td>
<td>%</td>
<td>Amount</td>
<td>Amount</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Amount</td>
<td>Amount</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Amount</td>
<td>Amount</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Amount</td>
<td>Amount</td>
</tr>
<tr>
<td>1947</td>
<td>$ .1</td>
<td>.3%</td>
<td>$10.1</td>
<td>27.1%</td>
</tr>
<tr>
<td>1948</td>
<td>.1</td>
<td>1%</td>
<td>11.3</td>
<td>18.0%</td>
</tr>
<tr>
<td>1949</td>
<td>.1</td>
<td>3%</td>
<td>15.8</td>
<td>46.5%</td>
</tr>
<tr>
<td>1950</td>
<td>.1</td>
<td>1%</td>
<td>17.1</td>
<td>18.3%</td>
</tr>
<tr>
<td>1951</td>
<td>.5</td>
<td>7%</td>
<td>15.9</td>
<td>21.2%</td>
</tr>
<tr>
<td>1952</td>
<td>1.6</td>
<td>18%</td>
<td>23.5</td>
<td>25.8%</td>
</tr>
<tr>
<td>1953</td>
<td>7.7</td>
<td>8.3%</td>
<td>21.9</td>
<td>23.5%</td>
</tr>
<tr>
<td>1954</td>
<td>49.0</td>
<td>32.4%</td>
<td>35.0</td>
<td>23.1%</td>
</tr>
<tr>
<td>1955</td>
<td>182.0</td>
<td>63.9%</td>
<td>27.3</td>
<td>9.6%</td>
</tr>
<tr>
<td>1956</td>
<td>214.2</td>
<td>76.0%</td>
<td>21.7</td>
<td>7.7%</td>
</tr>
<tr>
<td>1957</td>
<td>72.3</td>
<td>29.3%</td>
<td>48.9</td>
<td>19.8%</td>
</tr>
<tr>
<td>1958</td>
<td>183.0</td>
<td>57.7%</td>
<td>86.8</td>
<td>27.2%</td>
</tr>
<tr>
<td>1959</td>
<td>107.7</td>
<td>27.4%</td>
<td>183.3</td>
<td>46.6%</td>
</tr>
<tr>
<td>1960</td>
<td>78.4</td>
<td>21.0%</td>
<td>165.0</td>
<td>44.2%</td>
</tr>
<tr>
<td>1961</td>
<td>30.2</td>
<td>9%</td>
<td>144.9</td>
<td>43.1%</td>
</tr>
<tr>
<td>1962</td>
<td>79.7</td>
<td>23.5%</td>
<td>177.7</td>
<td>52.5%</td>
</tr>
<tr>
<td>1963</td>
<td>20.7</td>
<td>5.8%</td>
<td>175.9</td>
<td>49.4%</td>
</tr>
</tbody>
</table>

**Totala**

$1,027.4 28.8%  $1,181.5 33.2%  $1,356.9 38.0%  $3,565.8 100.0%

*aDetails may not add to totals because of rounding.

Source: Derived from data in Appendix Tables 17-19.
expenditures and the existence of these surpluses, together with current revenues, made heavy reliance on borrowing unnecessary. The only exception to this was the issuance of rather small amounts of revenue bonds by state universities to finance dormitory construction. In no year between 1947 and 1951 did borrowing account for as much as 1 per cent of total capital expenditures. Even in 1952 it accounted for less than 2 per cent of the total spent.

After 1952, however, a new era in capital improvements financing came into existence. From a total of slightly more than $1.1 million in capital improvements debt outstanding in 1951 the figure had grown to a level of almost $800 million at the end of fiscal 1963. Between 1954 and 1963 the amount of capital expenditures financed from borrowing ranged from a low of 6 per cent (in 1963) to a high of 76 per cent (in 1956).

Federal aid

The total contribution made by federal aid to Ohio's capital financing program since 1947 has been slightly larger than that made by borrowed funds and amounted to about $1,181.5 million or 33.2 per cent of the total spent in the seventeen years. Yearly percentages have fluctuated considerably for federal aid, too, ranging from a low of 8.3 per cent in 1956 to a high of 52.5 per cent in 1962.

Although some federal aid has been received by Ohio for non-highway capital outlays (particularly hospitals and education

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10See infra, Appendix Tables 21 and 22.
facilities) the greatest portion, approximately 95 per cent, has been for highway construction.11

Capital expenditure programs and sources of funds

In Tables 8-9 total capital expenditures made by Ohio during the 1947-1963 are broken down on a functional or program basis and the share of each program financed by each of the three sources of funds is shown in actual dollars contributed and as a percentage of the total amount spent.

Highways

The diversity of financing patterns has been as great in highway construction as in any area of capital improvements construction in Ohio. For the total of $2,960 million spent on highways between 1947 and 1963, approximately 27 per cent was obtained from borrowing, 38 per cent from federal aid, and 34 per cent from current revenues and balances. But this pattern shows significant variations both between time periods within the seventeen years and between types of highway improvements.

Highway borrowing programs

Despite the relatively large amount of total highway expenditure financed by borrowing, Ohio has not relied heavily on loan finance during the entire postwar period. Between 1947 and 1954 almost $400

11For discussion regarding the difficulties of obtaining data for federal aid for non-highway capital improvements and the assumptions used in this analysis, see below in the section dealing with "assumptions and limitations of the analysis," pp. 44-47.
### TABLE 8

**EXPENDITURES FOR HIGHWAY IMPROVEMENTS, BY FINANCING METHOD, STATE OF OHIO, 1947-1963**

(Dollar Amounts in Millions)

<table>
<thead>
<tr>
<th>Program And Period</th>
<th>Borrowing</th>
<th>Federal Aid</th>
<th>Current Revenues And Balances</th>
<th>Total Capital Outlays&lt;sup&gt;a&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Amount</td>
<td>Amount</td>
<td>Amount</td>
<td>Amount</td>
</tr>
<tr>
<td></td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>Regular:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1947-1954</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>$140.7</td>
<td>$256.6</td>
<td>$397.3</td>
<td>100.0</td>
</tr>
<tr>
<td></td>
<td>35.4</td>
<td>64.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1955-1963</td>
<td>500.0</td>
<td>1,008.8</td>
<td>734.1</td>
<td>2,242.9</td>
</tr>
<tr>
<td></td>
<td>22.3</td>
<td>45.0</td>
<td>32.7</td>
<td>100.0</td>
</tr>
<tr>
<td>Total Regular Outlays</td>
<td>$500.0</td>
<td>$1,149.5</td>
<td>$990.7</td>
<td>$2,640.2</td>
</tr>
<tr>
<td></td>
<td>18.9</td>
<td>43.5</td>
<td>37.5</td>
<td>100.0</td>
</tr>
<tr>
<td>Toll Facilities:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1953-1963</td>
<td>$301.7</td>
<td>$16.1</td>
<td>$319.5</td>
<td>100.0</td>
</tr>
<tr>
<td></td>
<td>94.4</td>
<td>5.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total All Facilities (1947-1963)</td>
<td>$801.7</td>
<td>$1,151.2</td>
<td>$1,006.8</td>
<td>$2,959.7</td>
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<tr>
<td></td>
<td>27.1</td>
<td>38.9</td>
<td>34.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

<sup>a</sup>Detail may not add to total because of rounding.

Source: Derived from data in Appendix Tables 17-18.
### TABLE 9
EXPENDITURES FOR NON-HIGHWAY CAPITAL IMPROVEMENTS, BY FINANCING METHOD, STATE OF OHIO, 1947-1963

(Dollar Amounts in Millions)

<table>
<thead>
<tr>
<th>Program</th>
<th>1947-1955</th>
<th>1956-1963</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Borrowing</td>
<td>Federal Aid</td>
</tr>
<tr>
<td></td>
<td>Amount</td>
<td>Amount</td>
</tr>
<tr>
<td></td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td><strong>Amount and Percentage Obtained From:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>$22,7</td>
</tr>
<tr>
<td>Education</td>
<td>$22,7</td>
<td>29.6</td>
</tr>
<tr>
<td>Higher Education</td>
<td>22.7</td>
<td>32.4</td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td>.3</td>
</tr>
<tr>
<td>Health, Welfare, and Correction</td>
<td>.4</td>
<td>4.4</td>
</tr>
<tr>
<td>Natural Resources</td>
<td>.1</td>
<td>1.2</td>
</tr>
<tr>
<td>Other and Unallocable</td>
<td>.3</td>
<td>1.7</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>$22.7</td>
<td>$11.2</td>
</tr>
</tbody>
</table>

|                               | $126.2    | $10.1      | $66.0             | $202.3        | 100.0         |
| Education                     | 126.2     | 62.4       | 10.0              | 64.6          | 32.2          | 200.8 |
| Higher Education              | b         | e          | .1                | 1.4           | 100.0         | 1.5   |
| Other                         | 75.5      | 63.5       | 5.9               | 36.5          | 31.5          | 118.9 |
| Health, Welfare, and Correction| 2.9       | 1.4        | 5.0               | 25.3          | 92.0          | 27.5  |
| Natural Resources             | .8        | .3         | 5.0               | 32.1          | 94.0          | 34.4  |
| Other and Unallocable        | .5        | 1.0        | 1.7               | 19.2          | 50.0          | 38.3  |
| **Total**                     | $203.0    | $19.2      | $160.8            | $383.0        | 100.0         |

**Total, All Non-Highway Capital Improvements, 1947-1963**

| Hair     | $225.7    | $30.4      | $350.0            | $606.1        | 100.0         |

*aDetail may not add to total because of rounding.

*bLess than $50,000.

*cLess than .05 per cent.

Source: Derived from data in Appendix Table 19, unpublished records made available by the Bureau of the Census, and State of Ohio, Department of Finance, Annual Reports, 1947-1963.
million was spent on regular highway facilities (i.e., toll-free facilities), but no borrowing was done. During this period $140.7 million or 35 per cent came from federal aid and $256.6 million or 65 per cent came from current revenues and balances.

Loan financing of postwar highway construction was first used in connection with the Ohio Turnpike, the bulk of which was constructed between the years 1953 and 1957. Of the approximately $298.2 million cost of this project, 100 per cent was paid for with the proceeds of revenue bonds supported by the tolls paid by turnpike users. Since the turnpike was constructed, approximately $10.2 million has been spent on additional capital improvements and these outlays have been financed out of current revenues and balances available to the Ohio Turnpike Commission.

The only other expenditure for highway toll facilities up to 1963 has been for $3.8 million in major improvements to a bridge operated by the State Bridge Commission of Ohio. This expenditure was spread over the eight-year period 1953-1959 and of the total spent, about $2.1 million was paid from tolls collected on the use of the bridge and about $1.7 million was obtained from federal aid.

Since 1954 spending by Ohio for regular highway facilities has accelerated rapidly, and during the years 1954 to 1963 total expenditures equaled $2,242.9 million, or about 85 per cent of the total spent on regular highways during the entire period 1947-1963. As noted above, Ohio made little use of borrowing to finance regular highway construction; since 1954, however, borrowing has financed a large part of such outlays. In November of 1953, the voters of the state approved a
constitutional amendment which permitted the state to borrow up to $500 million for financing its highway construction program. The first of this borrowing was done in 1955 and some borrowing took place under this authority in all but one year (1961) between 1955 and 1962. An issue of $62 million of highway debt was sold in 1962, exhausting the $500 million authorization. In all, the $500 million borrowed between 1955 and 1963 amounted to about 22.3 per cent of total highway (regular) expenditures made during the period.

Federal aid

Since 1954 federal aid has also become more important as a source of financing, both absolutely and relatively, particularly as a result of the Interstate highway program enacted in 1956. Prior to this time the maximum federal contribution to a state for most eligible highway construction was 50 per cent of the total cost. Although the 50 per cent matching provision continued after 1956 in the case of primary, secondary, and urban extension projects, for highways designated as part of the Interstate highway system, the federal government now contributes 90 per cent of the cost of construction and the state contributes only 10 per cent. During the period 1955-1963 total highway

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14 23 U. S. C. 120.

15 Ibid. In states having large public land areas, the federal share may go to 95 per cent. For a brief discussion of the federal highway aid program see Advisory Commission on Intergovernmental Relations, *The Role of Equalization in Federal Grants* (Washington: the Commission, 1964), pp. 130-133.
regular) expenditures grew by 565 per cent over those made in the 1947-1954 period; at the same time, the amount of federal aid grew by about 717 per cent. For this latter period, federal aid received equaled about 45 per cent of total outlays.

The role of current revenues in highway financing

In dollar terms, the contribution to the highway financing program made out of current revenues and balances has also grown substantially during recent years. Prior to 1954 the amount of current revenues and balances used for highway construction in a single year had always been less than $44 million. From 1954 to 1963, however, current revenues used yearly were greater than $50 million in all but two years (1956 and 1958) and in three out of the last four years they exceeded $100 million.16

But in comparing the two periods 1947-1954 and 1955-1963 it is seen that current revenues have become relatively less important as a source of funds in the latter period. In the first period current revenues used totaled $256.6 million or almost 65 per cent of regular highway construction expenditures. Although the annual contribution to highway construction made by current revenues increased substantially after 1954— for the years 1955-1963 they totaled $734.1 million— as a percentage of regular highway costs they fell almost 50 per cent from the earlier period to about 32.7 per cent.

16See infra, Appendix Table 17.
Education

All but a small portion of state capital expenditures for education has been for state universities. A diversity of financing methods has also characterized the education program in the postwar period.

Two basic types of improvements

Financing methods for state university capital improvements differ depending on the nature of the improvement in question. First, there are improvements which do not yield directly revenues (i.e., user charges cannot be levied) with which the improvements can be financed. Examples of such improvements would be administrative offices, classrooms, and libraries. Although the universities receive some funds over which the General Assembly has no control as to how they are spent, and which are sometimes used to finance non-self-liquidating improvements, the largest part of these improvements is financed with funds appropriated by the General Assembly. In turn, the General Assembly may obtain these funds either from the state's general revenues and balances or from borrowing (if such authority has been granted by constitutional amendment).

Second, each of the state universities has been granted authority by the General Assembly to issue revenue bonds in its own name, without further legislative sanction, to obtain funds to finance self-liquidating capital improvements such as dormitories, dining facilities, and athletic facilities. As a matter of practice, the Ohio

17See infra, Chapter V, Table 11.
legislature has confined its university capital improvements appropriations to the non-self-liquidating variety of improvement, leaving the individual universities the responsibility of providing for the self-liquidating variety.18

Between 1947 and 1955 total capital expenditures for higher education exceeded $70 million. During the same period revenue bonds issued by the state universities totaled about $22.7 million. Assuming that all or most of the bond proceeds were spent during the same period and assuming federal aid received amounted to about 5 per cent of total expenditures, current revenues and balances provided about $44 million or 63 per cent of the total spent and debt proceeds provided the balance of about 32 per cent.

In November, 1955, the Ohio Constitution was again amended to permit the state to borrow up to $150 million to finance non-highway capital improvements. Borrowing under this authorization began in 1957 and continued until 1962 when the maximum of $150 million had been borrowed. Of this amount, about $52.6 million was used to finance university improvements constructed during the period 1956-1963.19

18Just how little aid from regular state appropriations has been given for self-liquidating improvements is shown clearly in the Appendix of State of Ohio, Report of the Public Improvements Inspection Committee of the 104th General Assembly, February, 1963. Also see the capital improvements appropriation acts in the biennial editions of State of Ohio, The Appropriation Acts of the General Assembly of Ohio.

19Under the provisions of the 1955 amendment, part of the bond proceeds were to be used to construct classrooms to be leased or sold to public school districts (see infra, Chapter VI, p. 189, n. 63). These outlays have not been treated as state capital improvements expenditures in this study.
In addition, the universities issued their own revenue bonds totaling almost $82 million to finance self-liquidating improvements. Again assuming the bulk of the revenue bond proceeds was spent by the end of 1963 (and that no proceeds from bonds sold prior to 1956 were used), approximately 41 per cent of the total of $200.8 million spent on university improvements during the period was financed from debt proceeds. Thus, the remainder of $108.9 million or 54 per cent came from current revenues and balances.

Health, welfare, and correction improvements

Of the remaining non-highway capital improvement programs, health, welfare, and correction has been the most costly. Between 1947 and 1963 the state spent $206 million for capital improvements connected with this program. The pattern of financing methods used for the program has not been as varied as in the case of higher education. Although attempts have been made, courts in Ohio have refused to permit arrangements whereby revenue bonds would be issued to finance capital improvements for use in the state's health and welfare program.

During the years 1947-1955 when the state did no borrowing for capital improvements funds (although the universities did), the health, welfare, and correction programs were supported entirely from current

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20 Unpublished records of the Bureau of the Census.

revenues and balances and federal aid. Of the total of approximately $87.1 million spent in the period, more than $80 million was financed with current revenues and balances and the remainder was financed principally with federal aid.\(^{22}\)

Despite the inability of the state to issue revenue debt to support some portion of the health, welfare, and correction programs, they did benefit in a relatively large way from the proceeds of the $150 million capital improvements bond issue already discussed. Of the total of $129.4 million in debt proceeds (excluding revenue debt) spent on state non-highway capital improvements between 1956 and 1963, $75.5 million was allocated to health, welfare, and correction improvements. In all, about $118.9 million was spent on improvements for such programs from 1956 to 1963 and of this amount, about 63 per cent came from debt proceeds, about $37.5 million or 32 per cent came from current revenues and balances, and the balance of $5.9 million or 5 per cent came from federal aid.

Other improvements

The remaining improvements programs of the state which have been divided into natural resources and a miscellaneous, "all other" category\(^{23}\) have had to rely very heavily on current revenues and balances.

\(^{22}\) Most of the federal aid for these programs was for hospital construction. Federal aid for hospital construction is provided under the Hill-Burton program. See 42 U. S. C. 291.

\(^{23}\) In addition to unallocable outlays for the programs already discussed, this category includes outlays for state liquor stores, general public buildings, and non-highway transportation.
for most of their financing. Between 1956 and 1963 only about $1.3 million or 2 per cent of the cost of these programs has come from borrowed funds. Again assuming federal aid totaling 5 per cent of expenditures, as much as 93 per cent or $57.4 million came from current revenues and balances between 1956 and 1963. In the earlier period 1947-1955 when no bond money was available, these programs accounted for $38.3 million of the state's capital outlays. Of this amount, approximately $36.4 million came from current revenues and balances with the remainder being financed out of federal aid.

Assumptions and limitations of the analysis

In setting out to determine what portion of capital improvements expenditures have been obtained out of debt proceeds, the major problem encountered involved the probability that some portion of a year's debt proceeds may not have been expended in the same year. To minimize this problem, most of the above analysis has been based on aggregate data for a series of years and this technique should eliminate most of the timing problems. In the case of the $150 million non-highway borrowing program approved by the voters in 1955, there were no timing problems because Department of Finance records identified the amounts spent from the debt proceeds on a yearly basis.

The data for revenue debt issued by state universities are, with one exception, from unpublished records made available by the Census Bureau. The Census Bureau has no records of Ohio finances for 1949.24

24On July 1, 1949, Ohio changed from a January 1-December 31 fiscal year to a July 1-June 30 fiscal year. The Census Bureau did not collect and report data for the six months preceding the changeover.
For purposes of this analysis it was estimated that university debt issued in 1949 totaled $100,000. On the basis of university borrowing in the years immediately preceding and following 1949, this estimate seemed reasonable. Regardless of the accuracy of this assumption, the timing problem mentioned in the preceding paragraph remains.

Turnpike debt also presented some peculiar problems. All of this debt was issued in 1953 (calendar 1952), but according to the Annual Reports of the Ohio Turnpike Commission the actual construction for which the debt proceeds were used was spread over the years 1953-1957. This is also reflected in Census Bureau records. It was possible to eliminate the timing problem connected with the expenditure of the debt proceeds by assuming that the amount of expenditure made each year to construct the turnpike was financed out of debt proceeds. After 1956, however, additional capital outlays were made by the Turnpike Commission and with the exception of $4.2 million of such expenditures made in 1957, it was assumed that all outlays were financed out of current revenues and balances (other than from borrowing).  

The bulk of federal aid for capital improvements is made for highway construction. Fortunately, the Census Bureau reports in the Compendium of State Government Finances the amount of federal aid for

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25This seems reasonable on the basis of data contained in the Annual Reports of the Turnpike Commission and the records of the Census Bureau. Total capital outlays for the turnpike since its beginning until 1963 amounted to about $312.2 million of which approximately $298.2 million represented initial construction. Of the total debt issued of $326 million, about $298.2 million was expended for construction and the balance is accounted for by the discount on the original bond issue and various financial and administrative costs connected with initiating the project and marketing the securities.
highway construction received by Ohio and, with the exception of 1949 for which such data are not available in the Compendium, the Census Bureau figures were used. For 1949 data from the Annual Report of the Auditor of State were used. The only other federal aid for highways went for bridge improvements made by the State Bridge Commission during the years 1953-1963. As is discussed below, this aid and the bridge improvement outlays just mentioned were not included in the Census Bureau data and they were obtained from the Bridge Commission's Annual Report. Figures for federal aid for non-highway capital improvements could not be constructed for use in the above analysis. Although bits of information regarding such federal aid are available, nothing resembling a comprehensive statement of such aid could be found. Based on general knowledge of the scope and magnitude of such federal aid programs and on information provided by Ohio Department of Finance officials, it is fairly certain that no more than 5 per cent of non-highway capital expenditures were financed out of federal funds. Despite the likelihood that the percentage varied from program to program and from year to year, it was assumed that the federal aid share of all non-highway capital expenditures was 5 per cent.

During the years 1953-1961 the State Bridge Commission of Ohio spent approximately $7.3 million for capital improvements. In one case there were major improvements to a bridge and in another a bridge was purchased. These data are completely excluded from Census Bureau records and it was necessary to adjust the various relevant data accordingly on the basis of the Annual Reports of the Bridge Commission.\(^{26}\)

\(^{26}\)Undoubtedly, this omission was unintentional since the Census Bureau has included the Bridge Commission's activities in its reports both prior to and after the period under discussion.
Finally, it was assumed that the difference between total capital expenditures and the sum of debt proceeds and federal aid was equal to the share of the capital outlays paid for out of current revenues and balances. Although it might be more satisfactory to derive this figure independent of the other two sources, this was not possible. The fund structure of the state is such that an undertaking of this type would be far too great for a single researcher. However, insofar as the totals for debt proceeds and federal aid are correct, the remainder after these amounts are subtracted from total capital expenditures must be, by definition, equal to the amount obtained from current revenues and balances. Thus, the methodology used here does not necessarily introduce an error into the analysis.

Summary

Although total state of Ohio general expenditures have grown substantially since 1947 (about 256 per cent between 1947 and 1963), they did not match the growth displayed by their capital outlay component. Between 1947 and 1963 capital outlay by Ohio grew from $37.3 million to $356.3 million or about 800 per cent. On a percentage basis capital outlay has grown from 9.5 per cent of total general expenditures in 1947 to 25.6 per cent of them in 1963, and on three occasions between 1955 and 1960 it exceeded 30 per cent. Moreover, with the exception of the relatively small interest expenditures, capital outlay was the only component of general expenditures which increased its relative position during the seventeen years.
Per capita figures and outlays relative to personal income also reveal the substantial growth of Ohio capital expenditures in the post-war period. While per capita general expenditures were increasing from $50.88 to $137.04 or about 69 per cent, capital expenditures increased from $4.84 to $35.03 or about 623 per cent. Similarly, general expenditures increased only about 53 per cent ($36.03 to $55.18) between 1947 and 1963 when compared to the growth of personal income in Ohio, whereas capital expenditures grew approximately 311 per cent ($3.43 to $14.10) during the same period.

When adjustment is made for price increases since 1947, the increase in capital expenditures becomes more modest as one might expect, amounting to about 409 per cent. Still, annual capital expenditures (deflated) have been quite large in most years and between 1955 and 1963 the annual outlays have always exceeded $220 million. It is interesting to observe, however, that the capital outlays made in 1955 (deflated for price increases) exceeded those made in any of the three years 1961-1963.

In terms of the programs or purposes for which capital expenditures are made in Ohio, the least that can be said is that the automobile and truck are supreme in the sense that such a large proportion of each dollar expended for capital improvements is devoted to highway construction. Even more interesting, highways seem to be taking an ever-increasing share. In 1947 highways accounted for about 62 per cent of capital expenditures. After fluctuating about this figure by a few percentage points for several years, highway outlays increased to 72 per cent of total capital outlays in 1952 and have never again been
below this amount. Indeed, in 1954 they reached 84 per cent and since then they have always exceeded 82 per cent. In 1963, they reached their seventeen year peak of slightly more than 90 per cent of total capital expenditures.

No other major capital expenditure program of the state has been such a consistent performer throughout the seventeen years. Education received 13 per cent or more of each dollar spent for capital improvements in at least three years between 1947 and 1951, but since that time it has never received as much as 10 per cent and in most of the years the amount has been 30 to 50 per cent less than this. Health and welfare programs also received fairly large (at least as a percentage of total outlays) in the years between 1947 and 1952, but since then they have usually received even less than education.

Capital expenditures in Ohio have been financed from one or a combination of three sources of funds: current revenues and balances, federal aid, or debt proceeds. Although data regarding sources of funds for financing capital improvements are such that a number of assumptions must be made, it is possible to develop rough estimates as to the relative importance of or contribution made by each of them in financing Ohio's postwar capital outlays.

For the entire period 1947-1963, total capital outlays made by the state of Ohio amounted to nearly $3.6 billion. Of this amount 38 per cent came from current revenues and balances, slightly more than 33 per cent came from federal aid, and almost 29 per cent came from borrowing. Although these figures are revealing, additional and even
more revealing information can be obtained when they are disaggregated both by program and by time period.

In the case of regular (i.e., non-toll) improvements made between 1947 and 1954, no borrowing was used, federal aid contributed about 35 per cent and current revenues and balances about 65 per cent. But during the years 1955 and 1963 borrowing contributed about 22 per cent, federal aid became relatively more important at 45 per cent, and current revenues provided only about 33 per cent. In addition, a substantial amount was spent for toll facilities which were financed largely out of debt proceeds (almost 95 per cent) with most of the balance coming from current revenues. Finally, looking at total highway outlays between 1947 and 1963, it was seen that federal aid was the major source of funds (39 per cent), current revenues accounted for 34 per cent, with the remainder of 27 per cent coming out of debt proceeds.

Turning to the non-highway category of capital outlays, the relative importance of various financing methods is quite different from that observed for highway improvements. Between 1947 and 1955 current revenues and balances were particularly important, accounting for almost 85 per cent of the total expended. Because precise data for federal aid are not available, a liberal estimate of 5 per cent was used; thus, to the extent the federal aid figure was too liberal, current revenues may have accounted for even more than 85 per cent of the period's non-highway capital expenditures. The balance of 10 per cent was obtained from debt proceeds and all of it went for higher education outlays.
Looking now to the 1956-1963 period, the relative importance of debt proceeds and current revenues (federal aid was again estimated at 5 per cent) has changed considerably. Whereas in the earlier period just discussed current revenues provided more than eight times as much money for non-highway capital outlays as did borrowing, in this latter period borrowing actually became the larger source of funds. In percentage terms, borrowing contributed 53 per cent of the 1956-1963 outlays while current revenues only accounted for 42 per cent or less than one-half of the share contributed in the 1947-1955 period.

The nature of Ohio's capital improvements financial policy, 1947-1963

The preceding analysis reveals a great deal about changes in Ohio's capital expenditures financing policy and probable future developments. Since before 1850 until the 1950's the state of Ohio had made very little use of borrowing to finance capital improvements. Indeed, at the end of 1946 Ohio had little debt—none guaranteed by the state—and, as a result of the wartime increase in revenues and the reduced expenditures, a surplus of more than $160 million. So optimistic was the state's financial outlook that in 1947 Governor Herbert could suggest the need for tax reduction. Even though it was...

27Records of the Treasurer of State and unpublished records of the Census Bureau.


29The Governor made this suggestion to the General Assembly at least twice in 1947. See, Message of Governor Thomas J. Herbert to the Ninety-Seventh General Assembly of Ohio, Regular Session, January 20, 1947; and Message of Governor Thomas J. Herbert to the Ninety-Seventh General Assembly of Ohio, Special Session, December 3, 1947.
recognized at the time that substantial capital outlays would be required, especially since many were deferred during the period of hostilities, there is little evidence that anyone seriously contemplated any substantial borrowing to finance them.

By 1949 expenditures had apparently increased enough that, along with some depletion of the postwar surplus, no one seemed to be advocating tax reduction. Moreover, in his budget message in 1949, newly-elected Governor Lausche said that capital outlays could not be financed from current revenues (presumably because they were adequate only to finance current operating programs); rather they would have to be financed out of the accumulated surplus of $75 million. Despite this suggestion that financing Ohio's programs was becoming more difficult by 1949, there still seemed to be only limited interest in or consideration of substantial debt financing for capital improvements.

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30For example, as early as 1945 the legislature created a "postwar reserve fund" into which were to be appropriated surplus general fund revenues and from which capital expenditures were to be financed. Cf., State of Ohio, The Appropriation Acts of the Ninety-Sixth General Assembly of Ohio, 1945, H. B. No. 477, pp. 157-180.

31Although he did not suggest debt financing, the Auditor of State during this period, Joseph T. Ferguson, was much less sanguine about the condition of Ohio's finances. Cf., State of Ohio, Auditor of State, Annual Report, 1947-1950, pp. 7, 7, and 8, respectively.

32Budget Message of Governor Frank J. Lausche to the Ninety-Eighth General Assembly of Ohio, Regular Session, April 5, 1949.

33One example of this sentiment is the following statement attributed to the Ohio Highway Director in 1950: 'the citizens of Ohio are proud of the fact that our State government operates on a pay-as-you go basis.' Quoted in Hubert H. Frisinger, Michigan State Highway Expenditure Policy (Michigan Government Studies, No. 29; Ann Arbor: University of Michigan Press, 1954), p. 37. In the context within which this statement was quoted, it implies that official Ohio policy in 1950 was opposed to the use of debt financing for the state's
Very quickly at the beginning of the 1950's the state's capital improvements financing problems became more difficult. This became increasingly obvious in the statements made by the Governor and the actions taken by the legislature. For example, in his State of the State message presented to the General Assembly in 1951, Governor Lausche recommended the creation of a State Office Building Authority, empowered to issue bonds (not guaranteed by the state) and to acquire or construct out of the proceeds a state office building, the debt to be liquidated out of rentals paid by the various departments using the facilities. Although no action was taken on this proposal, it does serve to indicate that capital outlay financing was becoming more difficult.

The regular highway construction program. Although not noted in the study which quoted the Ohio Highway Director, the word regular is important because, by 1950, Ohio had enacted legislation which established the Ohio Turnpike Commission (Ohio Revised Code, Sec. 5537; General Code, Sec. 12C3) and which, in 1952, issued $326 million in nonguaranteed turnpike revenue bonds and embarked on the construction of a $300 million dollar toll-highway across the northern part of the state. Thus, while there was no use of guaranteed borrowing to finance capital outlays in the early postwar period—and apparently some official feeling that this was an admirable record—there was considerable use of and little overt concern over nonguaranteed borrowing. For some discussion of why this distinction might exist, see infra, Chapter IV, passim.

34 State of the State Message of Governor Frank J. Lausche to the Ninety-Ninth General Assembly of Ohio, Regular Session, 1951.

35 That is, difficult if taxes were not to be raised. Throughout the postwar period in Ohio, official sentiment has been adamantly opposed to most tax increases—with the significant exception of the years 1959-1963 when Michael V. DiSalle was Governor. Of course there were occasional tax increases, but as a generalization this seems to be a reasonable and fair observation.

How hopeful Governor Lausche was that his Building Authority proposal would be enacted into law—and upheld by the Supreme Court of Ohio—cannot be determined. But that he would even make such a proposal in view of the earlier Public Institutional Building Authority decisions
A study, published in 1951, which dealt with Ohio highway financing may also have been influential in the subsequent approval of guaranteed borrowing to finance state capital outlays.\(^36\) Projections showing future highway needs in Ohio had been made in the early 1950's and up to this time it was assumed that these improvements could best be financed out of current revenues and federal aid.\(^37\) The Lindman study, however, suggested that the highway program be accelerated by means of borrowing over a ten-year period, "the entire bond issue [to] be retired at the end of 20 years," and at no greater cost than a pay-as-you-go plan to finance a longer, but no larger, construction program.\(^38\)

In November of 1953, the voters approved an amendment to the Ohio Constitution permitting borrowing of up to $500 million to finance a substantial share of an eight-year $1 billion highway construction program.\(^39\) At a special session of the legislature in 1954, called to enact legislation authorizing borrowing pursuant to the 1953 amendment,


\(^{38}\) Lindman, *op. cit.*, p. 5.

\(^{39}\) Ohio Constitution, Article VIII, Sec. 2c.
Governor Lausche presented the details of the program and outlined its great advantages to the state. This event marked a significant departure in the capital improvement financing policies of Ohio. Not since before 1850 had Ohio lent its name and credit to a borrowing program designed to finance capital improvements.

The idea that the desired volume of state capital outlays could not be financed entirely out of current revenues and balances and should, instead, be supported substantially by means of borrowing was not limited to the highway program. By 1955, Ohio had obtained some experience with debt financing of capital improvements as a result of the $500 million major thoroughfare borrowing program implemented in 1954. The leadership apparently was pleased with this "new-found" source of funds, especially since it was on record as being opposed to any tax increases. At least borrowing was now acceptable enough that the Governor, in a message to the legislature early in 1955, proposed another amendment to the Constitution to permit borrowing $115 million for the construction of mental health facilities. Not only was this

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40 Message of Governor Frank J. Lausche to the One-Hundredth General Assembly of Ohio, Special Session, January 11, 1954.

41 The importance of this departure from traditional Ohio highway financing policy is also recognized in U. S. Bureau of Public Roads, op. cit., p. 31.

42 Perhaps significant was the fact that in this initial departure from a policy which had existed for more than one-hundred years was the fact that the bonds approved by the 1953 amendment were not guaranteed by the "full-faith and credit" of the state but, rather, only by a limited group of the state's revenues.

43 State of the State Message of Governor Frank J. Lausche to the One Hundred and First General Assembly of Ohio, Regular Session, January 11, 1955.
proposal acceptable to the General Assembly, but by election-time in November, 1955, the amendment upon which the electorate was asked to vote (and which it approved) permitted borrowing $150 million for mental health, correction, general office, and educational facilities.

After 1955 and until 1963 no new authority was sought or granted to issue guaranteed state debt to finance capital improvements. But the use of non-guaranteed state university revenue bonds continued and expanded substantially in terms of volume of borrowing. Also, a small issue of bridge commission revenue debt was sold.

By 1963, however, the borrowing authority granted in the 1953 and 1955 constitutional amendments had been exhausted, but a substantial quantity of additional capital improvements of various types was still needed. The new Administration, elected in November, 1962, had campaigned on the premise no new taxes were necessary and had promised that it would ensure that none were enacted. At the same time, it had referred to the many unmet capital improvements needs of the state and it promised to provide a large portion of the needed facilities. In line with this position, a series of financing programs was adopted between January, 1963, and May, 1964. Of these programs, the ones dealing with borrowing were of major importance. In addition to those expanding the nonguaranteed borrowing authority of certain state agencies, two proposals for guaranteed borrowing were enacted. The first—approved by the electorate in November, 1963—authorized the state to borrow $250 million over the next few years to finance various

44 But a November, 1957, amendment authorized borrowing up to $90 million to provide compensation to Ohio residents who served in the Korean conflict. Ohio Constitution, Article VIII, Sec. 2d.
non-highway capital improvements. The second—approved by the electorate in May, 1964—authorized the state to borrow $500 million to finance a portion of its planned highway construction program.  

Thus, borrowing to finance capital improvements in Ohio has been moved from a position of comparative obscurity in the early post-war period to one of major importance in the state's overall financial program in the middle 1960's. Indeed, it seems likely that borrowing will be used extensively in meeting Ohio's near-term capital improvements needs. This conclusion is strengthened if it is assumed that new state taxes or major adjustments in existing state taxes are improbable and that current programs will require all available revenues. Some of the implications of this state fiscal policy as applied to financing capital items will be considered later. First, however, it will be useful to look at the methods by which the state plans its improvements program.

45The particulars of these programs are examined below. See Chapter VI, passim.

46It is understood that the Rhodes Administration opposes using tax revenues—except those already pledged—for capital outlays. Furthermore, the Administration seems to consider tax increases unwise, it recognizes the existence of a large capital improvements backlog, and it favors debt financing to finance these capital items.
The objectives of this chapter are twofold. First, the analysis will focus on the general nature of capital budgeting. Some attention will be given to the definition of capital improvements, the rationale behind separating capital outlays from current or operating outlays in the budgeting process, and the rather common practice of excluding certain capital outlays from a central and uniform budgetary review. A second major section of this chapter will review the general process of planning, adopting, executing, and evaluating capital outlays in Ohio. Relatively new legislation has established a formal structure by which these activities are carried out and, in addition to a description of the structure, there will be some discussion regarding the actual results and problems which have occurred in implementing the legislation. The chapter will be concluded with a selected and decidedly limited analysis of some of the strengths and weaknesses of capital budgeting in Ohio.

State Capital Expenditures and Budgeting: A General Analysis

Definitional problems

Among states and cities which separate certain of their expenditures into some kind of capital budget, definitions and procedures

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1The terms "capital improvement," "capital outlay," "capital expenditure," and "public improvement" are often used interchangeably, and this practice will be followed here.
are so vague and diverse that it is virtually impossible to find a universally accepted technique. As Jesse Burkhead points out, "The criteria for selecting capital items are rough and are phrased in such terms as large size, long life, fixed nature, or nonrecurrent." A review of the definitions used by various governments would reveal just how rough these criteria are. In part this diversity is due to differences in accounting procedures and in part it is related to what the particular government is trying to accomplish or control with its capital budget. For purposes of this study, the definition of capital outlay used by the Bureau of the Census in its annual *Compendium of State Government Finances* is satisfactory, especially since some of its data will be used here. The Bureau defines capital outlays as "Direct expenditure for contract or force account construction of buildings, roads, and other improvements, and for purchase of equipment, land, and existing structures. Includes amounts for additions, replacements, and major alterations to fixed works and structures. However, expenditure for repairs to such works and structures is classified as current operation expenditure." 

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4*Compendium*, 1962, p. 57. It would be useful to distinguish here between capital outlay and current outlay—also referred to as current expenditures, operating expenditures, and general outlays—and
The nature and objectives of capital budgeting

The absence of well-standardized terminology makes the development of a general statement of the nature and objectives of capital budgeting particularly difficult. In the first place, the terms "capital budget" and "capital budgeting," so often used by finance men, frequently become "capital improvement program" and "capital programming" when used by physical planners. In this context, "capital budget" and "capital improvement program" usually refer to a group of capital projects for which appropriations are recommended or have already been made and which are scheduled to be constructed in the ensuing year or biennium, and "capital budgeting" and "capital programming" refer to an orderly, forward-looking procedure for planning the complex of improvements the government will provide in the future. Even this usage is not universal. A review of the literature also reveals use by both some finance men and some physical planners of the term "capital budget" to indicate only the proposals which are to be or have been approved by the legislature for implementation in the ensuing year or biennium, while "capital program" refers to a schedule of desirable capital outlays proposed for the next five or six years.

the Census Bureau definition is again satisfactory. These are defined as "Direct expenditures for compensation of own officers and employees and for the purchase of supplies, materials, and contractual services, except amounts for capital outlay." Ibid., p. 58.

5Hillhouse and Howard, op. cit., pp. 2-3.
and which includes those projects that will constitute the next capital budget.\(^6\)

Given this diversity of terminology, it becomes obvious that no single term is perfectly acceptable for describing the more-or-less orderly process of bringing capital improvements into existence. In the following discussion budget and program will be used interchangeably as will budgeting and programming. It will now be useful to look more closely at the nature of capital budgeting.

Capital budgeting defined

One student of governmental capital budgeting, James W. Martin, emphasizes (in the ideal budget) the unity between defining objectives; specifying particular projects to achieve these objectives; linking the work program with a formal, comprehensive financial plan; and implementing the program by means of an administrative arrangement which includes a schedule for project completions.\(^7\) Of particular interest here is Martin's attention to the necessity of linking the physical program

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\(^6\) This procedure is also noted by Hillhouse and Howard, ibid., p. 3. For examples of such use see W. H. Brown and C. E. Gilbert, Planning Municipal Investment: A Case Study of Philadelphia (Philadelphia: University of Pennsylvania Press, 1961), p. 27; and Pennsylvania Economy League, Planning for Pennsylvania's Public Works Needs (Harrisburg: The League, 1958), p. 2. Strictly speaking, Ohio is in an entirely different category from those discussed in that it uses "Capital Plan" to refer both to its tentative six year listing of planned (but not officially appropriated for) capital outlays and to the capital outlays to be constructed in the ensuing biennium for which appropriations have been made. The details of the "Capital Plan" will be discussed in a subsequent section of this chapter.

\(^7\) The Capital Budget and Highway Department Liaison with Public Service Companies (Lexington: University of Kentucky, 1962), p. 25.
with a formal, comprehensive financial program. Certainly, in the absence of such a financial plan, capital budgeting is much less an orderly, logical, forward-looking procedure than it might appear.

A slightly more detailed and admittedly ideal definition of capital budgeting has been developed by Hillhouse and Howard. According to them:

Capital budgeting is a process or system of administrative procedures which relates a long-term capital-improvement program with the methods which will be used to pay for these improvements and provides for the implementation of these long-term financial and physical plans. The term "budgeting" in capital budgeting connotes a two-sided approach: one which emphasizes project programming and expenditures on the one hand, and financial measures and revenues on the other. A balanced approach is implied, with projections of both physical and financial programs, a matching of project requirements against ability to pay, and with appropriate measures to ensure at the execution stage that end-product projects will be completed on scheduled time and within the cost estimates. On the physical side, the process seeks to replace the haphazard selection of projects, influenced by immediate pressures, with a thoughtful analysis of the relative necessities which are encountered, and it provides for an orderly scheduling of the construction program.8

In addition to emphasizing the need for integration of physical objectives with financial plans as did Martin's, the Hillhouse-Howard definition is particularly useful because it stresses the casual or accidental nature of the results to be expected when the process of putting capital improvements in place is not based on a well thought-out and comprehensive plan. Not only is it probable that, in the absence of a comprehensive plan, the wrong projects in the wrong order will be selected (unless one grants to the pressure groups and logrollers a store of wisdom comparable with their political strength); but it is equally

likely that serious and, perhaps, disastrous financial difficulties will be encountered in carrying out the complex of projects approved.

Separating capital expenditures from operating expenditures

Thus far in the discussion capital budgeting has been defined in an imprecise and ideal fashion in which the essence has been the need for unity between financial planning and execution and physical planning and execution. However, little attention has yet been given to the practice of separating from the government's total expenditure plans certain items designated as capital outlays. A hint regarding the rationale for this practice was given above. Reference was made there to Burkhead's imprecise criteria for identifying capital outlays. The criteria were such things as long life, large size, fixed nature, and nonrecurrent. But does the mere fact that a particular expenditure is made for a long-lived item suggest special treatment in the budget? In general, the answer is no. Burkhead offers more help by suggesting that the separation into operating outlays and capital outlays is done chiefly for policy and procedural reasons and because the identification of capital expenditures focuses attention on a type of outlay which requires a specialized pattern of decision-making. Although this leaves a great deal unsaid, it does summarize the basic reasons for special treatment of capital outlays, and it offers a good introduction to a more detailed analysis of capital budgeting theory and practice.

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9Supra, pp. 58-59.
10Burkhead, op. cit., p. 182.
11Of course the most immediate portion of the long term capital budget (e.g., the first two years of Ohio's six year program) is
Ignoring for the moment the reasons, it can be said that capital outlays are usually the chief source of sudden, large increases in state expenditures, they cause more of the state's financing problems, and they necessitate the most careful weighing of alternatives because needs are usually so in excess of available resources.\(^{12}\) For just such reasons, an increasing number of state governments are applying special procedures to capital improvements decision-making. According to Brown and Gilbert this special treatment has two justifications. The first "emphasizes fiscal planning and perspective regarding projects that are loan-financed" and the second "is couched in terms of physical planning of items distinguished by 'lumpiness' and longevity."\(^{13}\) The latter justification offers three advantages: (1) it emphasizes looking well beyond the present and undertaking research; (2) it brings about program and project integration which prevents overlap and obsolescence diseconomies; and (3) more attention is given both to the goals or ends and to the means (criteria) to ends of the various parties involved in the selection process.\(^{14}\)

So long as the reader recognizes that the Brown-Gilbert "physical" justification also embodies important "fiscal" aspects, integrated with and becomes a part of the state's current budget. Only at this point does the capital budget take concrete form.

\(^{12}\)Opp. cit., p. 185.

\(^{13}\)Brown and Gilbert, Opp. cit., p. 11. In all likelihood these authors probably should be considered students of "public investment planning" since their study of Philadelphia's program is far broader than a purely financial study would be.

\(^{14}\)Ibid.
their dichotomy is useful because it demonstrates both the greatest strength and greatest weakness of capital budgeting. Although the view is widespread that a capital budget is somehow a corollary to debt financing, "there is no objective reason why this should be the case. The technique is inherently neutral with respect to the means of finance."15 One explanation for the popularity of this erroneous view was the frequent use of sophisticated and often spurious explanations of the good sense of deficit financing by the federal government, especially during the 1930's. Many of these explanations were couched in terms of an analogy between public and private accounting. Unfortunately, a great number of these explanations attempted to extend the business analogy beyond the clear cases of self-liquidating projects and, to accomplish this, they were often forced to ignore certain accounting principles which would have weakened their position.16 The more sophisticated version of the argument is that capital budgeting provides a guideline which regulates the volume of borrowing. Under this approach, the double budget17 is used along with the rules that current outlays are normally financed from current revenues and that capital outlays are normally financed by borrowing and adequate depreciation charges against the capital assets are included in the current budget. Admitting the limited value of such a proposal, it is

15 Burkhead, op. cit., p. 190.

16 See infra, pp. 69-70.

17 Not to be confused with the British "double budget" system which, strictly speaking, "does not appear to have been designed with a view to capital budgeting." Moor, op. cit., p. 170.
nonetheless true that there are serious weaknesses to such practices.\textsuperscript{18} Further discussion of this controversy will be deferred until the following chapter when the general question of pay-as-you-go financing versus borrowing for capital outlays will be explored.

It is far easier to accept Brown and Gilbert's second justification for capital budgeting. The usual high cost and longevity of capital outlays require that such decisions be based on a long look into the future and careful research. After all, a decision to spend for some capital facility necessarily means that certain other wanted outlays will have to be postponed for a number of years. Similarly, it makes good sense to recognize explicitly that a great many capital improvements will have a substantial impact on other state programs. Sometimes they will be complementary and at other times they will increase the burdens of various programs. Such reactions will ultimately affect the state's finances. This makes the long view and the development of a unified, comprehensive plan for capital outlays essential.

Typically, the only area where substantial latitude in a state's spending decisions is recognized is that of capital outlays. Usually operating expenditures are considered to be more-or-less fixed, with

changes dictated rather automatically by such things as population and price level increases. Consequently, capital outlays become the focal point for the pressures perennially exerted by the various special interest groups. And probably the most successful method of defending against such pressures and ensuring that the majority of capital outlay decisions are not rendered merely on the basis of short-sighted interests is by means of a capital budgeting process. As Burkhead puts the matter, "The capital budget, when linked with a long-range improvement plan enables local [and state] government officials to deal with and yet exert some control over the representations of the interest groups."²⁰

The use of the capital budget and the long-range financial plan may facilitate understanding of the state's financial condition both for the taxpayer-voter and for the potential investor (if the state undertakes borrowing). Short of the most drastic emergency (the 1964 Alaskan earthquake might be such an emergency) almost anyone with any sense of financial responsibility would agree that a state should meet its current expenses out of current (i.e., non-debt) revenue. While controversy, some real and some symbolic, continues about the appropriate scope and timing of and the income and employment effects resultant from federal level fiscal policy decisions, there is general

⁰Burkhead, op. cit., p. 185. This view is also reflected in George A. Bell, State Budget Administration in Maryland, (College Park: University of Maryland, 1957), pp. 66-67. This should not be construed as meaning that such a view is entirely correct. But correct or not, it is probably the accepted one.

²⁰Burkhead, loc. cit.
unanimity that states are not justified in borrowing to finance current operating expenses. No such unanimity exists in the case of capital improvements. Perennial argument rages over whether the method should be pay-as-you-go, debt financing, or some combination. But even the pay-as-you-go advocate probably would not view resort to debt financing for capital outlays as being nearly so serious a breach of financial propriety as he would the use of such methods to finance current expenses. In such circumstances, a fair case can be made for use of some type of double budget merely to demonstrate that the state is not incurring a deficit on its current account. Some argue that the double budget approach is useful even for the sophisticated reader of budget documents because the knowledge that the state prepares a capital budget supported by a long-range financial plan would be evidence that the state "is doing a sound and responsible job of administering its financial affairs."  

Before concluding this section, attention should be given to two other questionable arguments for separation of capital outlays and current outlays. The idea lingers— and its existence is sometimes helped along by irresponsible statements of politicians— that the capital budget contains a type of nonrecurring or extraordinary expenditure. Among those who hold this obviously incorrect view there is the

belief that sometime soon these projects will be completed and government spending can return to a lower, more "normal" level. In fact, the preceding discussion of the capital budgeting techniques used by states demonstrates that it is precisely because these specially-treated outlays are going to continue indefinitely that the techniques are so valuable. Countering the myth that such outlays are only temporary is possibly the greatest contribution the capital budget and long-range financial planning can make.\(^{22}\)

Finally, it is often maintained that a capital budget is of value because of its businesslike appearance. A complete discussion of the differences between private and governmental accounting is not possible here; however, a few comments can be made which should demonstrate that whatever valid justification exists for governmental capital budgeting does not rest on an analogy with the private sector. It is obvious that the profit-oriented operations of private business justify separate treatment for capital expenditures in contrast with operating outlays. Capital contributes to income and profits for a number of years and its costs should be distributed over a like number of years. But with the exception of a few self-liquidating enterprises, government is not a profit-oriented operation. Its ends are far broader than mere profit-making and the adoption of a financial device theoretically founded on such a goal would, at best, lead to confusion. Furthermore, governments seldom include realistic depreciation charges in their budgets or set aside cash from current revenues to cover such

charges. In such cases, adoption of capital budgeting based on the
business analogy is not even complete and cannot achieve the intended
(but dubious) goal.  

**Exclusions from central capital budgeting**

Central capital budgeting is being done by a state if a number
of its agencies systematically submit their capital outlay requests to
a central review agency, if the various requests are consolidated--
after central screening--for submission to the legislature, and if there
exist administrative arrangements for execution of the approved out-
lays.  

In the above discussion in which capital improvements were
defined, it was shown that a common practice in states doing capital
budgeting was to exclude certain categories of outlays from the pro-
cess. Although highway construction is the most frequently excluded
category, there are other types of capital outlay which may be
excluded. Because these specially-treated expenditures bulk large in

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23 The reader should notice the similarity between this argument
and the one discussed above which is used to justify borrowing.
Although they can be merged easily, they are different arguments. It
is possible to support the business analogy argument without favoring
borrowing. For more elaborate discussion of this business analogy
argument see Burkhead, *op. cit.*, pp. 205-206; and Goode and Birnbaum,
*op. cit.*, pp. 25-30. A technical discussion of depreciation accounting
in government can be found in Irving Tenner and Edward S. Lynn, *Munici-
pal and Governmental Accounting* (Englewood Cliffs: Prentice-Hall, Inc.,

24 Hillhouse and Howard, *op. cit.*, p. 1. This section will be
based, in large part, on a comparable one in Hillhouse and Howard,
*ibid.*, pp. 33-39. The major portion of the discussion here will be
related to exclusions in Ohio.

the total capital outlay of most states, the reasons for their special status should be understood.

One useful method of distinguishing between types of projects excluded from central budgetary review is to separate them into highway and non-highway categories. As noted above, highway construction is the most frequently excluded category in states doing capital budgeting. Ohio follows this rule for actual highway construction and right-of-way acquisitions, but it includes construction of highway buildings in its central capital budgeting process. In the case of non-highway capital projects, Ohio includes all projects which are financed by state funds, whether the funds are earmarked or part of the state's general revenues. But Ohio also uses special boards or commissions empowered to borrow by means of nonguaranteed revenue bonds and to use such funds to construct and operate certain self-liquidating projects. Virtually all activities of these commissions, including capital construction, are carried out free from any direct control by the legislature.

Highway projects are planned, approved, and executed separately from other capital projects in so many states, according to Hillhouse

26Another method of distinguishing, but of little relevance to practice in Ohio, is to separate exclusions into those not included in the central-review process and those not included in the capital budget document. See Hillhouse and Howard, *ibid.*, pp. 33-34.

27Central capital budgeting as it is done in Ohio is required in Ohio Revised Code, Sec. 125.82. But Ohio Revised Code, Sec. 127.26, effectively, removes highway construction and right-of-way acquisition from the central budgeting process.

28Of the twenty-eight states which Hillhouse and Howard found to be doing capital budgeting, at least nine exclude some aspect of
and Howard, first, because the planning process in highways is so technical, complex, and specialized and because it is thought that since highway planning and execution involves several levels of governmental reviewing agencies, an additional review by a central budgeting agency would add little to the process and it might do a great deal of harm. 29

A second explanation rests on the assumption that because such projects are supported by so-called user charges, they do not merit nearly so probing an examination as do those supported by the general revenues of the state and which, when increased very much, are responsible for very obvious and usually unpopular tax increases. 30

Other reasons for exclusion are frequently tendered which apply not only to highways but to non-highway items as well. First and foremost on this list is probably the practice of earmarking certain revenues. This practice has not yet brought about the exclusion of any non-highway projects in Ohio, although the state does earmark certain taxes and other revenues. 31

Another reason for exclusion, particularly

highway construction from the central capital budgeting process.  

29 Part of this attitude also stems from highway planners' fears that if their plans are made public--and later changed--the pressures exerted by groups losing a favored project will lead to a great deal of trouble. This point of view is reflected in a discussion among highway officials in Highway Research Board, Formulating Highway Construction Programs, Special Report 62, (Washington: National Research Council, 1961), pp. 74-75.


31 However, the newly created Ohio Public Facilities Finance Commission (130 O.L. H974 (1963); Cf. Ohio Revised Code, Sec. 154.02) may prove to be the exception. This commission has the authority to issue non-guaranteed revenue bonds to meet the appropriations of the
important for Ohio, is the existence of the state created, semi-autonomous financing and operating commissions such as the Ohio Turnpike Commission, the State Underground Parking Commission, and the State University Housing Commissions. As previously noted, capital projects initiated by such commissions are almost always completely outside the central budgeting process and are virtually free from direct state control. In large part, this immunity from legislative control is a consequence of the use of nonguaranteed bonds to finance such projects. A third reason for exclusion is the increasing role of federal grants and loans in financing many of a state's capital expenditures, including both highways and various state buildings. Some of the agencies receiving such financial aid argue that greater freedom than is possible under central capital budgeting is necessary to facilitate negotiations and to ensure adequate flexibility for meeting the complex requirements attached to such grants. 32

Hillhouse and Howard argue, quite persuasively, that precisely because highway construction is so crucial to a state's overall development there is some justification for including it within the general assembly for various capital projects. These bonds would be financed from profits of the Ohio Department of Liquor Control. The present language of the law seems to indicate that all projects financed in this way are to undergo the regular central budgeting process. This unusual financing device will be discussed further in Chapter V.

32Most of these arguments can be found in Hillhouse and Howard, loc. cit. For further enumeration and some comments on reasons for exclusions see James W. Martin, A Framework for State Capital Budgeting (Lexington: University of Kentucky, 1963), p. 12. (Mimeographed.)
central-review process so as to coordinate it with other capital projects. 33 Similar comments apply to other excluded capital outlays. And in the case of non-highway capital outlays it appears that the reasons for exclusions are much less defensible than are some of those for exclusion of highway construction. This is especially true for Ohio in the case of projects controlled by boards with authority to issue nonguaranteed revenue bonds. The principal justification for such nonguaranteed debt financing is the constitutional limit on debt. 34 One might question the need for such a provision to ensure financial responsibility by the legislature.

In addition to achieving better coordination of the state's role in overall development, there would be other benefits from comprehensive capital budgeting. For example, more complete data would facilitate the measurement and analysis of the impact of the state's programs. 35 Finally, there is the chance that a fully comprehensive capital budgeting process, by increasing the objectivity of the decision making process, may lessen the extent of logrolling and reduce the number of decisions based on short-sighted interests. Even if nothing else were gained, this achievement alone would justify the change.


34 The debt limit and the use of nonguaranteed borrowing is discussed in Chapters V and VI, passim. Although there could be some other logical justification for separate planning of certain non-highway capital outlays, discussions with Ohio's capital planning officials did not turn up any.

35 The special treatment of certain capital outlays and the total exclusion of some in official state reports has been a major obstacle to obtaining complete data required in the present study.
The Capital Budgeting Process in Ohio

Before engaging in a discussion of the capital budgeting process in Ohio, it is essential that the reader understand the special and arbitrary way in which the terms budget and budgeting are used. The budgetary system should be thought of as a continuing process of formulating, adopting, executing, and evaluating the programs of the government. The budget is an integration of a financial and physical plan which is designed as a management device to carry out the state's programs and to acquire the capital projects needed. Unfortunately, budgeting is often viewed primarily as an expenditure control device and many students of public finance who should know better have stressed the expenditure aspects of budgeting as though this were the essence of the process. Sundelson, however, in his excellent study of national and state budgetary methods in the 1930's emphasizes the need, if the budgetary process is to be complete, to use the process not only for expenditure control but equally as much for revenue planning. In short, the budgetary process should constantly call attention to the vital link between expenditures and revenues and the need for careful coordination between the two. As subsequent analysis will reveal, however, the capital budgeting process in Ohio concentrates on the expenditure aspects of planning.

36A similar definition but limited to capital budgets is given by Martin, A Framework for State Capital Budgeting, p. 1.
38Ibid.
The Capital Planning and Improvement Act

A few states have been doing capital budgeting at the departmental level since the 1920's but, in general, centrally-coordinated state capital budgeting and long-range financial planning is a quite recent innovation. In fact, state capital budgeting really did not receive widespread attention by many states until after World War II.

Ohio has been no exception to the tendency to begin only very recently to coordinate centrally its capital spending program. In 1955 Ohio's General Assembly established the Division of Capital Planning and Improvement within the Department of Finance. This division had the responsibility for developing a program of needed capital improvements which was to be submitted to the Capital Planning and Improvement Board. The Board reviewed, adopted or modified, and finally recommended to the legislature a plan for state capital outlays known officially as the Capital Plan. The division began operation in December, 1955, and the first Capital Plan was presented to the General Assembly in January, 1956.

39 Hillhouse and Howard found twenty-eight states doing some form of capital budgeting and three others preparing to engage in it. Op. cit., p. 3.

40 As a matter of fact, it has been only very recently that Ohio has established a permanent professional budget staff. Formerly, the budget staff was little more than a mere central collection agency for departmental spending requests which it consolidated and altered rather arbitrarily on the basis of revenue estimates and administration policy. For an example of official recognition of this need for a permanent professional budget staff see the finance director's letter of transmittal accompanying Ohio's 1957-1959 Executive Budget.

41 126 O. L. 845, 846 (1955); Cf. Ohio Revised Code, Sec. 125.82.

42 Hereafter referred to as the Board.
Subsequent legislation passed in 1959 changed both the position of the capital planning group within the Finance Department and the role (and name) of the Board. First, capital planning was made a responsibility of the Finance Department's Budget Division. Second, the Board's responsibility was reduced to advising the Finance Department "relative to the capital planning and improvement functions exercised by the department (finance) pursuant to Section 125.82 of the Revised Code."43

The nature of the act44

The following is a brief summary of the essential features of the statute (Ohio Revised Code, 125.82) which specifies the Finance Department's duties in connection with preparing the capital budget:

1. Analyzes and inspects on a regular basis all structures and real estate owned or used by the state to determine their utilization, condition, and adequacy.

2. Prepares and maintains a Capital Plan for real estate acquisition and building construction which should be undertaken in the coming six years. The plan should provide details regarding the cost, use, and description of each facility included.

3. Requires all departments and agencies to submit, biennially, their requests for capital improvements along with supporting details of description, need, or purpose and cost; evaluates these projects as

43 128 O. L. 876 (1959); Cf. Ohio Revised Code, Sec. 127.22.

44 Although the terms "capital budget" and "capital budgeting" are being used because they best reflect the financial orientation of this study, these terms appear nowhere in the Ohio Statutes or in official documents issued by departments involved in the process. In Ohio, the relevant terms are the "Capital Plan" and capital planning.
to validity and comparative degree of need among them; and consults with departments and agencies on all capital projects being considered for inclusion in Capital Plan.

4. Prepares biennially, subject to the Governor's approval, a revised Capital Plan to be submitted to the General Assembly. The Capital Plan includes a progress report on the execution of capital improvements, and the department's (Governor's) recommendations regarding projects which should be executed in each of the succeeding three biennia.

5. Establishes architectural and use standards for public facilities which are to be adhered to in preparing the Capital Plan.

6. Examines all plans, cost estimates, and other pertinent data related to structures for which appropriations have been made. Before the Public Works Department can permit construction, the Finance Department must ascertain and certify that the contemplated construction conforms to the Capital Plan and standards noted just above.

Beyond these explicit orders, the General Assembly has enacted little legislation concerning the nature of the capital budgeting process. It has specified that nothing in Section 125.82 of the Ohio Revised Code prevents the highway director from acquiring rights of way and letting construction contracts. But nothing is said regarding the disposition of the Capital Plan submitted by the Governor to the General Assembly. In practice, this Capital Plan is used by the legislators mainly as a guide to projects subsequently recommended

\[45\text{128 O. L. 876 (1959); Cf. Ohio Revised Code, Sec. 127.26.}\]
in the capital improvements appropriations bill submitted by the Governor. 46

Capital Plan preparation

In June or July of the year preceding the first session of the new General Assembly, the Finance Department sends to all departments and agencies the forms on which capital expenditure requests are to be submitted. Three different forms are used for requesting projects. The first form contains a listing, in priority sequence within each biennium of the agency's total requests at various possible levels of appropriations. The second form is used "to show the relationship between existing facilities and facilities proposed for inclusion in the new Capital Plan." 47 Minimum information included in this form consists of estimates of the effect of population trends on needs; effect of program and policy changes; effect of deferment of some part or all of the capital improvement requests; and the effect of meeting needs by alternatives such as use of existing space, remodeling present facilities, or new construction. The third form contains details about specific projects. The information reported on this form is extensive and includes details about the project's description, purpose, when

46 In fact, there are two "Capital Plans." The one recommended by the Governor is printed and labeled Capital Plan. In addition, each appropriations bill approved by the General Assembly contains a paragraph to the effect that the appropriation items included, plus any existing capital improvement appropriations, constitute the "Capital Plan." See, for example, 130 O. L. H 962 (1963).

needed, time required to construct, effects of deferring project beyond
the requested date, cost estimates, space standards used, reason for
project and its role in the agency's overall plans and an explanation
of operating costs that would be incurred if the project is constructed.

After completing its package of project requests, each agency
submits it to the Finance Department's Budget Division. The first job
of the budget staff is to check and evaluate each agency's requests.
Since the project request package for some agencies may run to hundreds
of pages, this review is a substantial undertaking. A second and more
difficult duty of the budget staff is to evaluate a particular agency's
requests alongside the requests of all other agencies, given the con­
straint that available revenues will not be sufficient to finance all
project requests. Even with revenue limitations, however, certain
choices are relatively automatic and little influenced by current
administrative policy. For example, top priorities would usually go
to partially completed projects which require additional appropriations.
Similarly, high priorities would be assigned to projects needed to
maintain or service an existing facility—for example, a new heating
plant at a university to replace one destroyed by fire. Beyond these
and similar "essential" capital outlays, the relative choices as to
proper priority sequence theoretically are much more debatable and con­
trolled in a relatively arbitrary fashion by administrative policy.

The Governor's role in the prepara-
tion of the Capital Plan

Ultimate decisions as to what items will be included in the
Capital Plan must be made by the Governor. Every governor has made
certain commitments and has certain objectives which must be reflected in the budget recommendations he submits to the legislature. Usually these commitments and objectives are stated in general terms (e.g., improvement of the state's higher education program, an expanded highway program, etc.). It remains for the budget planners to translate the general program into a complex of specific projects that will achieve the goals of the administration. Consequently, there is still a great need for objectivity in the selection process.

As a matter of fact, most observers and practitioners who are well acquainted with the capital budgeting process in Ohio are of the opinion that the fact that the Governor's decisions are controlling does little to impair the objectivity of the selection process. They argue that, given the inadequate capital outlay appropriations in Ohio in recent years relative to the state's needs—which are so patently obvious—there is little chance that the projects finally selected for recommendation to the legislature will not qualify as among the top priority ones.

The Governor's authority in the development of appropriation recommendations is equally paramount. But unlike the project selection process where institutional toughness and the palpability of needs restricts the real latitude of the Governor, financial policy and appropriation recommendation show a paucity of continuity from administration to administration. Successive governors usually agree that

48The term is James M. Martin's. See his discussion of the principles of budgetary "unity" and "comprehensiveness" and the requirements for achieving them in A Framework for State Capital Budgeting, pp. 8-12.
capital needs are critical; seldom do they agree as to how the needs should be financed or even that they can be financed. Budget officers, to the extent they have formulated a long-range plan to finance capital needs, have been notably unsuccessful in convincing successive administrations of its merits. Therefore, successive governors, although usually in agreement on the general composition and priority sequence of the state's capital needs, effectively demolish the continuity of the actual construction program because of their inconsistent financial policies.

Decision-making and the priority sequence

A few additional considerations affecting the final priority sequence can also be observed. Occasionally, the "ideal" sequence may have to be altered by replacing a very high priority, high cost project with one or a number of demonstrably lower priority projects with a lower total cost simply because of revenue limitations. In other cases (e.g., public parks) it may be decided that it is preferable to provide funds for one or a few relatively large and elaborate facilities, rather than to parcel out a comparable amount of money for somewhat minor improvements in a large number of similar facilities, simply because it sometimes is thought important to demonstrate to the taxpayers that something very tangible and very obvious has been obtained with their tax contributions.

One final rule in the decision-making process merits discussion. The budget planners attempt, not always with the complete cooperation of the departments concerned, to ensure that adequate funds are
provided to maintain properly all existing facilities before any new facilities are provided. But the short-sighted department or agency, not thoroughly aware of the benefits of a rational planning process, may sometimes attempt to obtain a higher priority for a new project as opposed to a rehabilitation project because it believes that once the new facility is obtained, it will be no great task to obtain funds to bring existing facilities up to standards. This is a deplorable practice, but it often can be a highly successful one for the agency which has been granted a degree of immunity by the administration and the legislature. It is significant that Ohio's governors have not been particularly tolerant of such perverse practices, and the budget planners have been quite successful in thwarting the majority of such attempts.

Role of the Capital Planning and Improvements Advisory Board

Throughout the period when the Budget Division is scrutinizing the capital improvement requests of the various departments and agencies, it is consulting with and receiving advice from the Board. Members of the Board travel with budget staff members to the various requesting agencies to evaluate firsthand the condition of the agency and the need for the projects. Since six of these members are also members of the legislature,49 the work of the Board can be said to represent an

49The Board is composed of the finance director, the public works director, a citizen appointed by the Governor and serving at his pleasure, three house members appointed by the speaker (only two of which can be members of the same party), and three senators appointed by the president pro tempore (only two of which can be members of the same party).
advance consideration by the legislature of the state's capital spending program. Even though it is only an advisory group and even though its six legislative members do not speak for the entire legislature, the Board's opinions and recommendations are thought to be given considerable weight when the legislature finally makes capital spending decisions. Most informed professionals involved in the capital budgeting process seem to feel the Board's participation is important in the sense that it facilitates legislative acceptance of the final capital outlay recommendations. 50

Legislative review of capital improvement recommendations

No official action is taken by the General Assembly on the Capital Plan submitted by the Governor. It represents only a compilation of suggested capital outlays for the next six years and it is used by the lawmakers chiefly as an information source. In the Capital Plan are descriptive details about recommended projects and general suggestions as to sources of funds for financing the projects. The Plan is usually divided into four sections: the first three contain project information for outlays to be made in each of the coming three

50 This is not to say that the full legislature's review of capital improvements recommendations is a rubber stamp affair. In actual practice the situation is quite the contrary. But aside from the relatively few attempts by individual or small groups of lawmakers to advance their pet projects, the predominant disagreement and controversy stems from the financing problems and controversy between the legislature and the Governor—especially when the majority party is not the Governor's party—over how additional revenues can be raised.
biennia and the final section includes a summary of prior years accomplishments in capital improvements construction.

Shortly after the Capital Plan is submitted, the Governor submits his capital improvements appropriation bill to the General Assembly. The bill is prepared by the Finance Department and reflects the Governor's budget recommendations for the coming biennium. Most of the formal responsibility for consideration of the appropriation bill is assigned to the finance committees of the two houses of the General Assembly. These committees hold separate hearings—by tradition the house first considers appropriations bills—at which time they hear testimony from not only Budget Division personnel but also representatives from departments and agencies requesting capital improvement appropriations (and who may not be in complete accord with the administration's decisions concerning their particular requests and who will sometimes take this opportunity to make a final "sales pitch").

In addition to considering the merits of various expenditure recommendations, the finance committees also must direct their attention to the revenue estimates and to the matter of how to finance the capital spending program. This is frequently a controversial affair. Some lawmakers may question the validity of the administration's revenue estimates, and there may be more than a little disagreement.

51 A word of explanation concerning the use of "budget" is necessary. Strictly speaking, the "budget" in Ohio is the Executive Budget required by law (112 O. L. 342 (1927); Cf. Ohio Revised Code, 107.03). Among other things, the Governor is to include in his budget all appropriation recommendations for all state activities including capital improvements. In actual practice, however, the subsequent capital improvements appropriations bill may contain additional capital improvement recommendations.
regarding whether tax increases or borrowing should be used to finance the capital outlays in excess of available revenues, or whether the state should even undertake a capital improvements program which would necessitate new tax legislation or borrowing. During these deliberations the Director of Finance and some of his staff members testify regarding the administration's estimates and the nature of the financing proposals.

Upon completion of the hearings, the respective finance committees amend the appropriations bill as they see fit and recommend it to their houses for adoption. After each house has approved its version, a conference committee prepares a compromise bill which, if approved by both houses, is sent to the Governor for his signature.  

Capital Plan execution

Once the General Assembly has made its decisions as to the size of the capital outlay appropriation and its distribution among the various departments and as to the nature of the financing arrangements, it is the responsibility of each agency receiving appropriations to initiate requests for release of funds.

The Controlling Board

Ohio has an institution, known as the Controlling Board, which is created by each appropriation act.  

52 For a much more detailed explanation of the budgetary process in Ohio, but which is concerned almost exclusively with the current operations budget, see State of Ohio, Ohio Legislative Service Commission, Budget Preparation and Execution, Staff Research Report No. 60, January, 1963.

53 According to Hillhouse and Howard at least four other states (California, New Jersey, Maryland, and Michigan) also have similar control boards. Op. cit., p. 137.
duties related to the management of state appropriations. With regard to capital outlays, the Board must release all such appropriations—including funds for real estate purchases, preparation of construction plans, construction, and all other capital spending—and "before such funds can be released, the board must approve of the proposed capital improvements themselves." Therefore, capital outlays undergo still another examination before any money is made available. Occasionally, members of the Controlling Board may take their board powers to heart and question the advisability either of undertaking a particular project in the manner planned or they may even question whether the project should be undertaken at all.

After approving a project proposal in general, the Controlling Board contacts the Finance Department to obtain a certification that funds are available to finance the first stage of the project (i.e., the design stage). When the drawings and plans are prepared, the Budget Division of the Finance Department must certify that they conform with the Capital Plan and that cost estimates are reasonable. Once this is accomplished, the Department of Public Works (which

54State of Ohio, Ohio Legislative Service Commission, Budget Preparation and Execution, p. 40. The report quoted here was ordered by the legislature—which creates the controlling board—and is somewhat controversial in that it is highly critical of the board's activities and comes rather close to recommending its abolition.

55In the case of education expenditures, a recommendation for an outlay must be made by the State Board of Education (for public schools) or by the Ohio Board of Regents (state-supported universities) before the Controlling Board can give its approval. See State of Ohio, The Appropriation Acts of the One-Hundred and Fifth General Assembly of Ohio, 1963, S. B. 370.
supervises the majority of non-highway construction projects) advertises for bids. Upon receipt of bids and assuming they are within the final cost estimates, the Controlling Board releases the money for construction (after once again getting a certification from the Finance Department that the necessary funds are available). Then the Public Works Department lets the contracts and construction begin.

The Public Improvements Inspection Committee

There remains what can be broadly described as a final stage in the process of putting capital improvements in place—aside from the continuing review given to the total program and its components of each agency by the Finance Department's budget analysts and by interested officials within each agency. However, this stage is not directly related to any of those already described.

In 1955, at about the same time it was enacting the original capital budgeting legislation, the General Assembly created the Public Improvements Inspection Committee. The committee consists of five senators appointed by the president pro tempore (only three of which can be from the same party), the president pro tempore, and the house speaker. The committee is responsible for maintaining a continuing inspection of all capital improvement including repairs and maintenance, for reviewing the amounts and disposition of expenditures from funds appropriated for capital improvements, and for reporting periodically to the General Assembly and to the public as to the state's capital

56129 O. L. 582 (1961); Cf. Ohio Revised Code, 103.41-103.47.
improvements program. To carry out its duties the committee visits various state agencies "for the primary purpose of reviewing capital improvements." By interpreting in broad fashion the statutory description of its duties the committee also reviews and analyzes the overall agency program into which the capital improvements are incorporated. As a consequence, the committee serves not only as an information source for the General Assembly on progress in the state's capital improvements program which the General Assembly has authorized, but as a "watch dog" and source of information concerning whatever other aspects of the several programs of the state the committee chooses to include in its periodic reports.

An Evaluation of Capital Budgeting in Ohio

The preceding discussion has stressed the need, in capital budgeting, for an integration of physical and financial planning. At this point, and with this requirement in mind, an effort should be made to appraise Ohio's capital budgeting program.

Looking first at the formal authority for capital budgeting in Ohio (especially Ohio Revised Code, Sec. 125.82) one detects the almost complete omission of any guidance as to the financing aspects of the budgetary process. So far as the statutes are concerned capital

57 129 O. L. 582 (1961); Cf. Ohio Revised Code, 103.43.
59 Originally the committee's principal work consisted of finding out the causes of construction delays. See State of Ohio, Public Improvements Inspection Committee, Quarterly Report, January 1, 1957, Appendix C.
budgeting in Ohio means physical planning and expenditure control. There is not even a cross reference in the statutes which connects the Capital Plan and the process by which it is developed and updated with the statute which details the Governor's duties preparing and submitting the biennial executive budget. Moreover, this latter statute (Ohio Revised Code, Sec. 107.03) is phrased in very general language and requires only that the Governor make appropriation recommendations for all the state's activities and revenue estimates under existing and proposed legislation. Even here, there is no sharp specification of financial planning requirements.

The absence of financial guidance is not complete, however. Elsewhere in the statutes and in the state's Constitution there are limits and rules dealing with borrowing and taxation. But these rules and limits essentially circumscribe the state's activities and are properly described as restrictive perimeters which serve few positive functions. It should be noted, however, that these perimeters are entirely consistent with the state's capital planning legislation which, in its implicit objectives, is principally oriented toward expenditure control as opposed to positive financial planning.

Does the fact that the laws are devoid of more than superficial attention to the matter of positive financial guidelines necessarily justify condemning them? Not necessarily. A strong case can be made for the omission of great detail in the laws given the dynamic nature of the state's responsibilities and requirements. There is much to be said for a legal structure which facilitates adaptation to changing circumstances. But even if this is true, there must still be a number
of general rules of action which are followed with few changes from
time to time—indepen dent of administrative changes.\textit{60}

Ohio does not fare well in terms of continuity of financial
policies, either. As was revealed in Chapter II, a comparison of the
financial policies of recent Ohio governors clearly reflects this.
Sometimes they reflect a commitment to pay-as-you-go financing of
capital improvements as well as current outlays and sometimes they
reflect a propensity to utilize borrowing to finance capital improve­
ments. Within these extremes the variations are numerous. Some
administrations and legislatures, at the same time they issue pro­
nouncements concerning the critical needs for capital improvements,
treat such outlays in a residual fashion, allocating to them only any
available revenues after current or operating programs are provided
for. If any borrowing authority exists, this may also be used to
finance some part of the capital improvements needs. At other times
and with a different administration and legislature, the effort to pro­
vide capital outlay funds might be more substantial and new tax legis­
lation might be enacted or additional borrowing authority sought. In
retrospect, two very definite situations can be discerned: first,
Ohio's capital improvements needs are always at the critical stage and
second, each new crisis—which is certain to exist regardless of the
officeholders—reflects the state's apparent inability to solve its
problems.

\textit{60}See Martin's statement on this point in \textit{A Framework for State
Capital Budgeting}, p. 5.
Although the laws do little to guide financial policy formation, they do provide a mechanism for the rational selection of at least part of the state's capital outlays. Physical planning and the selection of alternative capital outlays have been served rather well, both by the laws and by the various administrations and legislatures in office in recent years. The need to develop a Capital Plan has required both that the central budgeting staff develop more sophisticated techniques for selecting projects and for defending and justifying them to the administration and the legislature. Perhaps more important has been the Capital Plan's effect on the scope and quality of planning in the agencies and departments. Not always convinced of the Budget Division's need for careful documentation of their requests and not always satisfied that the benefits received justify the effort, the departments have learned rather well (in the opinion of Budget Division personnel) that without adequate documentation, their requests are less likely to be approved. So far as the central review process goes in including the state's capital outlays, it seems to have performed quite well in identifying the most necessary projects.

In the matter of presenting capital improvements recommendations to the legislature in the manner most suitable for legislative deliberation, the Capital Plan falls considerably short of the ideal. There exists no clear link between the list of projects recommended for the coming biennium (for which the legislature is asked to approve appropriations) and either the Governor's budget or his appropriation bill. A review of the Capital Plan contributes little to an understanding of a particular projects role in the overall program of the relevant
agency. Furthermore, it is almost impossible to find in either the Capital Plan or any other documents given to the legislators estimates of the effects of particular capital outlays on future operating costs. Since one of the principal arguments in favor of program budgeting (which Ohio gradually is adopting) is its contribution to the legislature and the public of knowledge regarding what has been done, what is planned, and what the costs of particular programs are and will be in the future, the deficiencies in Ohio's system would seem to suggest the need for a great deal more improvement.  

Substantively, Ohio's central capital budgeting process has been concerned largely with public buildings and facilities required to provide regular public services. This would seem to explain in large part why the budget planners have been so successful in identifying a group of recommended projects which is seldom altered drastically by the Governor and, eventually, the legislature. Such capital improvements are so free from controversy for two reasons: first, they largely are the result of policy decisions already made; and second, it is relatively easy to express needs for them in fairly specific terms.

61Recent executive budgets have reflected some progress in instituting program budgeting in Ohio. An evaluation of these budgets can be found in State of Ohio, Ohio Legislative Service Commission, Budget Preparation and Execution, pp. 26-28. For a good discussion of the advantages and problems of adopting the program budget see Arlene Theuer Shadoan, Preparation, Review, and Execution of the State Operating Budget, (Lexington: University of Kentucky, 1963), pp. 12-21.

Another class of capital improvements, which in Ohio are generally handled outside the central capital budgeting process, are those of developmental nature. In addition to recreation facilities (which are included in Ohio's Capital Plan), this classification includes highways, public housing, river development, and land development. With the exceptions of highways and recreation projects, Ohio has not become very involved with development. James makes the point that although budget planners can make contributions in terms of evaluating feasibility and planning the financing, such activities usually require new public policy articulation. And formulation of such policy is difficult because such programs are usually so expensive, needs for them seldom can be stated very precisely, and the impact on the private economy is usually great.

The problems of developmental programs are reflected in Ohio's approach to highway building. The state's outlays for highways completely overshadow those for other capital improvements. Yet highway building is practically immune from the guidance and control exerted by the chief executive and the legislature on the other capital

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63 This classification is James'. See ibid., p. 22. Recreation projects, which are included in Ohio's central budgeting process, are considered development projects.


The legislature has traditionally considered highway programs to be too technical to permit much interference and substitution or rearrangement of priorities by anyone outside the Highway Department. This may not be particularly unsatisfactory from the standpoint of the precise composition of the entire highway program. The consensus among those familiar with the techniques used by the highway planners is that they are sophisticated and up-to-date. But from the standpoint of taking into account the interactions of highways on the state's other programs and its financial and economic condition, this isolation and immunity is not so desirable.

Similar remarks can be applied to the capital outlays of the semi-autonomous commissions or authorities. In terms of the advantages to be derived from a rational, comprehensive procedure for selecting projects on the basis of need, there is just as much reason to include the so-called self-liquidating projects in the review as to include any other types of capital projects. Government is much more than a profit-oriented operation, and its decisions should be influenced by far more than the measurable dollar and cents returns of various alternative programs. Moreover, seldom do these semi-autonomous institutions not

66 This is only a special case of the tendency by chief executives and legislatures to give minute attention to the budgets of smaller agencies while they give only cursory and perfunctory examinations to those of the very large agencies. Simply stated, they look most carefully at what they can understand most clearly. Mrs. Shadoan comments on this in op. cit., p. 19.

67 This is not to deny the utility of cost-benefit and similar techniques for deciding how much should be spent, in total and for particular projects, and the proper composition of the revenue structure. With the exception of the relatively simple case of cost-benefit
have at least an indirect effect on the state government. Finally, the borrowing activities of these organizations, nominally outside the state's responsibility may, in fact, have a considerable effect on the state's financial condition and credit rating.68

Summary and Conclusion

This analysis reveals an imbalance between the physical and financial aspects of capital budgeting or planning in Ohio. Aside from the debatable practice of excluding certain categories of capital improvements from its central capital budgeting process, the state has achieved a measure of success in developing a mechanism which imparts some objectivity to the selection process. Both the central budgeting staff and the various departments and agencies requesting capital improvements have made progress in developing techniques for selecting projects. On the other hand, the process does not yet provide much information regarding the role of particular projects within the overall program of the relevant agency or of the state in general, nor does it provide much in the way of estimates of the effects of capital outlays on future operating costs.

On the financial side the situation is less satisfactory. Formal guidance largely is of the negative sort, limiting rather than

analysis in highway planning, Ohio has made little use of marginal analysis although its efforts to develop program budgeting augur well for application in other areas. Martin provides a good discussion of the application of marginal analysis in budgeting in An Economic Criterion for State and City Budget Making (Lexington: University of Kentucky, 1963) pp. 6-13. (Mimeographed.)

68 See the following two chapters for some analysis dealing with this possibility.
guiding. Policy, to the extent it is articulated, is lacking in continuity from administration to administration. Although it is wise to permit each administration a wide range of discretion in such matters, it is the opinion of the writer that Ohio's capital improvements financial policy should reflect more stability than it presently does. This question is discussed further in Chapter VII.
CHAPTER IV

THE QUESTION OF PUBLIC BORROWING:

A REVIEW OF BASIC ISSUES

In Chapter II it was seen that a large portion of the capital improvements constructed by the state of Ohio since 1946 has been financed by borrowing. As the postwar period has progressed, a decreasing portion of Ohio's capital improvements has been provided by pay-as-you-go or strictly cash financing.¹

One of the perennial controversies in public finance involves the question of the proper use of public credit. As Winthrop Daniels, an early American student of public finance, put the matter in 1899, "Ever since states began to pile up debts the policy of resorting to public credit has been discussed by publicists and economists with singularly little unanimity of opinion."² The ease with which two bond issues totaling $750 million were approved by Ohio voters in 1963 and 1964 might be taken as indicative that a consensus which favors borrowing for public improvements finally has developed.³ Perhaps

¹Supra, Chapter II, pp. 35-36.


³See Ohio Constitution, Article VIII, Secs. 2f. and 2g.
there is now, some sixty years after Daniels wrote, at least temporary "unanimity of opinion."

On the other hand, the apparent unanimity may in reality reflect only the effects of a decade of relative prosperity, a growing population which expects an increasing quantity and quality of services from the state, and a general hostility toward increased taxation. Such situations are not new. More than once, however, states and cities have undertaken large spending programs financed by large debt issues and have continued such activities beyond the point of reasonableness. Then a reaction has set in and action has been taken to curb "this insanity of borrowing." It is not impossible that some calamitous event could again create a financial crisis which would result in the mobilization of the pay-as-you-go advocates. In the words of Paul Studenski:

The resort to borrowing has generally met with some opposition in every state or community when first proposed. Though seemingly vanquished, the opposition revives periodically at a time when much borrowing is going on, and when the debt charges become a burden. A demand is then made upon the government to put an end to the piling up of debts, and to use current resources instead of loans in the financing of permanent improvements. Borrowing is declared imprudent, unfair to future generations, and wasteful of public money. The slogan "pay-as-you-go" is advanced as expressive of an opposite and wiser policy.5

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The Theory of Public Borrowing

No attempt is made here to trace in systematic fashion the development of the theory of public borrowing. To some extent the theory of public borrowing is still in an inchoate form. Public borrowing by the states began early in the 1800's. This first venture by states into public borrowing ended in financial collapse, and with the exception of unavoidable borrowing during the Civil War and a small amount right afterward, most states did not again engage in substantial borrowing until the 1920's.

As late as 1941 B. U. Ratchford, in his study of state debts, could say: "We know comparatively little about the proper use and control of credit, either private or public." It is probably not unreasonable to say that our knowledge about the use of public credit, especially state and local public credit, is not substantially greater in 1964. However limited our knowledge of public credit, its use is again on the rise and it seems important to examine the existing body of doctrine for possible guidelines which may be useful to Ohio and other states in planning their public improvements program. Furthermore, such an examination may reveal weaknesses in the existing theory or practices which should be recognized and corrected.


7Studenski, op. cit., p. 8. Although Ohio experienced considerable difficulty in managing its debts during the 1840's, it did not default. Bogart, op. cit., p. 264.

The general case for public borrowing

Regardless of embellishments which may accompany the case for borrowing to finance public improvements, the principal arguments are few and relatively simple. The essential case can be presented with only one or two basic arguments. To the extent these are true, the case is virtually watertight. First, it is asserted that the necessary public improvements are simply too expensive to finance from current revenues (other than debt receipts). Full payment by the present generation is considered somehow unfair. In some cases such as government office buildings, school buildings, and public welfare facilities, the advocates of borrowing may suggest that the outlays are extraordinary and nonrecurring and will yield their services to a number of generations of taxpayers in addition to the present one. Equity demands that the future users also share in the cost and this can be assured if borrowing is used to finance the facility.

Sometimes no claim is made that such outlays are extraordinary or nonrecurring; it is simply said that, for whatever reason, the

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government has failed to keep up with the provision of capital facilities and a crash program is mandatory. Once this backlog is removed the government can revert to a pay-as-you-go policy for its recurring improvements, perhaps resorting to borrowing for the extraordinary outlay that may occasionally occur. Regardless of the fact that past and present generations should have paid for the backlog, it is simply impossible. The increase in tax rates which would be required would be too onerous and disruptive to economic activity. Besides, the benefits from the improvements that will accrue to the residents far outweigh the sacrifices represented by the interest cost on the debt.

Spreading the cost of capital improvements

A second basic defense of borrowing to finance public improvements is applied specifically to so-called self-liquidating or self-financing facilities. These are facilities such as turnpikes, parking garages, and university dormitories, the use of which is subject to a direct charge. In part, the case for borrowing under these circumstances is not unlike the case for borrowing for extraordinary outlays. Borrowing facilitates distribution of the cost over a longer period. But in this case the motive is to insure that the users pay the cost of the facility, rather than the taxpayers \textit{qua} taxpayers, some of whom may not derive any significant benefit from the facility. Proponents assert that there can be no claim that borrowing is too expensive because of the interest costs, for taxpayers pay nothing. As for the users of the facility who pay a price which reflects all expenses of constructing and operating the facility, it can be assumed that they
find the benefits received at least equal to the cost or else they would not patronize the facility.\(^\text{10}\)

There are other reasons for borrowing but, in the main, these are subsidiary ones usually implicit in those already discussed. For example, an analogy sometimes is drawn with private enterprise where it is pointed out that business borrows for its capital outlays and only charges a part of their cost against each year's revenue. In this way the costs of an outlay can be better distributed over the period of years during which it contributes to income.\(^\text{11}\) Under the assumption that public improvements also contribute benefits for a number of years, this rationale for borrowing is then applied to governments.

The marginal utility argument

Another argument, couched in terms of marginal utility theory, draws an analogy between government and the individual as consumers.\(^\text{12}\) Under the principle of diminishing marginal utility, the individual attempts to achieve a balance such that the marginal utilities for each of his various expenditures are proportional to their respective prices.

\(^{10}\)Although fairly easy to understand when related to toll roads, parking garages, and dormitories, the concept of "self-liquidating" projects sometimes can be stretched rather far. For example, "[a] government project that provides to other government agencies services that would otherwise have to be bought from the private sector may be regarded as self-liquidating...." Goode and Birnbaum, \textit{op. cit.}, p. 37.

\(^{11}\)Also, see supra, Chapter III, pp. 69-70.

\(^{12}\)For a good discussion of this argument, see James A. Maxwell, \textit{op. cit.}, pp. 452-453. Maxwell's criticisms of this argument will be discussed below.
However, when confronted with an item whose cost is very large in relation to his income, the consumer will have difficulty in achieving the optimum balance referred to above. For the person of limited means, the marginal utility of an additional dollar spent is always high, and if he must save enough money to pay for an expensive item outright, it is unlikely that he will often be able to purchase the item. But a system of deferred payments (i.e., installments) will permit the poor man to mortgage his future income and enjoy the consumption of an expensive item more or less contemporaneously with his payments.

Advocates of the marginal utility argument transfer the above type of explanation of the rationale for installment purchases over to the government sector to justify borrowing for high-cost capital outlays. A corollary to this point of view suggests that reliance on taxation, especially to finance non-recurring capital outlays, would probably result in less than optimum provision of facilities, "since persons will tend to discount heavily the benefits in future years, whereas the tax burden is direct and immediate."

Other arguments for borrowing

Another argument deals with the savings that accrue to taxpayers when the government borrows and taxpayers are not compelled to

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13 Maxwell cites Alvin Hansen as one economist who supports this installment theory of government borrowing. Ibid., p. 453, n. 5. Although Hansen refers specifically to federal borrowing, there is no indication that he would not also use this reasoning in the case of state and local capital spending. Adams also seems to favor the installment argument. See his Public Debts, pp. 98, 307.

14 Due, op. cit., p. 520.
contribute the entire cost at the time the improvement is constructed. Proponents emphasize that the interest paid on the loan (which means that the final tax bill is higher by the amount of interest) is not wasted, per se, because the benefits that accrue from a project financed by borrowing may be much in excess of the interest cost. Furthermore (and this is the significant point in the argument), it is claimed that the individual taxpayer is able to earn a greater return on his money (or saves a greater amount because he does not have to borrow funds to pay his tax bill) than the government must pay to borrow funds.15 In short, the returns on private investments (made with the money that would otherwise have been paid in taxes to finance the government's expenditure) partially offset the costs of borrowing.

Borrowing is sometimes defended on the basis of what Henry Carter Adams called the "engineering necessity."16 The principal point underlying this argument is that a project, once begin, should be completed as rapidly as possible and without delay. If delay occurs it is sometimes necessary to make expensive repairs to the parts which have been completed (and it sometimes is inferred that such repairs might not be required if the entire project were in operation). And to the extent that part of a facility is left idle, this represents a waste of funds. Some recent arguments in favor of debt-financed highway construction have gone so far as to assert categorically that stopgap and


16 Adams, Public Debts, p. 97; and The Science of Finance, pp. 532, 543.
temporary improvements required to maintain old and inadequate roads which the proposed highway would replace or supplement would cost more than the interest expense if the new highway were financed by borrowing.¹⁷

Another argument supporting some non-commercial or non-self-liquidating capital outlays involves the developmental contributions made by such improvements as highways, airports, and natural resource development. Kenyon E. Poole is one fiscal economist who sees merit in such an argument.¹⁸ In addition to the completely immeasurable "mental satisfaction" that may be derived from such improvements, there are the equally immeasurable but economically significant returns such as cost reductions and increased productivity in the private sector of the economy.¹⁹ Cost reductions may lead to a general decline in prices or, through increased efficiency, they may lead to an expansion in income and spending and, ultimately, increased tax revenues. Either way the government gains²⁰ from its use of loan finance.


¹⁹Poole, op. cit., p. 592.

²⁰Ibid. The developmental benefits of public improvements which may outweigh the "costs" of debt financing are also emphasized by Ross and Bonin, op. cit., p. 108.
Finally, increasing recognition is being given to the contribution borrowing can make in mitigating a depression situation. However, because this view, if it is to have real validity, also implies that borrowing will be curtailed in periods of excessive economic activity, it cannot properly be called an argument for borrowing. Given the fact that governments have a limited debt-carrying capacity, their proper course of action should be to conserve as much as possible this capacity until an economic decline occurs.

**Weaknesses in the case for public borrowing**

It has been shown that one of the principal arguments in favor of borrowing for capital outlays is related to their disproportionate cost relative to current revenues. When this argument refers specifically to very expensive, extraordinary or non-recurring (at least for an extended period) improvements it is particularly persuasive. The complete financing of such an outlay from current revenues would necessitate a temporary increase in taxes or the temporary use of an additional tax. Most students of public finance acknowledge the undesirability of such fluctuations in the tax rate, particularly because this makes business planning difficult and because such fluctuations do not treat fairly those who enter and leave the community from year to year.\(^{21}\)

Usually, however, it is not made clear just what constitutes an extraordinary improvement. Professor Buehler recognizes this problem and concludes: "The decision about what is an extraordinary outlay must be a matter of opinion. Too often the issue is settled by declaring proposed expenditures extraordinary and then approving a borrowing program."\(^{22}\) Professor Studenski was just as skeptical of the usual improvement's alleged extraordinary nature. After surveying the trends in state and municipal capital improvement spending his judgment was that although public officials may believe a particular outlay they authorize is a "one-shot," temporary activity, "actual developments invariably prove otherwise."\(^{23}\) Probably the only practical solution—assuming the state is interested in adopting a sound capital improvements financing policy—is to treat capital outlays as a whole, rather than to look at the nature of individual items, and to finance a certain normal or average amount from current revenues, perhaps using loan finance to finance any excess.\(^{24}\)

The dilemma of financing an improvements backlog

The dilemma of how, properly, to finance a large backlog of recurring capital improvements is equally intractable. In some


situations there may be little doubt that the improvements are necessary. The question becomes whether it is desirable to delay until some later time payment for such outlays. Even the most detached observer would have trouble opposing borrowing where the needs included public institutions (e.g., hospitals and prisons) and where the general public (through their elected representatives) objected to meeting the entire cost by means of a tax increase. For in such cases those who would benefit most directly are also the most inarticulate members of society.

Thus, there is a logical dilemma. Facilities are needed and the economic solution is to provide them from current revenues. But the public will militates against it. Who is to be criticised for such a situation? Ratchford points to the public officials and observes that when taxpayers are enjoying a large return for their tax contributions (i.e., borrowing is undertaken) they are apt to hold a favorable view toward the incumbent public officials, giving the latter "an advantage over more efficient and conscientious candidates who try to replace them." Shultz and Harriss also discuss what they call the supreme political obstacle to financing from current revenues:

If a state or city administration increases tax rates, it is likely to antagonize taxpayers whose votes will decide whether it continues in office after the election. Announcement of a bond issue to finance a government improvement arouses less hostility, since a bond issue does not immediately take money from the pockets of the taxpayers. Even though over the years a strict tax policy may be better for the community than a borrowing policy, holders of political office cannot be expected to injure their careers by forcing a tax levy on a public which would rather mortgage its future than pay cash today. Enlightened public opinion

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25 Ratchford, op. cit., p. 543.
is prerequisite to any form of "pay-as-you-go" program for financing government improvements.\textsuperscript{26}

Thus it appears that both the public officials and the public in general contribute to this facet of fiscal reality; neither is apt to favor the strictly "economic" solution.

Arguments against loan-financed self-liquidating improvements

Borrowing to finance self-liquidating enterprises is seldom challenged. The theory of user charges for the use of turnpikes, university dormitories, and public parking facilities is convincing.\textsuperscript{27} But there are a few economists bold enough to question the conclusion that such enterprises should always be financed by borrowing. Studenski is one such "dissenter" to the conventional viewpoint. He is quite emphatic when he says: "Whether the expenditure is 'revenue-producing' (financed by service charges) or 'non-revenue-producing' (paid from taxes) has nothing to do with the question of whether borrowing should be resorted to or not."\textsuperscript{28} So long as both types of projects are necessary, the real question in both cases is whether it is "more economical to pay immediately from current resources, or is it more economical to defer payment? The issue in either case is the distribution of burdens between the present and the future—a fact which writers on the subject

\textsuperscript{26} Shultz and Harriss, \textit{op. cit.}, pp. 524-525.

\textsuperscript{27} For a discussion of the circumstances under which user charges usually are applied, see Due, \textit{op. cit.}, pp. 423-437.

\textsuperscript{28} Public Borrowing, p. 111. This same point is made by James Martin in \textit{An Economic Criterion for State and City Budget Making}, pp. 10-11.
seem generally to have overlooked. The importance of this point can be seen if one imagines a case where a revision in philosophy brings about the application of user charges for projects now considered outside the realm of such practices. Complete school facilities, all highways, and many other such facilities could be included. On this basis then, they could be self-liquidating (in theory, at least) and, under traditional assumptions, they could be financed by borrowing no matter how recurrent they might be. An obvious exaggeration perhaps, but it does demonstrate that there is no inherent difference between the types of improvements which justifies the use of different standards in selecting the proper means of financing. Quoting Studenski once again:

If an all-loan policy is uneconomical and dangerous in one case, it is just as uneconomical and dangerous in the other. If recurrent expenditures should be financed from taxes in the one case, they should be financed from service charges in the other case. To maintain differently is to defy logic.

Other weaknesses in the case for public borrowing

The argument that future users of a project should share its cost seems overworked and often misused. The objective seems reasonable enough when applied to extraordinary outlays. But frequently those who propound this equity idea do not present the full story. Seldom does

29Studenski, op. cit., pp. 111-112.

30Ibid., p. 112. Studenski does, however, concede that borrowing is the only alternative to possible heavy taxation to finance the initial venture into a particular type of revenue producing enterprise. But he also notes that once the first such enterprise is operating, its revenue provides another source of financing for subsequent capital outlays. Ibid., pp. 110-111.
there seem to be recognition that not only does a particular generation contribute to the stock of capital improvements, but it also uses up a share of the existing stock. Because present users consume part of existing capital improvements and because few governments' current budgets include a realistic capital consumption charge to be paid from current revenues, there is no justification under normal circumstances for distributing all costs for capital improvements over a period of years. To do this is identical to borrowing to finance current expenditures.31

Similar objections can be made to the argument in favor of borrowing which is couched in terms of an analogy with business. In the first place, it is improper to draw such an analogy if provision is not going to be made in the current budget (paid from current revenues) for capital consumption. To do otherwise is simply not consistent with modern business practice. Second, there is good reason to question the assumption that business generally resorts to borrowing to finance capital expenditures. The available evidence does not seem to support this contention.32 Finally, Chapter III33 emphasized the


32Maxwell, op. cit., p. 458, n. 5, cites testimony before the Temporary National Economic Committee to the effect that a very large proportion of business investment funds has been generated internally. More recently, Ernest Block has demonstrated that internal financing has been the major source of funds in the postwar period, especially in the case of large manufacturing firms. See his "Short Cycles in Corporate Demand for Government Securities and Cash," American Economic Review, LIII (December, 1963), 1066-1067.

33See, supra, Chapter III, pp. 69-70.
fallacy of thinking about governmental finances in strictly profit-oriented terms—which is implicit in the use of the business analogy—to the virtual exclusion of other criteria. Although occasionally useful, profit-oriented criteria are certainly not always the paramount guidelines.

The "marginal utility" argument has been criticized by Maxwell for its misuse of a strictly individual-oriented theory to rationalize government borrowing. For the poor consumer the installment purchase approach may be essential if he is ever to obtain an expensive item of consumption. This may be termed the synchronization of private consumption and payment. In this case consumption and payment are joined in the same person. But in the case of government borrowing (i.e., installment buying) which Maxwell calls the collective synchronization of consumption and payment, there is not necessarily this identity of consumer and payer. "The utilities flowing from the goods will quite often be consumed by the low income groups, while usually the burden of finance will fall upon the well-to-do." To the extent this happens, the application of marginal utility theory to justify loan finance is improper. The theory simply does not apply under such circumstances.

Admittedly, some immediate and permanent savings may accrue to taxpayers if borrowing is substituted for a pay-as-you-go policy. But if a policy of substantial borrowing is sustained for any length of

35 But as Maxwell points out, installment buying is not an unmixed blessing for the foolish consumer. Ibid., p. 453.
36 Ibid.
time, service charges will grow and the result may be a curtailment in the provision of current services, an increase in taxes or, perhaps, both of these. Eventually, the annual debt charges may exceed the annual expenditure for new capital improvements. Certainly this will be the case if a state places major reliance on a policy of borrowing to finance its recurring capital improvements outlays without simultaneously achieving substantial growth in its current revenues, either by increasing the productivity of the existing revenue system or by raising taxes or adopting new ones.

The permanent savings accruing to taxpayers because the government borrows and permits them to use, productively, funds which otherwise would have been paid immediately in taxes seem to be greatly exaggerated. As Studenski points out, it is necessary to distinguish between the costs of the debt to the government and to the community.\textsuperscript{37} The government's cost is the net interest paid less any earnings on the investment of temporarily idle funds. For the community, however, the cost is less than this because some of the money not taken in taxes as a consequence of the government borrowing is invested and earns some return. If all these funds were invested and yielded in excess of the net cost of the government debt, there would be no cost to the community for its government's debt; in fact, there would be a net gain. If the funds were invested in the debt of the community, there would again be no cost to the community. But under any of these assumptions it is not obvious that borrowing is an unmixed blessing. For under

\textsuperscript{37}Studenski, \textit{op. cit.}, p. 73.
almost any possible circumstance there will be a redistribution of income, the exact nature of which virtually defies computation. And to the extent that some members of the community use their tax saving for consumption (certainly this is a more plausible assumption), there is little offset—except, perhaps, "psychic income"—to compensate for their increased future tax liability which will probably occur as a result of the borrowing.

One of the most persuasive arguments against the use of borrowing for more than extraordinary or abnormal capital improvements involves the need by a government to maintain adequate flexibility to meet its obligations during periods of economic recession. This is not an objection to borrowing, per se, but a reminder that states have only a limited debt-carrying capacity. It is likely that the amount of debt a state can afford to carry in periods of prosperity is substantially larger than during a sharp and protracted recessionary period. As Frederick Bird has said: "A sound borrowing policy . . . calls for the conservation rather than the exhaustion of credit. It demands that the limit of debt to be incurred be gauged by ability to pay under adverse circumstances rather than by resources at the peak of a business boom."39

38 The reference here is to a "real" debt limit based on a state's ability to pay, not to "artificial" debt limits created by legislative enactment. The latter, legal debt limits will be discussed in Chapter V.

Furthermore, the policy of financing a substantial portion of
capital outlays out of current revenues (and preserving a large part of
its borrowing capacity) during more prosperous periods may ensure that
the state can continue to maintain current operating programs at nearly
normal levels during recessions when current revenues usually decline.
A state following such a policy can divert that portion of revenues
normally used for capital outlays to cover operating expenses during
recessions, financing its capital outlays out of loan proceeds or
reserves accumulated during prosperous times. Flexibility of this sort
would contribute much to the stabilization policies of the federal
government.40

40 The question of capital expenditure policy during various
phases of the business cycle is a source of considerable controversy
among fiscal economists. In the first place, some maintain that the
level of capital outlays should be varied so as to counter movements
in the business cycle. But others maintain that the character of most
improvements is such that they are needed regardless of the position
of the business cycle. In their view capital outlays should not be
varied deliberately to help promote stability; rather, the method of
financing should be varied. Regardless of which of these policies is
accepted, its execution will certainly be facilitated if the state is
able to incur debt during recession. Even if neither policy is
accepted and the conclusion is reached that future recessions will be
mild and brief enough that the burden of stabilization can be handled
by the federal government alone, the conservation of borrowing power
for emergencies and use during recessions has the merit that the
state would not be faced with heavy debt service obligations at a
time when its revenues were declining.

Good discussions of the need for help by states in achieving
economic stabilization can be found in the classic study by Alvin H.
Hansen and Harvey S. Perloff, State and Local Finance in the National
Economy (New York: W. W. Norton, 1944), esp. chaps. iv and x; and
Eugene A. Myers and Randall S. Stout, "The Role of States and Local
Governments in National Fiscal Policy," National Tax Journal, X
(June, 1957), 171-175. The question of whether stabilization is best
accomplished by varying the level of capital outlays or by varying the
method of financing a stable volume of outlays is reviewed in Richard
Kenneth Stuart, Financing Public Improvements by the State of Maine
Opponents of borrowing (or, at least, excessive borrowing) sometimes charge that this leads to premium interest rates paid on new bond issues as the government's net debt increases. Undoubtedly there is some validity to this contention but, it too, defies quantification. In the case of flagrant abuse of debt creation powers when a state so expands its debt that it obviously is straining to meet its current service charges, there can be little doubt that it will pay large premiums of any subsequent borrowing. But beyond such outstanding examples, little can be said if only because so little is known about the complexities of interest rate determination.

One final objection which may be particularly relevant to Ohio's financial policies in recent years will be noted—although it is difficult to put into concrete, quantitative terms. This objection concerns a state's failure under a policy of frequent resort to borrowing for recurring capital improvements to take into account adequately the present taxpayers' ability to pay. The postwar period has been marked by frequent attempts by states to attract new industries on the basis of

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41 Studenski, *Public Borrowing*, pp. 74-75.

42 Shultz and Harris, *op. cit.*, p. 537.

either a special tax-concession to the new firms or a general "low-tax" policy. How well such a policy works in accomplishing its objective is a subject of considerable controversy. But that it may result in limited provision of services by the state is quite definite. There is evidence that Ohio, for example, is failing to exploit its tax potential nearly as much as is the majority of states. Probably acknowledging this assertion, the defenders of the status quo might point to the resulting industrial and general economic expansion which they claim it will encourage and conclude that the ultimate enlargement of the state's tax base will permit easily the provision of the services presently deferred plus a great many new ones. This may be true—and it may not be. In any case, only time will tell. If it turns out to be true, fine. The present generation has been forced to do without some services, but future generations will enjoy an abundance. This may not be objectionable. But what happens if the present optimism

44 A brief review of some recent studies in this area can be found in George W. Thatcher et al., Tax Revision Alternatives for the Tax System of Ohio (Columbus: Ohio Tax Study Committee, 1962), pp. 78-85. According to Thatcher, the available evidence indicates "very strongly that tax differentials are of secondary if not minor importance in the determination of industrial locations." Ibid., p. 85.

45 A recent study by the Advisory Commission on Intergovernmental Relations reaches a similar conclusion. It found Ohio to show below average "tax effort" (defined as the extent to which a state uses its available fiscal capacity or ability to raise revenue). See L. L. Ecker-Racz, "ACIR's Study of Fiscal Capacity and Tax Effort," in National Tax Association, Proceedings of the Fifty-fifth Annual Conference, 1962 (Harrisburg, 1963), pp. 188-197; and Advisory Commission on Intergovernmental Relations, Measures of State and Local Fiscal Capacity and Tax Effort (Washington: U. S. Government Printing Office, 1962). Also see Thatcher, op. cit., p. 82.
proves excessive? Future generations, which may have new and greater financial burdens to bear, are saddled with the additional burden of paying for improvements which could have been financed in earlier, more prosperous periods. Admittedly, this allegation is just as conjectural as the one made by the "low taxes now" advocates. The point is, it is possible and it should be considered carefully before continuing such a course of action.

Summary and Conclusions

The preceding analysis has revealed few "principles" of proper financing of capital improvements. Both from a practical, economic standpoint and from a political one, an absolute pay-as-you-go plan seems extreme. Some use of loan finance seems to be indicated.

A consensus exists which favors borrowing for extraordinary or non-recurring capital improvements. But no unequivocal definition of such an improvement has been discovered. Thus, the best solution may be to treat as non-recurring and, perhaps, eligible for loan finance that portion of a year's capital outlays which exceeds some long-term average.

Self-supporting capital improvements usually are considered to be automatic candidates for loan-financing. However, there may be an error in such an assumption because it seems to evade the fundamental question of whether it is more economical to finance the project from current revenues or from loan proceeds. In fact, it is possible that there is, from the standpoint of proper financing methods, no essential difference between self-supporting projects and those supported from the government's general revenue.
Borrowing may permit the diffusion of the money burden of an improvement over a period of time comparable with its life. In the case of very-expensive, non-recurring outlays this may be the equitable solution. But to the extent that governments fail to pay from current revenues an amount representative of the capital consumption in the current period, the equity argument has much less merit.

An argument in favor of borrowing based on asset accounting in business was seen to be deficient to the extent it did not also recognize the standard business practice of charging a reasonable depreciation allowance against current revenues. Moreover, there is evidence that business does not rely on loan finance nearly as much as the argument's advocates claim. Finally, the application of only profit-oriented criteria to governmental finance does not seem to be warranted in view of the complex activities undertaken by governments.

The excessive reliance on loan finance in prosperous periods may leave a government's ability to support its debt burden impaired during periods of economic recession. And the latter period may be precisely the time when borrowing is most necessary and useful. Because a government's credit is limited and because more debt usually means larger service charges to be paid from current revenues, the careless use of loan finance may result in a situation where more is being paid out in debt service charges than is being spent for new improvements.

Finally, there is the possibility that a state which pursues a "low-tax" policy to encourage economic expansion and which necessarily must curtail its current provision of services may not accomplish its
first objective. If this happens, the failure to exploit adequately present revenue sources may throw unnecessary burdens on future taxpayers. Even when current services are not drastically curtailed (i.e., loan finance is used), if the hoped-for economic expansion does not materialize, the postponement of final payment may prove to have been unnecessary and even undesirable.

The conclusions with regard to the proper use of loan finance seem to be these: (1) some debt is unavoidable and probably useful; (2) loan finance may be indicated to finance some excess over average annual capital outlays; (3) loan finance may not always be the proper source of funds for self-liquidating projects; and (4) care must be exercised to avoid excessive delay in paying for improvements.
CHAPTER V

CONSTITUTIONAL DEBT RESTRICTIONS AND
NONGUARANTEED BORROWING

Chapter IV concluded that public borrowing, although a matter not without controversy, is a useful supplement to current revenues in the financing of capital improvements. Chapter II revealed that borrowing has been more than a supplement to current revenues in Ohio's postwar capital improvements program; indeed, loan finance has come to play a major role in financing state capital improvements. On the basis of the favorable attitude toward the use of loan finance displayed by most of the state's policy makers and its electorate and their reluctance to rely heavily on current tax revenues to finance capital improvements, it seems reasonable to assume that an effort will be made to continue to use borrowing as a major financing device.

Irrespective of one's views regarding how prominent the role of loan finance should be in the state's capital improvements program, recognition that it is important in Ohio and will probably remain so for some time to come suggests the need for carefully planning and maintaining a program of sound debt financing. The purpose of this chapter and the one which follows is to examine Ohio's debt financing program in terms of such important factors as the state's constitutional debt limit, the use of nonguaranteed borrowing, the structure of the
debt, and the organization and effectiveness of its debt management program.

The Nature and Significance of the Constitutional Restriction Against State Debt

The nature of state debt limits

State borrowing for capital improvements began in the early 1820's\(^1\) and by the years 1842-1843 state indebtedness had reached $230 million, nine states were in default, and others were struggling to continue servicing their debts.\(^2\) Not only was much of this borrowing excessive in terms of the states' ability to service it, but it frequently was used for wasteful purposes and was handled fraudulently.\(^3\) Such developments led to demands by taxpayers in various states for protection against the recurrence of such irresponsible actions.

The growing hostility toward the excesses brought about by misuse of public credit culminated in the enactment in 1842 by Rhode Island (free from debt at the time) of a constitutional amendment limiting the power of her legislature to incur debt.\(^4\) This amendment precluded the state's legislature, without the consent of the electorate, from incurring debts in excess of $50,000 (except in time of war, insurrection, or invasion), and from pledging the faith and credit of

\(^1\)Ratchford, op. cit., p. 73; Studenski, Public Borrowing, p. 7.

\(^2\)Ratchford, op. cit., p. 105.

\(^3\)Ibid., pp. 73-104.

\(^4\)Rhode Island Constitution, Article IV, Sec. 13; Heins, op. cit., pp. 8-9.
the state for the payment of others' obligations. New Jersey followed in 1844 with a similar but even more restrictive amendment. The strength of the movement for debt limits during the period is demonstrated by the fact that nineteen states adopted some form of constitutional debt limit prior to the Civil War. After the war, several southern states added debt restrictions and "all states subsequently entering the Union have included some restrictive provision in their constitutions." In all, forty-three states have taken some action to restrict their legislatures' powers to incur debt.

Ohio's constitutional debt limit

In 1851 when Ohio adopted its second Constitution, it included two articles in which the power of the General Assembly to incur debt was greatly circumscribed. The Constitution under which Ohio had been operating up to this time was silent on the matter of state debt. Bogart has described well the events leading up to the adoption of the debt limit and it is not difficult to sympathize with the electorate of that period for demanding such a stringent restriction. Not only were many of the expenditures from debt proceeds ill-advised and irresponsible, but the tax burden in Ohio was increasing rapidly by the early

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5New Jersey Constitution, (1844) Article IV, Sec. 13; Heins, loc. cit.
6Ibid., p. 9.
7Ibid., p. 10.
8Although it has been amended a number of times since 1851, the 1851 Constitution remains the organic law of Ohio.
1840's, and as much as fifty per cent of the state's tax receipts were being used to pay interest charges on outstanding debt.\textsuperscript{10} A review of the record of the debates which preceded adoption of the \textit{Constitution} in 1851 reveals clearly that many of the delegates were particularly hostile to state debt because it had been responsible for heavy tax burdens.\textsuperscript{11} Thus, it can be said that there were some persuasive factors underlying the adoption of Ohio's debt limit.

The nature of Ohio's debt limit

Restrictions on state indebtedness appear in two Articles in the Ohio \textit{Constitution}. In addition to the original controls over indebtedness contained in Article VIII (entitled "Public Debt and Public Works"), and in Article XII (entitled "Finance and Taxation"), two additional clauses regarding indebtedness were added to the \textit{Constitution} in 1912. Immediately below is a brief summary of the general constitutional provisions relating to state debt in Ohio.

\textbf{Article VIII - Basic Debt Provisions}

Section 1. Public Debt. Limits the debt of the state to $750,000. In other words, this is the maximum amount of debt which the General Assembly can incur by its own authority.

Section 2. Additional Debt Creating Powers. Additional debt may be incurred "to repel invasion, suppress insurrection, defend the

\textsuperscript{10}Ibid., p. 263.

state in war, or to redeem the present outstanding indebtedness of the state . . . ."

Section 3. The State to Create No Other Debt. "Except the debts above specified in sections one and two of this article, no debt whatever shall hereafter be created by, or on behalf of the state."

Section 4. No Lending of State Credit. The state is prohibited from lending its credit to aid any individual association or corporation.

Section 5. No Assumption of Debts by the State. The state is prohibited from assuming the debts of any political subdivision or any other group unless the debts were incurred "to repel invasion, suppress insurrection, or defend the state in war."

Section 7. Sinking Fund. Creates a sinking fund sufficient to pay the regular interest charges on the debt and annually, to reduce the debt by at least $100,000, this amount to increase annually by six per cent compounded. Appropriates to sinking fund revenues sufficient to repay the debt as provided above.

Section 10. Application of Sinking Fund. Orders commissioners of the sinking fund to use money in the fund and additional sums appropriated by the General Assembly to pay interest and repay debt as they come due.

Article XII - Finance and Taxation

Section 4. Revenue. Requires that General Assembly raise revenue sufficient to pay expenses of the state, including interest charges.
Section 6. No Debt for Internal Improvement. "Except as otherwise provided in this constitution the state shall never contract any debt for purposes of internal improvement." (Adopted in 1912.)

Section 11. Bonded Indebtedness; Interest and Sinking Fund. Prohibits creation or refunding of debt of state (or its political subdivisions) unless the relevant legislation provides for taxation adequate to pay interest on the debt and to redeem it at maturity. (Adopted in 1912.)

Since adoption of the debt limit in 1851, the Ohio Constitution has been amended seven times (six of the amendments have been adopted since 1947) to permit additional borrowing power for specified purposes. All of these amendments have been incorporated within Article VIII, Section 2.12

An appraisal of debt limits

It has been shown above that most constitutional restrictions against state debt were a part of the aftermath of the widespread misuse of the public credit during the first half of the last century. It can also be said that those who worked to achieve the adoption of the

12The amendments are discussed in Chapter VI. Amendments to Ohio's Constitution must receive a three-fifths vote of the members of the General Assembly and a majority of the votes cast in a statewide election. Ohio Constitution, Article XVI, Sec. 1. In addition to the seven amendments which have been approved, two other proposed amendments to increase the debt limit have been rejected by the voters. The first of these was rejected in 1912 and the second was rejected in 1931. Records of the Secretary of State and J. H. Newman, Organic Law of Ohio and Proposed Amendments (Columbus: Board of Library Commissioners, Ohio State Library, 1913), pp. 171-181.
ceilings were opposed to state borrowing particularly because the eventual result was a heavier tax burden as the states struggled to avoid default on their obligations. The theory which explains why inflexible debt limits were enacted has been succinctly stated as follows:

The theory of debt limitation assumes that there is an ascertainable, inflexible limit that can be permanently placed on the amount of money people should have taken out of their taxes for debt or on the amount of money to be acquired by borrowing. This in turn assumes there is a predetermined limit on the number of public improvements to be financed by debt.13

Such general observations regarding the motivations of the framers and ratifiers of the original debt limits seem to be reasonable, but they do not go very far in explaining why debt limits continue as an institution so widely incorporated into the structure of American state government. Only a little reflection is necessary to see how meaningless the original theory has become. Still, the debt limits remain and little overt effort is made to remove them.14 On the basis of these observations, one of two conclusions is warranted. Either there have developed new reasons for debt limits to replace those just identified or debt limits are, in fact, mere appendages from an earlier time which accomplish little of value and which may do considerable harm.


Advantages of debt limits.

One of the major problems encountered in trying to identify the advantages of debt limits is the absence of a substantial and persuasive body of doctrine. It appears that little effort is made to articulate the rationale for retaining constitutional debt restrictions. Ratchford is one student of state borrowing who concludes that the exact purpose of debt limits "has never been clearly and precisely set forth." Although he is not in favor of the usual, rigid state debt limit, he does suggest some possible purposes that they might serve. These include (1) limitation on the scope of government activity, (2) protection of bondholders, (3) protection of taxpayers, and (4) protection of the solvency of the government so it can perform its necessary and proper functions. After considering all these possible purposes of debt limits, it is Ratchford's opinion that their principal purpose has been to protect taxpayers. He thinks the courts have tended to consider this as the sole purpose. A secondary purpose, especially important to state governments which might be burdened with additional responsibilities if their subdivisions experienced financial difficulties, might be protection of the government's solvency. Quite definite is his conclusion that bondholder protection was not a motive for debt limits "except as that may happen incidentally."

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15 Ibid., p. 215.
16 Ibid.
17 Ibid., pp. 215-216.
18 Ibid., p. 215.
Similarly, concern for a too-large scope of government activities does not seem to have been a significant factor. Although he would in all cases prefer more flexible debt limits, Ratchford apparently would like to see them dispensed with in those states with a consistent record of ability to handle unlimited borrowing power.

Protection of the public credit

Shultz and Harriss, although far from satisfied with every aspect of conventional debt limits, see some justification for their existence. In their opinion, such restrictions offer protection against the abuse of state credit and, however restrictive, they believe it is usually possible to get approval for additional debt where it is really needed. Furthermore, the requirement that the electorate must approve borrowing in excess of the limit might raise the general quality of spending and financing decisions. "The delay and publicity involved in such procedure [a bond referendum or a constitutional amendment] help to insure serious consideration of the proposed bond issue and to check one year's legislature from yielding to pressures that bind taxpayers for a full generation."

Another reason for debt limits, implied in those already discussed, concerns the alleged imprudence of governments in financial


20 American State Debts, p. 592.


22 Ibid.
matters. The assumption underlying this argument is that public officials, subject to many conflicting pressures with regard to financial matters, typically look for the easy but not necessarily most responsible solution. As one member of the legal profession has said:

Although governments usually are not considered weak bargainers, the constitutional debt limit is based upon the premise that, in matters of finance, they are often imprudent. A legislature ..., caught between the popular pressures for new developments and against additional taxes, may attempt to escape through excessive borrowing ... Debt limits reflect a determination by the framers and ratifiers of state constitutions that governments are congenital borrowers who often deal unwise[10].

Attempts to abolish debt limits

A review of the literature discloses few instances in which some authority offers an unqualified endorsement of conventional debt limits.[24] Yet as was noted above, there is little evidence that serious efforts have been made in recent years to abolish the more restrictive limits. At the same time, there is evidence that many state legislatures (and, presumably, their electorates) are becoming increasingly

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[24] One exception is The Tax Foundation. See its Constitutional Debt Control in the States (New York: The Tax Foundation, 1954). Until recently, the National Municipal League had consistently recommended that state constitutions require a referendum for approving (or rejecting) borrowing. But in its latest study of state constitutions the League suggests that unlimited borrowing authority be given to the legislature. In its opinion referendums do not do much restricting "since voters are asked to pass judgment with limited or no knowledge of the complex fiscal and general policy issues that prompted the legislature and the governor to seek the new debt." National Municipal League, Model State Constitution (6th ed.; New York: National Municipal League, 1963), p. 92.
amenable to the use of loan finance for the provision of needed and wanted capital improvements. Even more interesting, perhaps, the growing volume of state indebtedness would seem to indicate that debt limits really do not do a great deal of limiting. Herein may lie the explanation for the absence of loud controversy regarding debt limits. To some debt is immoral and anathema, but taxes are "more immoral" and a greater anathema. As long as the size of the indebtedness does not become so great as to make them aware of its burden and as long as the capital improvement needs are so patently obvious, they are not inclined to sound the alarm and seek more restrictive and effective debt restrictions. On the other side, among those who do not find anything inherently objectionable about loan financing and who oppose the conventional debt ceilings, the absence of any substantial effort to bring about the abolition or drastic revision of the restrictions may be just as understandable. After all, why get exercised about debt limits so long as the states have been able both to raise the limits and increase their regular borrowing and to borrow by methods not circumscribed by conventional limits?

Disadvantages of debt limits

It is difficult for the writer to present an appraisal of debt limits which is not rather heavily weighted against them. This can be

explained in part by the fact that for states which have them there is no way to estimate what the record would have been had they not been in operation. It would seem to be improper to look back to the early 1800's and the states' financial difficulties when limits were not present. So many conditions have changed drastically since then that much of the early record would seem to be quite inapplicable to the present period. On the other hand, where debt limits now exist it is a relatively simple matter to identify a number of presumably derivative disadvantages.

The effectiveness of debt limits

As a limit, for example, it is difficult to give Ohio's debt limit particularly high marks (if the ability of a debt limit actually to restrain debt is a relevant criterion). It was seen above that Ohio's Constitution was amended only once before 1947 to permit additional state borrowing, but since 1947 it has been amended six times. This has permitted the expansion of guaranteed state debt from nil in 1946 to more than $425 million at the end of fiscal 1963. In addition, Ohio's nonguaranteed debt increased from less than $3 million in 1946 to about $400 million at the end of 1963. Of course one could argue that figures such as these do not prove that Ohio's debt limit has been ineffective. It can be shown, for example, that at the end of fiscal

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27 Supra, p. 127.

28 Appendix Tables 21 and 22.
1963, Ohio's per capita state debt was only about eighty-three dollars as opposed to a per capita debt of $123.45 for all fifty states. Per contra, it should be noted that in addition to the fact that such a comparison ignores local debt, it also says nothing about what might have happened had there been less restrictive limits on borrowing. After all, it is not certain that more borrowing would have occurred. Those who argue that Ohio's debt limit has accomplished little could direct attention to the limited efforts prior to the postwar period to amend the Constitution and conclude that the temper of the times simply was not sympathetic to borrowing, debt limit or not. Following this reasoning, it might be concluded that, even with no restrictions on debt creation, legislatures in the earlier period would not have dared attempt substantial borrowing activity. Even conceding that it was the debt limit which has accounted for the limited use (at least in prewar years) of loan finance in Ohio, and assuming that the advocate of debt limits does not reject borrowing as an evil per se, the possibility exists that from time to time loan finance would have been of substantial benefit to the state's welfare and entirely within the limits of rational fiscal planning.

The few good studies of the effectiveness of debt limits merit comment. Ratchford measured the effectiveness of debt limits by comparing the debt situation in three groups of states: states requiring a constitutional amendment to increase borrowing authority (eighteen

\[29\text{Compendium, 1963, p. 47.}\]

\[30\text{See, infra, pp. 136-137, for a discussion of one study which included local debt in a test of the effectiveness of state debt limits.}\]
states in this group), states requiring a popular referendum (seventeen states), and states with no limit (thirteen states).\footnote{American State Debts, p. 440.} Using these three groupings and comparing such measures as total debts, per capita debts, and debt burden (per capita interest payments and interest payments as a per cent of total revenues), Ratchford's results were somewhat inconclusive. He did conclude that debt limits seemed to have some restraining influence\footnote{Ibid., p. 441.} and that two states (Arkansas and Tennessee) which imposed no limitations on their legislatures also had the most trouble with their debts during the 1930's.\footnote{Ibid., p. 442.} On the other hand, he found that some other states with no restrictions did not seem to need any.\footnote{Ibid., pp. 445, 592.} In 1958 Ratchford brought his study of debt limits up to date in a paper presented at the annual conference of the National Tax Association.\footnote{"State and Local Debt Limitations," in National Tax Association, Proceedings of the Fifty-first Annual Conference, 1958 (Harrisburg, 1959), pp. 215-229.} This time he found that the eight states which vested borrowing authority in the legislature had debts twice as large as the twenty states which required constitutional amendments, both in per capita terms and in terms of personal income.\footnote{Ibid., p. 225.} Although Ratchford apparently did not consider his comparisons very significant, it is here concluded that the evidence again indicates that limits do have
some tendency to limit the absolute size of debt although they do not prevent states from borrowing.

More recently, Heins has attempted to measure the effectiveness of state debt limits. In part, his analysis is similar to Ratchford's, but he has gone further by including local debts in the various groups of states. This is a useful addition to the analysis because one way of evading debt limits at the state level is to delegate more functions to the political subdivisions. Heins also is unable to reach a definite conclusion. However, his analysis does suggest "that constitutional provisions have been less effective—if effective at all—in limiting state debt than most people would have supposed." The analysis also does not reveal any tendency toward excessive debt increases in states with unlimited borrowing authority. Most surprising of all (and most relevant to and supportive of his thesis that debt restrictions are no longer necessary) is the discovery that when local debt and debt burden are included in the analysis, states with no restrictions have a smaller burden than states requiring a referendum and only a slightly larger burden than states requiring a constitutional amendment. As Heins concludes: "The least that can be said is that there is no apparent tendency for a runaway state debt

38 Ibid., p. 35.
39 Ibid.
40 Ibid.
to occur in states without constitutional restrictions against state
debt."  

The cost of changing debt limits

One drawback of constitutional debt limits is the expense of preparing for and administering a vote on an amendment. It is difficult to arrive at an estimate of the cost, but it is undoubtedly substantial. More important than the administrative cost of an amendment, is the cost incurred by public officials in promoting the issue before the electorate. Prior to the passage of the highway construction amendment (Article VIII, Section 2g) in May, 1964, the Governor devoted a great portion of his time to traveling around the state promoting passage of the amendment. Admittedly, no one forced the Governor to expend so much effort on the issue but, recognizing that a great deal of his program was predicated on the provision of more and better highways, it does not seem to have been a disproportionate allocation of his energies. In fact, to the extent his promotion of the amendment was influential to the subsequent affirmative vote, it may have prevented the junking of a program on which highway planners had expended

In 1959, the Ohio Secretary of State estimated that the cost of advertising (as required by law) and printing ballots for an amendment voted on that year amounted to approximately $63,000. No estimate was made for the cost of counting the ballots. In addition to all the direct costs to the state in connection with an amendment—and certainly the $63,000 noted above excludes a substantial portion of the costs—there are the costs incurred by private interest groups in promoting (or opposing) an amendment. It has been estimated that private groups spent $250,000 promoting each of the two amendments approved in 1963 and 1964.
much time and effort. Whatever the policy merits may be, it appears that the political leadership in Ohio in 1964 have reached the conclusion that additional taxes are either undesirable or not politically possible in the short run. Therefore, it is fair to assume that the highway improvement program would have been cancelled had the borrowing amendment not passed; a great deal of planning expense would have been wasted; and the existence of an adequate road net would have been deferred.

Some might argue that the difficulty of implementing a program to be financed by borrowing is the natural result of a "no new tax" policy. An alternative means of financing current revenues could be used and, if necessary, taxes could be raised, new taxes could be utilized, or other programs could be curtailed to provide the necessary funds. Under any of these circumstances the electorate could easily see (and feel) the cost and could take this into account at the next election. Debt financed program maintenance or expansion does not necessarily induce as prompt a response from the electorate since they are not required to pay immediately. A common presumption is that the policies of a leadership which relies on loan finance escape the scrutiny of the electorate, at least until they have left office and other officials are faced with the problem of servicing the debt. Consequently, the philosophy of the debt limitation requires that the electorate be permitted to pass on such borrowing proposals.

Debt limits and legislative responsibility

Some opponents of debt limits argue that such devices provide a refuge for legislatures who are unwilling to make difficult decisions.
Instead, the decisions are foisted off on the general electorate who is far less qualified. Studenski, particularly, is vehement in his denunciation of the practice of using referendums to decide whether borrowing should be used. In his opinion:

As a scheme of control of public borrowing, the referendum is a very clumsy device. It leads to the decision of the question, whether bonds should be issued, by political manipulation or accident, rather than by consideration of what is a sound financial policy. The public officers, who have or can get the facts, shift responsibility for the decision to the voters who, not having the facts and being unable to obtain them, are not in a position to pass an intelligent opinion. The problems of fiscal policy involved in bond proposals are too complicated for a "yes" or "no" answer. The requirements of referenda make borrowing either very difficult . . . or very easy . . . . They result in extreme policies--either of opposition to all borrowing or of indiscriminate approval of all borrowing--according as the people have been made to fear the creation of a debt as an evil or taught to welcome it as a blessing.43

Studenski's conclusion may be too harsh, but it does call attention to some of the questionable assumptions implicit in the requirement that all but a nominal amount of borrowing must be directly sanctioned by the electorate. Particularly interesting is his contention that the electorate is less qualified to decide the complicated question of whether a given borrowing proposal merits approval. No categorical conclusion is possible on this point, but Chapter IV revealed just how difficult it is to decide when borrowing is warranted --even when all the relevant facts are available. Recognizing this, it may be unreasonable to assume that the electorate (as opposed to the elected officials) will make the better decision. It is readily apparent that in this area the theory of democracy and the requirements

43 Public Borrowing, p. 50.
of rational planning conflict to some extent. This is one instance of
the larger problem of relating the expertise of the specialist to the
theory and practice of democratic government. The fiscal economist
qua economist may have no special competence to draw limits; he can
only point out the defects of excessive reliance upon a town meeting
approach in a complex socio-economic system.

The excessive rigidity of debt limits

For many years economists have objected to the more restrictive
debt limits because they fail to allow for changing circumstances.
Shultz and Harriss express this sentiment in the following statement:
"Debt limits are in a sense crude and superficial methods of controlling
expenditure. They represent the imposition of one generation's judg­
ment—or emotions—or another generation which will inevitably face
different conditions."44 Others see confusion as to purposes in con­
ventional debt limits. As one student of debt limits has observed:
"The enactors of the early constitutional limitations confused the
doctrinal question of the scope of the community responsibility for
furnishing internal improvements with the economic question of the
proper debt level in relation to a community's ability to pay taxes,
and attempted to embody this confusion in a rule of law for all time."45

44 Op. cit., p. 514. Also see Buehler, op. cit., p. 692; and
Secrist, op. cit., p. 43.

45 Magnusson, op. cit., p. 394. Also see Secrist, op. cit.,
p. 48.
Debt limits and nonguaranteed borrowing

The most persuasive argument against constitutional debt limits involves their inability to prevent the use of nonguaranteed borrowing—indeed, a strong case can be made for the conclusion that debt limits encourage the use of nonguaranteed borrowing—a device which is growing in importance in many states. The nature and significance of nonguaranteed borrowing will be analyzed in the following section.

Nonguaranteed Borrowing and the Circumvention of Constitutional Debt Limits

The requirement that all borrowing authority beyond a nominal amount be explicitly sanctioned in a state's constitution or approved in a popular referendum would seem to be a formidable obstacle to state debt creation. During most of the period prior to World War II this was true. Since then, however, the spirit, if not the letter, of constitutional debt restrictions has been violated a great deal by means of so-called nonguaranteed borrowing. This development is so important to the question of state capital improvements financing that it is necessary to consider the nature of such borrowing, the devices which have been developed to accomplish it, and the courts' attitude toward it.

Nonguaranteed borrowing and revenue bonds

Nonguaranteed borrowing as the term is used here, refers to borrowing done by some department, agency, or other public instrumentality created by a state (but excluding regular political
subdivisions such as cities and counties) outside of the restrictions imposed by a constitutional debt limit. Typically, although not completely accurately, the debt instruments representing such extraconstitutional borrowing are called revenue bonds.46

Ratchford, in an analysis of various nonguaranteed borrowing techniques found the following definition of revenue bonds framed by Laurence S. Knapper as the best available:

Revenue bonds are all those bonds of political units that are payable as to principal and interest exclusively from the earnings, or (in the case of a sale of property) from other non-contributed assets, of a specified revenue-producing enterprise, for the acquisition, construction, improvement, or operation of which enterprise the bonds were issued.47

Heins also quotes this definition approvingly, although he goes on to point out that "in recent years the term revenue bond has been commonly expanded to include bonds which are serviced out of public funds, the sources of which are rental revenues from other political agencies or units, or special taxes."48

46 Strictly speaking, bonds which are guaranteed, in part, by states can be called revenue bonds. Thus, Ohio sometimes refers to its first highway bonds (Ohio Constitution, Article VIII, Sec. 2c) as revenue bonds because they are secured by highway user charges and not the full faith and credit of the state. Such bonds are grouped in Census Bureau compilations with conventional revenue bonds under the general description "nonguaranteed debt."


Revenue bonds and the special fund doctrine

The primary rationale behind the courts' tendency to uphold the bulk of nonguaranteed borrowing is found in the "special fund" doctrine.\(^4^9\) In essence, the doctrine says that "loans which are to be liquidated by the use of special funds derived from the revenues of the activity involved do not constitute debts within the meaning of any constitutional restriction regarding the incurrence of a state debt."\(^5^0\)

Under this reasoning, there is the assumption that the bonds are not secured by the faith and credit of the state. Rather, the theory is that the debts are "an obligation of the ultimate payers [i.e., users of the facility]."\(^5^1\)

Some state supreme courts have noted exceptions in the application of the special fund doctrine, two of which are discussed here. First, the courts have sometimes refused to approve revenue bonds where the government may be required to "feed" or supplement with general revenues the fund from which the bonds will be liquidated.\(^5^2\) In a more restricted version of the first exception courts have held that if the

\(^{49}\)Ernest Kurnow, "The Nonguaranteed Debt of State and Local Governments," National Tax Journal, XV (September, 1962), 239. The relevant Ohio rules are discussed in the following section.

\(^{50}\)Gerwig, op. cit., p. 393.

\(^{51}\)Morris, op. cit., p. 243.

\(^{52}\)State ex rel. Public Institutional Building Authority v. Griffith, 135 O S. 604, 22 N. E. 2d 200 (1939); and State ex rel.
bonds are secured in any way by revenues other than from the project financed, the bonds are not self-sustaining and are therefore invalid. 53 Second, revenue bonds secured by a mortgage on property formerly owned by the government have been disapproved in some states. 54

Although not uniformly applied by the courts, the special fund doctrine is now well-established and it has been adopted in "some more or less rigorous form" 55 by all states with constitutional debt limits. Thus, a device (revenue bonds) and a doctrine (the special fund) have been developed and applied to neutralize somewhat the effects of constitutional debt limits. 56

Public authorities and commissions

In the postwar period states have been making increasing use of the public authority (or commission) device for carrying out various public activities. Although ambiguity exists regarding what, precisely,  

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Public Institutional Building Authority v. Neffner, 137 O. S. 390, 30 N. E. 2d 705 (1940). These and other Ohio cases are discussed in the following section of this chapter.


55 Heins, op. cit., p. 16.

56 For an example of just how far the "logic" of revenue debt can be stretched to neutralize constitutional debt limits, see State v. Moorer, 152 S. C. 455 (1929); and Ratchford's discussion in American State Debts, pp. 452-454.
a state public authority is, it can be defined as a public corporation established by the state legislature to operate outside the regular structure of the state government free from the usual restrictions and procedures of state government functions "in order to finance and construct and usually to operate revenue-producing public enterprises. 57

The Council of State Governments, in its detailed study of authorities, 58 found that although they were developed in the states for various purposes, 59 since 1945, "the major factor stimulating use of the Authority has been its financial advantages." 60 By "financial advantages" the Council meant that authorities could raise large sums of money to finance capital outlays without conflicting with states' constitutional debt limits. 61 Furthermore, in selecting the state instrumentalities to be included in its study the Council decided that the key criteria would be: (1) reliance on revenue bonds financed by user charges and no dependence on and lack of power to levy taxes, and (2) reliance on revenue bonds instead of taxes as a basic pattern


59 Ibid., p. 1. Two other possible purposes noted by the Council are to establish a flexible mechanism to manage essentially commercial operations and to adopt a workable method of handling intercommunity and interstate problems. Ibid.

60 Ibid., p. 2.

61 Ibid., pp. 1-2.
of the overall agency, and not merely for certain of its subsidiary functions. 62

Heins elaborates on the reasons for using authorities and he sees them as being a particularly useful means of avoiding debt limits in states where the courts have taken a more restricted attitude with regard to the special fund doctrine. 63 As was noted above, the courts in some states take a narrow view of when the special fund doctrine should be applied to revenue bonds issued, 64 particularly when they have been issued by the state itself, but all courts have upheld the legality of nonguaranteed debt issued by public authorities. 65

Building authorities and lease financing

Undoubtedly the most controversial of the nonguaranteed borrowing methods developed to evade debt limits is the use of public authorities to finance general office buildings and the like. Seldom can such projects be called self-liquidating under even the most liberal definition. Some courts, however, have approved such financing mechanisms. 66

Public building authorities provide capital facilities for states by means of a lease-purchase arrangement. Under this device,

62 Ibid., p. 5.
64 See, supra, pp. 143-144.
65 Kurnow, op. cit., p. 239.
66 Among the states where building authorities have been approved by the courts are Georgia, Indiana, Kentucky, Maine, Pennsylvania, California, and Michigan. Ibid., p. 242. Also see Council of State Governments, op. cit., pp. 97-99.
the authority might issue revenue bonds to obtain funds to construct a building for the state. The bonds are serviced from the rentals paid by the state to the authority. In other words, the revenue which gives the revenue bonds their name here is the annual appropriation made by the legislature to one of the state's departments or agencies to provide such items as office or classroom space or capital equipment. Normally, the lease agreement between the state and the authority stipulates that the state will take title to the facilities when the bonds are retired.67

Although such devices are less common than the first two devices discussed—because the courts have been much less willing to sustain them68—where they have been validated, it is possible for the state to finance almost all its capital facilities by borrowing, without the electorate's sanction, regardless of the nominal restrictiveness of its debt limit.69

67See Heins, op. cit., pp. 18-19, and the references cited there for additional details on lease financing.

68In addition to Ohio (discussed below) states in which building authorities have been found invalid in whole or in part include Florida, Wisconsin, Alabama, Illinois, Maine, and New Jersey. Kurnow, op. cit., pp. 242-243. Also see Council of State Governments, op. cit., pp. 97-99.

69Heins, op. cit., p. 19. Another method of evading state debt limits which is discussed by Heins involves the practice in some states of relying heavily on their political subdivisions to engage in borrowing to provide many capital improvements. Op. cit., pp. 19-20. As early as 1924 Bogart noted the existence of a tendency toward this kind of evasion in Ohio and he concluded that the state's debt limit "while historically intelligible, is today both unnecessary and unwise." Ernest L. Bogart, Internal Improvements and State Debt in Ohio (New York: Longmans, Green, 1924), p. 238.
The evolution of nonquaranteed borrowing in Ohio

From 1851, when the hostility of the electorate toward loan-financed public improvements culminated in the enactment of the constitutional debt limit, until the postwar period, Ohio made few attempts to utilize borrowing to finance capital improvements. There were, however, a few attempts to evade the limit during the early years of the limit's existence. As a result of one such attempt, an 1857 case, State of Ohio v. Medbery, established precedent which has continued in force up to the present time. In this case the Supreme Court of Ohio rejected a scheme whereby the state's public works board had entered into a long-term contract for canal repairs in which it agreed to pay a total of $1,375,000 over a period of five years. Rejecting the notion that the constitutional prohibition against debt applied to actual borrowing and not to agreements of the type involved in this case, the court ruled that the obligation to pay for canal repairs over a five year period came within the meaning of debt prohibited by Article VIII, Section 3 of the Ohio Constitution.

In the 1922 case of Kasch v. Miller, the state finally received approval from the court to engage in some borrowing outside the restrictions of the constitutional ceiling. This case involved a water conservation and flood protection system under the direction of the state

70 7 O. S. 522 (1857).
71 Ibid., p. 535.
72 104 O. S. 281, 135 N. E. 813 (1922). This was one of the first cases in which revenue bond financing by a state was upheld. Council of State Governments, op. cit., p. 20.
public works superintendent. Bonds, issued by the state, were payable entirely out of the proceeds of the sale or lease of the water power generated by the dam project or, in case of default, by sale of the site itself. The court held that these bonds were valid and not an obligation of the state because there was no pledge of the state's "resources, its revenues or its credit . . . ." 73

The Kasch v. Miller distinction was relied on in a 1933 opinion by the Ohio Attorney General. 74 The federal government had offered to the state a loan for a forest conservation project, the loan to be repaid from the proceeds of the sale of the forest land or its products. There apparently remained some doubt as to the applicability of the Kasch decision and the Governor sought the Attorney General's opinion on the legality of such borrowing. The opinion approved the loan so

73 Ibid., p. 290. See "Case Note: Constitutional Law - Recent Interpretation of Ohio's Limitation on Indebtedness," Ohio State Law Journal, VI (June, 1940), 297-308, for a discussion of how the Kasch decision differed from the State v. Medbery one. In this article the author states that "it is judicial legerdemain to declare that, under the facts of the Kasch situation, there has been no creation of state debt." Ibid., p. 301. But he goes on to conclude that the decision was proper but the basis for it was tenuous. The two decisions can be harmonized, the author says, because in State v. Medbery the debt was to be repaid from tax proceeds while in Kasch v. Miller the debt was to be repaid solely from the proceeds of the sale of water and power. This distinction which accounts for the courts' ability to validate revenue bonds in spite of debt limitations has been noted elsewhere. For example, two lawyers writing in 1937 were very emphatic in their assertion that the debt referred to in constitutional debt limits could only mean, "in the light of the historical and economic considerations underlying the purposes of such provisions," debt to be met by future taxation. Williams and Nehemkis, op. cit., p. 189.

74 State of Ohio, 1933 Opinions of the Attorney General, No. 800.
long as the obligation was incurred by legislative enactment.\textsuperscript{75} Again, at the end of the decade, the Kasch decision was apparently relied upon when the General Assembly enacted legislation authorizing the construction of dormitories at various state supported universities and colleges, the dormitories to be financed by revenue bonds secured solely by student charges.\textsuperscript{76}

In 1935 the General Assembly established the State Bridge Commission of Ohio.\textsuperscript{77} The principal function of the Commission was to acquire and to operate toll bridges in the state, the acquisition of which was to be financed by revenue bonds payable only from toll revenues. By 1940 the Commission had acquired a number of bridges and had issued revenue bonds. At this time it decided to take advantage of a decline in interest rates by refunding some outstanding bonds. When the new issue of bonds was presented to the Secretary of State for his certification as required by law, he refused to sign, contending that the Bridge Commission law itself was unconstitutional and the bonds were invalid. The Ohio Supreme Court ruled that the creation of the Commission was a valid exercise of the General Assembly's power and that the bonds issued by the Commission were valid.\textsuperscript{78} The Court went

\begin{footnotesize}
\textsuperscript{75}Ibid., p. 679.

\textsuperscript{76}Ohio General Code, Sec. 7923-1. Subsequently repealed and replaced in 1943 by Ohio General Code, Sec. 4863-6 (now Ohio Revised Code, Sec. 3345.07). See "Case Note: Constitutional Law - Recent Interpretation of Ohio's Limitation on Indebtedness," op. cit., pp. 301-302, n. 17.

\textsuperscript{77}Ohio Revised Code, Sec. 5593.02 (General Code, Sec. 1084-3).

\end{footnotesize}
on to say that the bonds fit within the rule set down in *Kasch v. Miller* (i.e., the bonds are legal so long as they are payable only from the revenues of the project financed).  

The *Kasch* rule was relatively narrow and of little use in the case of state borrowing to finance public improvements of the non-self-liquidating type. In 1938, however, in an attempt to devise a method whereby funds could be borrowed to finance facilities such as welfare and correctional institutions, the General Assembly created the Public Institutional Building Authority. The Authority was to construct, equip, and make improvements to various state institutions, using lands owned by the state but held by the Authority for twenty-five years. This work was to be financed by the sale of revenue bonds to be issued by the Authority and to be serviced from the proceeds of rental payments made by various state agencies from their available income. In case of default, among other remedies, trustees for the bondholders could take and operate the facilities. When the Authority prepared to issue its first bonds and sought certification of them from the Secretary of State, he refused and the case went to the Ohio Supreme Court.

The court found a substantial portion of the Building Authority act unconstitutional and upheld the Secretary of State's refusal to

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80 Ohio Revised Code, Sec. 151.02 (General Code, Sec. 2332-2).

81 *Ibid.*, Sec. 151-04 (General Code, Sec. 2332-3a).

82 *Ibid.*, Sec. 151.09 (General Code, Sec. 2332-8).
certify the bond issue. Specifically, Kasch v. Miller was reaffirmed, but the court rejected the arrangement here because the receipts of the contemplated hospital were not made the sole source of payment. Instead, the state welfare department had agreed to pay the Authority a specific sum each year. The court also objected because the payments made by the families of the inmates and the counties where they resided (which were the real revenue source for the bonds) would flow into the general fund from which general appropriations were made and could, if the General Assembly so decided, be used for purposes other than maintaining the inmates. The ultimate result could be, the court said, an increase in taxes. In addition, the court rejected the arrangement because it objected to the financing of additions to a state-owned facility by bonds secured by a pledge of not only revenues from the addition but also revenues of the already existing facility. In the court's view, this constituted a debt of the state. Finally, the court objected to the bondholder's remedy of foreclosure because such an action might force the state to redeem the bonds to prevent the loss of existing facilities.

83 State ex rel., Public Institutional Building Authority v. Griffith, supra.
84 Ibid., p. 619.
85 Ibid., p. 614.
86 Ibid., p. 619.
87 Ibid., pp. 604-605.
88 Ibid., p. 616.
A year and one-half after the first Building Authority case, the Ohio Supreme Court again rejected an attempt by the Authority to issue revenue bonds. In this instance the Authority wanted to build a new and entirely separate facility as contrasted with the earlier attempt to construct only an addition to an existing facility. It was thought that the court might uphold this arrangement because there was complete separation of the contemplated facility from those already in operation and owned by the state. The absence of such a situation in the first case had been noted by the court. Contrary to expectations, the court again rejected the plan because funds formerly flowing into the general revenue funds were technically pledged as rental payments to be made to the Authority, the result being that the state would have to look elsewhere (e.g., increased taxes) for revenues to care for the institution's inmates.

Two decisions involving the legality of the Ohio Turnpike Commission should also be noted. The first decision, in *State ex rel. Kauer v. Defenbacher*, upheld the state's right under Article VIII, Section 2, Ohio Revised Code, Sec. 5537 (General Code, Sec. 1203). The reluctance of Ohio courts to sanction lease-financing of this type is apparently somewhat unique for a state where debt beyond a specified amount requires an amendment to the constitution. According to one student of the law of lease-financing, Ohio is the only state with an absolute prohibition against debt (beyond $750,000) where the courts have not approved a revenue bond leasing arrangement. Richard F. Mooney, "Tax Supported Revenue Bonds: A Study of Methods Used to Avoid Constitutional Limitations on Public Debt," in *Association of Life Insurance Counsel Proceedings*, Vol. XIII (1957), p. 567.
Section 4 of the Ohio Constitution to give or loan its credit or to provide aid (in the form of preliminary planning of the Turnpike) to a public corporation created for a public purpose, and the Turnpike Commission was declared to be an eligible organization for such aid.\textsuperscript{93}

In the second Turnpike case, State ex rel. Allen v. Ferguson,\textsuperscript{94} the legality of bonds issued by the Turnpike Commission was upheld. The court approved and followed Kasch v. Miller and State Bridge Commission v. Griffith in finding that bonds issued by a separate corporate body and payable solely from the revenues derived from the operation of the Turnpike did not constitute a debt of the state.\textsuperscript{95}

Finally in the case of State ex rel. Gordon v. Rhodes\textsuperscript{96} the Supreme Court of Ohio ruled that off-street parking revenue bonds secured in part by revenues from parking meters were legal. As is noted in the following chapter,\textsuperscript{97} this decision enabled bond counsel for the state universities to approve dormitory revenue bonds secured in part by the revenue of existing dormitories.

\textbf{The use of nonguaranteed debt in Ohio}

Nonguaranteed borrowing by state departments, agencies, universities and colleges, and commissions is becoming an increasingly

\textsuperscript{93}\textit{Ibid.}, pp. 269-270.
\textsuperscript{94}155 O. S. 26, 97 N. E. 2d 660 (1951).
\textsuperscript{95}\textit{Ibid.}, p. 27.
\textsuperscript{96}158 O. S. 129, 107 N. E. 2d 206 (1952).
\textsuperscript{97}\textit{Infra}, Chapter VI, p. 213.
important method of raising funds to finance capital improvements in Ohio. Just how important the use of nonguaranteed borrowing has become in the postwar period is shown in Table 10. In 1946, nonguaranteed debt outstanding equaled about $2.7 million and by 1951, it had declined to approximately $1.1 million. Since 1951, however, the trend has been steadily upward, and the amount of debt outstanding at the end of 1963 totaled approximately $398 million. The bulk of this debt is accounted for by one project, the Ohio Turnpike. But debt of the state universities has also been increasing. This debt, incurred to finance dormitories, dining facilities, auditorium and similar revenue-producing facilities, has increased from about $1.2 million in 1946 to almost $88 million at the end of 1963. The bridge commission debt has increased very little during the period, and it has become relatively insignificant when compared with the other forms of nonguaranteed debt outstanding. A commission to build underground parking garages began operations in 1963 and borrowed $6.6 million to finance the parking garage under the state capital building.

Of the four agencies that have debt outstanding in 1964, only the state universities and colleges are certain to continue increasing their outstanding debt in the future. The other three could also incur more debt, but at present there is no indication that any expansion in their activities is contemplated which would necessitate additional borrowing.

There are, however, as a result of legislation passed by the General Assembly in 1963 and 1964, other commissions and departments which have authority to incur nonguaranteed debt. A summary of the
## TABLE 10

**NONGUARANTEED DEBT OUTSTANDING IN OHIO, 1946 - 1963**

(In Thousands of Dollars)

<table>
<thead>
<tr>
<th>Year</th>
<th>State Universities</th>
<th>State Bridge Commission</th>
<th>Ohio Turnpike Commission</th>
<th>State Underground Parking Garage</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1946</td>
<td>$1,194</td>
<td>$1,540</td>
<td>$...</td>
<td>$...</td>
<td>$2,734</td>
</tr>
<tr>
<td>1947</td>
<td>1,023</td>
<td>1,165</td>
<td>$...</td>
<td>$...</td>
<td>2,188</td>
</tr>
<tr>
<td>1948</td>
<td>833</td>
<td>675</td>
<td>$...</td>
<td>$...</td>
<td>1,508</td>
</tr>
<tr>
<td>1949</td>
<td>b</td>
<td>400</td>
<td>$...</td>
<td>$...</td>
<td>b</td>
</tr>
<tr>
<td>1950</td>
<td>919</td>
<td>110</td>
<td>$...</td>
<td>$...</td>
<td>1,029</td>
</tr>
<tr>
<td>1951</td>
<td>1,142</td>
<td>$...</td>
<td>$...</td>
<td>$...</td>
<td>1,132</td>
</tr>
<tr>
<td>1952</td>
<td>2,616</td>
<td>$...</td>
<td>326,000</td>
<td>$...</td>
<td>328,616</td>
</tr>
<tr>
<td>1953</td>
<td>3,542</td>
<td>$...</td>
<td>326,000</td>
<td>$...</td>
<td>329,542</td>
</tr>
<tr>
<td>1954</td>
<td>11,392</td>
<td>$...</td>
<td>326,000</td>
<td>$...</td>
<td>337,392</td>
</tr>
<tr>
<td>1955</td>
<td>19,525</td>
<td>$...</td>
<td>326,000</td>
<td>$...</td>
<td>345,525</td>
</tr>
<tr>
<td>1956</td>
<td>27,969</td>
<td>$...</td>
<td>326,000</td>
<td>$...</td>
<td>353,969</td>
</tr>
<tr>
<td>1957</td>
<td>34,428</td>
<td>3,500</td>
<td>326,000</td>
<td>$...</td>
<td>363,923</td>
</tr>
<tr>
<td>1958</td>
<td>38,859</td>
<td>3,500</td>
<td>326,000</td>
<td>$...</td>
<td>368,859</td>
</tr>
<tr>
<td>1959</td>
<td>42,615</td>
<td>3,435</td>
<td>326,000</td>
<td>$...</td>
<td>372,050</td>
</tr>
<tr>
<td>1960</td>
<td>50,263</td>
<td>3,355</td>
<td>326,000</td>
<td>$...</td>
<td>379,618</td>
</tr>
<tr>
<td>1961</td>
<td>63,770</td>
<td>3,267</td>
<td>321,313</td>
<td>$...</td>
<td>388,350</td>
</tr>
<tr>
<td>1962</td>
<td>69,182</td>
<td>2,956</td>
<td>310,567</td>
<td>$...</td>
<td>382,705</td>
</tr>
<tr>
<td>1963</td>
<td>87,691</td>
<td>4,353</td>
<td>299,380</td>
<td>6,600</td>
<td>398,024</td>
</tr>
</tbody>
</table>

aData except for state universities are for calendar years; state universities data are for July 1 - June 30 fiscal year.

bNot available.

Source: University debt from unpublished records made available by the Bureau of the Census; all other debt figures are from the annual reports of the State Bridge Commission, Ohio Turnpike Commission, and the State Underground Parking Garage.
Salient features of this new authority (in addition to a summary of the borrowing authority enacted prior to 1963) is contained in Table 11. As the table indicates, no debt has yet been incurred. According to officials of the Ohio Department of Finance, it will be some time before much use is made of this authority, but a feasibility study is underway currently, in connection with a state park, and this could lead to the issuance of revenue bonds by the Department of Natural Resources.

Revenue bonds issued under the authority given to the Natural Resources Department, payable solely from revenues collected from users of state parks (and which do not flow into the general fund), probably would be legal. Revenue bonds issued by the Ohio Building Authority and the Ohio Public Facilities Finance Commission, however, are of doubtful validity. This is recognized by the administration and this accounts, in part, for the absence of any immediate plans to use the authority and to test (either directly with a "friendly" lawsuit or with the almost inevitable "unfriendly" one) the constitutionality of such legislation. One lawsuit involving the $250 million capital improvements bond issue approved by the voters in 1963 has already occurred.98

**Disadvantages of nonguaranteed borrowing**

Nonguaranteed borrowing has only recently been adopted widely by states as a major source of funds to finance capital improvements.

98 *State ex rel. Lynch v. Rhodes*, 176 O. S. 251, 199 N. E. 2d 393 (1964). Also see, infra, Chapter VI, p. 197, n. 83.
<table>
<thead>
<tr>
<th>Name of Department, Agency, or Commission</th>
<th>Section in Ohio Revised Code in Which Authorized</th>
<th>Date Enacted</th>
<th>Use of Debt Proceeds</th>
<th>Source of Funds to Service Debt</th>
<th>Statutory Limit on Borrowing Authority</th>
<th>Amount Outstanding</th>
</tr>
</thead>
<tbody>
<tr>
<td>State Bridge Commission of Ohio</td>
<td>5593.01 to 5593.19</td>
<td>1935</td>
<td>Acquire, improve, maintain, and operate bridges</td>
<td>Bridge tolls</td>
<td>None</td>
<td>$4,296,000</td>
</tr>
<tr>
<td>Ohio Turnpike Commission</td>
<td>5537.01 to 5537.23</td>
<td>1949</td>
<td>Construct, maintain, and operate turnpikes</td>
<td>Turnpike tolls</td>
<td>None</td>
<td>299,380,000</td>
</tr>
<tr>
<td>State Underground Parking Commission</td>
<td>5538.22 to 5538.43</td>
<td>1961</td>
<td>Construct, maintain, and operate parking facilities</td>
<td>Fees from use of parking garages</td>
<td>None</td>
<td>6,600,000</td>
</tr>
<tr>
<td>State Colleges and Universities</td>
<td>3337.07 to 3345.11</td>
<td>1937</td>
<td>Construct, purchase, or lease; maintain; and operate dormitories, dining facilities, athletic facilities, auditoriums, etc. for use by students, staff, and faculty</td>
<td>Fees from operation of facilities and student fees assessed for such purposes</td>
<td>None</td>
<td>87,691,000</td>
</tr>
<tr>
<td>State University Housing Commissions</td>
<td>3347.01 to 3347.09</td>
<td>1947</td>
<td>Construct, purchase, or lease; maintain; and operate dormitories, dining facilities, athletic facilities, auditoriums, etc. for students, staff, and faculty</td>
<td>Fees from operation of facilities</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>Ohio Building Authority</td>
<td>152.01 to 152.18</td>
<td>1963</td>
<td>Construct, reconstruct, maintain, and operate facilities for use of aged and indigent</td>
<td>Appropriations</td>
<td>None</td>
<td>No debt issued; has not begun operating</td>
</tr>
<tr>
<td>Name of Department, Agency, or Commission</td>
<td>Section in Ohio Revised Code in Which Authorized</td>
<td>Date Enacted</td>
<td>Use of Debt Proceeds</td>
<td>Source of Funds to Pay Interest and Principal</td>
<td>Limit on Borrowing Authority</td>
<td>Amount of Debt Outstanding</td>
</tr>
<tr>
<td>-----------------------------------------</td>
<td>-----------------------------------------------</td>
<td>--------------</td>
<td>---------------------</td>
<td>-------------------------------------------</td>
<td>----------------------------</td>
<td>--------------------------</td>
</tr>
<tr>
<td>Ohio Public Facilities Finance Commission</td>
<td>154.01 to 1969</td>
<td>1. Acquire or construct facilities needed to house state operations; 2. Acquire and prepare land for dam sites, parks, and conservation projects; 3. Contribute to student loan or loan guarantee funds of Ohio Higher Education Assistance Commission; 4. Provide public school classrooms for public school districts unable to provide them within their debt limits</td>
<td>Annual net profit of state liquor monopoly</td>
<td>Annual borrowing cannot exceed 20 per cent of average annual net profit of liquor control department for preceding two calendar years</td>
<td>No debt issued; has not begun operating</td>
<td></td>
</tr>
<tr>
<td>Department of Natural Resources</td>
<td>1501.01 to 1961</td>
<td>Acquire land and acquire, construct, enlarge, and equip facilities in state parks</td>
<td>Receipts from operation of park facilities</td>
<td>None</td>
<td>No debt issued; one feasibility study underway</td>
<td></td>
</tr>
</tbody>
</table>

*As of June 1, 1964.*

*As of December 31, 1963.*

*Included in $87,691,000 reported immediately above.*

**Source:** All details except debt outstanding come from Ohio Revised Code and interviews with Department of Finance officials; bridge debt from records of the State Bridge Commission; turnpike debt from Table 10; underground parking garage debt from records of the State Underground Parking Commission; university debt from Table 10.
As was suggested above, a principal reason states have begun to make great use of various nonguaranteed borrowing devices is their desire to raise large sums of money to finance capital outlays without drawing on current tax resources and without conflicting with constitutional debt limitations. Table 12 shows nonguaranteed debt as a percentage of total state debt in 1963. States are grouped according to the degree of restriction against guaranteed borrowing. The most restricted group (debt in excess of a nominal amount must be approved by a constitutional amendment) has the highest percentage of nonguaranteed debt to total debt, and the least restricted group (borrowing power rests in the legislature) has the lowest percentage. Six of the states in the most restricted group have only nonguaranteed debt, but this was true for only one of the thirty states in the other two categories. At a minimum, these data are consistent with the conclusion that one of the principal reasons states use nonguaranteed borrowing is the existence of a debt limit. They also suggest that the more restrictive the limit, the greater the use of nonguaranteed borrowing relative to the use of guaranteed debt.

As the use of nonguaranteed debt has increased in recent years, economists, lawyers, and others interested in state government fiscal and administrative policy have begun to call attention to a number of disadvantages and problems attendant with its use. Some believe the disadvantages and problems are so serious that such borrowing should be curbed greatly. Reflective of their sentiment toward nonguaranteed borrowing is the following statement by Manuel Gottlieb: "If rational
### TABLE 12
STATE NONGUARANTEED LONG-TERM DEBT AS A PERCENTAGE OF TOTAL LONG-TERM DEBT, STATES CLASSIFIED BY NATURE OF DEBT LIMITATION, 1963
(Dollar Figures in Millions)

<table>
<thead>
<tr>
<th>State</th>
<th>Total Long-Term Debt</th>
<th>Nonguaranteed Debt</th>
<th>Nonguaranteed Debt as Percentage of Total Debt</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>States requiring constitutional amendment:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alabama</td>
<td>$ 306.7</td>
<td>$ 256.1</td>
<td>83.5</td>
</tr>
<tr>
<td>Arizona</td>
<td>22.8</td>
<td>22.8</td>
<td>100.0</td>
</tr>
<tr>
<td>Colorado</td>
<td>97.9</td>
<td>97.9</td>
<td>100.0</td>
</tr>
<tr>
<td>Florida</td>
<td>484.2</td>
<td>484.2</td>
<td>100.0</td>
</tr>
<tr>
<td>Georgia</td>
<td>484.7</td>
<td>484.7</td>
<td>100.0</td>
</tr>
<tr>
<td>Indiana</td>
<td>470.3</td>
<td>469.9</td>
<td>99.9</td>
</tr>
<tr>
<td>Louisiana</td>
<td>497.8</td>
<td>169.5</td>
<td>34.0</td>
</tr>
<tr>
<td>Michigan</td>
<td>960.3</td>
<td>854.2</td>
<td>89.0</td>
</tr>
<tr>
<td>Minnesota</td>
<td>221.2</td>
<td>26.3</td>
<td>11.2</td>
</tr>
<tr>
<td>Nebraska</td>
<td>20.5</td>
<td>20.5</td>
<td>100.0</td>
</tr>
<tr>
<td>Nevada</td>
<td>5.1</td>
<td>2.0</td>
<td>39.2</td>
</tr>
<tr>
<td>North Dakota</td>
<td>16.1</td>
<td>11.2</td>
<td>69.6</td>
</tr>
<tr>
<td>Ohio</td>
<td>836.4</td>
<td>401.3a</td>
<td>47.9a</td>
</tr>
<tr>
<td>Oregon</td>
<td>411.1</td>
<td>.1</td>
<td>-0-</td>
</tr>
<tr>
<td>Pennsylvania</td>
<td>1,524.2</td>
<td>1,266.0</td>
<td>83.1</td>
</tr>
<tr>
<td>South Dakota</td>
<td>10.2</td>
<td>10.2</td>
<td>100.0</td>
</tr>
<tr>
<td>Texas</td>
<td>463.5</td>
<td>215.9</td>
<td>46.6</td>
</tr>
<tr>
<td>Utah</td>
<td>20.9</td>
<td>20.9</td>
<td>100.0</td>
</tr>
<tr>
<td>West Virginia</td>
<td>279.0</td>
<td>223.8</td>
<td>80.2</td>
</tr>
<tr>
<td>Wisconsin</td>
<td>126.5</td>
<td>126.5</td>
<td>100.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>$7,259.4</td>
<td>$5,164.1a</td>
<td>71.1a</td>
</tr>
</tbody>
</table>

| **States requiring referendum:** |                      |                    |                                               |
| Alaska               | $ 45.8               | $ 15.5             | 33.8                                          |
| Arkansas             | 99.8                 | 45.3               | 45.4                                          |
| California           | 2,936.8              | 193.0              | 65.7                                          |
| Idaho                | 7.4                  | 5.9                | 79.7                                          |
| Illinois             | 1,040.6              | 590.6              | 56.8                                          |
| Iowa                 | 48.9                 | 20.2               | 41.3                                          |
| Kansas               | 206.6                | 187.6              | 90.8                                          |
| Kentucky             | 584.3                | 450.0              | 77.0                                          |
TABLE 12—Continued

<table>
<thead>
<tr>
<th>State</th>
<th>Total Long-Term Debt</th>
<th>Nonguaranteed Debt</th>
<th>Nonguaranteed Debt as Percentage of Total Debt</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maine</td>
<td>139.6</td>
<td>86.8</td>
<td>46.2</td>
</tr>
<tr>
<td>Missouri</td>
<td>108.1</td>
<td>50.5</td>
<td>44.7</td>
</tr>
<tr>
<td>Montana</td>
<td>52.5</td>
<td>48.6</td>
<td>92.6</td>
</tr>
<tr>
<td>New Jersey</td>
<td>1,005.9</td>
<td>469.5</td>
<td>44.9</td>
</tr>
<tr>
<td>New Mexico</td>
<td>67.5</td>
<td>48.4</td>
<td>71.7</td>
</tr>
<tr>
<td>New York</td>
<td>3,391.6</td>
<td>1,771.6</td>
<td>52.2</td>
</tr>
<tr>
<td>North Carolina</td>
<td>246.3</td>
<td>22.0</td>
<td>8.9</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>326.3</td>
<td>256.4</td>
<td>78.6</td>
</tr>
<tr>
<td>Rhode Island</td>
<td>119.2</td>
<td>9.2</td>
<td>7.7</td>
</tr>
<tr>
<td>South Carolina</td>
<td>251.3</td>
<td>62.9</td>
<td>22.5</td>
</tr>
<tr>
<td>Virginia</td>
<td>206.7</td>
<td>204.2</td>
<td>98.8</td>
</tr>
<tr>
<td>Washington</td>
<td>497.0</td>
<td>445.1</td>
<td>89.6</td>
</tr>
<tr>
<td>Wyoming</td>
<td>12.8</td>
<td>12.8</td>
<td>100.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$11,395.0</strong></td>
<td><strong>$4,996.1</strong></td>
<td><strong>43.8</strong></td>
</tr>
</tbody>
</table>

States with no or minor restrictions:

<table>
<thead>
<tr>
<th>State</th>
<th>Total Long-Term Debt</th>
<th>Nonguaranteed Debt</th>
<th>Nonguaranteed Debt as Percentage of Total Debt</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connecticut</td>
<td>$895.9</td>
<td>$345.8</td>
<td>38.6</td>
</tr>
<tr>
<td>Delaware</td>
<td>240.9</td>
<td>31.3</td>
<td>11.3</td>
</tr>
<tr>
<td>Hawaii</td>
<td>207.4</td>
<td>86.9</td>
<td>44.2</td>
</tr>
<tr>
<td>Maryland</td>
<td>742.9</td>
<td>469.6</td>
<td>63.2</td>
</tr>
<tr>
<td>Massachusetts</td>
<td>1,493.4</td>
<td>558.7</td>
<td>4.4</td>
</tr>
<tr>
<td>Mississippi</td>
<td>217.8</td>
<td>110.2</td>
<td>50.6</td>
</tr>
<tr>
<td>New Hampshire</td>
<td>85.7</td>
<td>1.3</td>
<td>1.5</td>
</tr>
<tr>
<td>Tennessee</td>
<td>153.8</td>
<td>11.8</td>
<td>7.7</td>
</tr>
<tr>
<td>Vermont</td>
<td>59.2</td>
<td>2.3</td>
<td>3.9</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$4,097.0</strong></td>
<td><strong>$1,617.9</strong></td>
<td><strong>39.5</strong></td>
</tr>
</tbody>
</table>

*Census Bureau data were adjusted to exclude $315,046,000 of highway revenue debt which is not guaranteed by the full faith and credit of Ohio (and therefore is nonguaranteed debt under the Census Bureau definition) but which was approved by a constitutional amendment.*

and informed deliberation dominated political judgment and shaped institutions, then the revenue bond would be sparingly used.  

Probably the most widely discussed objection is the interest premium paid on nonguaranteed bonds relative to those fully guaranteed by the state.  

Quantifying the interest premium is not a simple matter, particularly because revenue bonds and guaranteed bonds issued at a given time are seldom fully comparable. Heins, however, has developed a technique for taking the differences into account, and he has made some estimates of the additional interest costs paid by some states on their nonguaranteed debt. Table 13 contains a summary of Heins' estimates covering bonds issued by seven states during the years 1956-1959. One state, Illinois, will pay in added interest costs over the life of the issues an amount equal to nearly 47 per cent of the amount borrowed. Taking the added interest costs as a percentage of the total amount borrowed in the seven states, the added interest payments amount to about 15 per cent of the amount borrowed. Even when the extreme case of Illinois is eliminated, the added interest costs


100Heins' treatment of this seems to be the best available. Op. cit., pp. 36-68.
TABLE 13
ESTIMATED ADDITIONAL INTEREST COSTS FROM REVENUE BOND FINANCING IN SELECTED STATES, 1956-1959 (Revenue Bonds Issued in Thousands of Dollars)

<table>
<thead>
<tr>
<th>State</th>
<th>Amount of Revenue Bonds Issued 1956-1959</th>
<th>Added Annual Interest Payments</th>
<th>Added Interest Payments Over Life of Issue</th>
<th>Added Interest Payments (Life) as a Percentage of Total Amount of Revenue Bonds Issued</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alabama</td>
<td>$60,000</td>
<td>$181,800</td>
<td>$2,342,400</td>
<td>3.9</td>
</tr>
<tr>
<td>Georgia</td>
<td>97,920</td>
<td>720,290</td>
<td>9,046,030</td>
<td>9.2</td>
</tr>
<tr>
<td>Illinois</td>
<td>79,730</td>
<td>976,055</td>
<td>37,318,610</td>
<td>46.8</td>
</tr>
<tr>
<td>Indiana</td>
<td>50,400</td>
<td>415,997</td>
<td>8,427,477</td>
<td>16.7</td>
</tr>
<tr>
<td>Pennsylvania</td>
<td>188,435</td>
<td>496,061</td>
<td>8,964,069</td>
<td>4.8</td>
</tr>
<tr>
<td>Washington</td>
<td>130,485</td>
<td>1,054,212</td>
<td>21,460,761</td>
<td>16.4</td>
</tr>
<tr>
<td>Wisconsin</td>
<td>22,440</td>
<td>117,659</td>
<td>2,191,597</td>
<td>9.8</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$629,410</strong></td>
<td><strong>$3,962,074</strong></td>
<td><strong>$89,750,944</strong></td>
<td><strong>14.3^a</strong></td>
</tr>
</tbody>
</table>

^aIf Illinois data are omitted, this value for remaining six states is 9.5.

Source: Data in columns one through three are taken from A. James Heins, Constitutional Restrictions Against State Debt (Madison: University of Wisconsin Press, 1963), pp. 52-55.
for the remaining six states is still more than 10 per cent of the amount borrowed. 101

Insofar as these estimates reflect accurately the additional cost to the states from using nonguaranteed debt, a reasonable conclusion is that such methods are significantly costly in an absolute sense. But this knowledge, taken alone, does not justify condemnation of nonguaranteed borrowing or even suggest that it is unreasonably expensive. The important consideration involves the benefit for which a state pays the interest premium. Presumably, the differential represents the cost of shifting risk from taxpayers to lenders. 102 But does the borrowing public actually get what it pays for? For a state which resorts to nonguaranteed borrowing not because it is unable to carry and wants to shift the risk of an enterprise failure to the lenders but, rather, because a constitutional debt restriction makes fully guaranteed borrowing difficult, the answer may be that the interest premium is buying an illusory benefit. Most states have considerable pride and value a good credit rating. Since there seems to be little doubt that a default on its nonguaranteed debt would be reflected in the rating given to a state's guaranteed obligations, it would be quite costly for a state to ignore revenue bonds issued in its name or in the name of one of its instrumentalities if the enterprise securing them failed. Although it is not possible to know in advance what a particular state would do in such a situation, informed observers

101 See, infra, Chapter VI, Table 14, p. 183, for similar estimates for some of Ohio's debt.

102 Heins, op. cit., p. 56.
believe that most states would make every effort to assume the responsibility of servicing such obligations. If this is true, and if the existence of constitutional debt limits prevents states from expressing their intent to support nonguaranteed debt, "the public may wind up voluntarily accepting the risk and yet paying the risk premium to lenders of funds."  

Although debt limits were intended to guarantee to the electorate the final say on when and for what purposes debt should be incurred, the ability of legislatures to circumvent the limits and, hence, the scrutiny of the electorate, may lead to less rather than more dissemination of information regarding their activities than if direct borrowing was used. Moreover, if citizens are convinced that a debt limit in the constitution prevents the legislature from abusing its power and damaging the state's financial health, they may become less concerned with the problems of government and the difficult questions of public policy. Nothing is more conducive to political irresponsibility than such public apathy. When a device like a public authority is required to finance an improvement, it is usually necessary for the legislature which created it to free it from most of the controls.

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103 In an interview with the present writer, former Ohio Governor Michael DiSalle was very emphatic in his statement that he was certain Ohio would not ignore nonguaranteed debt issued by the state or one of its instrumentalities.

104 Heins, op. cit., p. 60.

normally exerted over state agencies. For this reason, lawmakers have some justification for their tendency to absolve themselves from blame should such an instrumentality encounter difficulties. But since such operations are established to carry out some public purposes, it seems proper that they should be held accountable to the public (i.e., the legislature and the electorate).

Finally, the willingness of elected officials to resort to nonguaranteed borrowing and the willingness of most courts to interpret the constitutional debt restrictions so liberally as to permit a large volume of extraconstitutional debt delays an attack on the real problem—the existence of unrealistic debt limits. In other words, the existence of an outdated restriction may lead to the use of expensive and unsatisfactory financing methods and to discrimination as to the type of improvements provided (i.e., self-liquidating projects are politically easier to obtain). Some believe that if courts would enforce the debt limits more rigidly and declare more nonguaranteed borrowing illegal, the public would soon see that the necessary revisions in debt restrictions were made. However, this position asks the judiciary to determine a basic question of state fiscal and economic

106 Magnusson, op. cit., p. 395.

107 As Gottlieb says, the use of revenue bonds promotes projects yielding direct revenue as opposed to those improvements where the benefits are indirect and diffuse. Op. cit., p. 41.

108 Op. cit., p. 396. Morris, op. cit., pp. 266-267, expresses a similar view, but he also notes that this might backfire and lead to more costly methods such as leases.

In addition to the disadvantages and problems discussed in this section, there are others involving debt management which will be considered in Chapter VI.
policy. While John R. Commons did label the United States Supreme Court "an authoritative faculty of political economy,"\textsuperscript{109} the thrust of twentieth century jurisprudence, rightly or wrongly, has not pointed toward juridical resolution of legislative questions. Given the technical precision of judicial delimitation of the scope of constitutional debt limitations in Ohio and elsewhere, it seems unlikely that the judiciary will readily resolve the policy problem analyzed in this chapter. Such resolution may require the time necessary for much education about the scope of public improvements and their optimal financing. Short run problems can seldom wait upon this kind of process.

**Summary and Conclusions**

State debt limits were first instituted as a result of excessive borrowing by many states during the first half of the nineteenth century. Since then, all but seven states have taken some action to limit their legislatures' power to incur debt.

Ohio was among the first to add a debt limit when it incorporated one into its Constitution which was adopted in 1851. Although the limit prohibits debt in excess of $750,000 (except for defense purposes), the Constitution has been amended seven times to permit additional borrowing and state debt totaled about $425 million at the end of fiscal 1963.

Despite the absence of substantial effort to abolish the debt limit, the apparent ease with which it is amended makes its effectiveness

somewhat doubtful. Moreover, the existence of the limit may encourage nonguaranteed borrowing. The primary rationale which enables courts to find nonguaranteed borrowing not in violation of constitutional limits is the special fund doctrine. Although there are about as many variations of the doctrine as there are states with debt limits, the essence is that debt to be liquidated by revenues derived from the project involved is not debt within the meaning of the constitutional limit. The Supreme Court of Ohio has limited the application of the doctrine more than have courts in some other states, but it has been liberal enough in its interpretation to permit nonguaranteed borrowing for bridges, a turnpike, university dormitories, and other revenue-producing facilities.

Nonguaranteed borrowing, although of value to states with restrictive debt limits, is a costly device. Legally, some risk is shifted from the general government (taxpayers) to the lenders. This involves an interest premium. To the extent that many states would not permit their instrumentalities' revenue bonds to go into default, the premium may be paid for illusory benefits.

Sometimes it is claimed that because the electorate must approve all borrowing in excess of a nominal limit, the quality of spending and borrowing decisions will be improved because the voters will be better informed. That this actually happens is doubtful, but there can be little doubt that projects financed by nonguaranteed borrowing usually receive less publicity and stir up less public interest than do those financed by the more conventional methods (e.g., current tax revenues
and guaranteed borrowing). Thus, nonguaranteed borrowing may actually contribute to voter apathy and political irresponsibility.

Particularly because debt limits appear to be ineffective and because they encourage the use of more expensive and frequently less desirable forms of debt, a strong case can be made for abolishing them. Even substantially less restrictive limits seem undesirable in the opinion of the writer. In the first place, although there may be some limit beyond which a state's debt should not go, its magnitude certainly cannot easily be quantified. Second, legislatures which have wanted to borrow have demonstrated their resourcefulness at devising methods to circumvent the limits. Undoubtedly, future legislatures will be just as resourceful in developing technically permissible exceptions, regardless of the nature of new limits which might be adopted. This is especially likely if the courts continue to validate legislative authorization of borrowing based upon an actual or constructive user charge rationale.

Despite the apparent desirability of complete abolition of debt limits, the political facts of life make such a development unlikely indeed. The conventional wisdom is hostile to borrowing—at least until it comes to a choice between borrowing and increased taxation—and public officials must be cognizant of this. If this is true, the best that can be obtained in the short run may be a revision in the nature of the limits. Chapter VII proposes a debt limit which might be useful for a state such as Ohio if the decision were made to modify the present limit and yet retain some limitation on the legislative's ability to incur guaranteed debt.
CHAPTER VI

STATE DEBT IN OHIO: STRUCTURE AND MANAGEMENT

Merely because Ohio's guaranteed and nonguaranteed debt has increased substantially since 1947 does not mean that the state's financial health has deteriorated. It does mean, however, that a program of sound debt financing and financial management becomes increasingly imperative.

Developing a program of sound debt financing involves analysis of (1) time and purpose of borrowing; (2) terms of borrowing (e.g., maturity of debt issues, use of call option, etc.); (3) use of guaranteed debt and (if ever) nonguaranteed debt; and (4) organization of the debt administration functions. This chapter analyzes Ohio's debt financing program in the postwar period and presents some recommendations for revisions in current practices.

Debt Guaranteed by the State of Ohio

The role of the Sinking Fund Commission

The Board of Commissioners of the Sinking Fund, created by the Ohio Constitution (Article VIII, Sec. 8), has primary responsibility

1Hereafter called the Commissioners.
for managing Ohio's guaranteed debt. It is composed of the Governor, Treasurer, Auditor, Secretary of State, and the Attorney General.\(^2\) The Constitution establishes a sinking fund\(^3\) and it specifies the following duties for the Commissioners: (1) submission to the Governor of a biennial report detailing the balance in the sinking fund and reporting the Commissioners' activities, which report the Governor is to submit to the General Assembly;\(^4\) (2) application of moneys in the sinking fund along with funds appropriated by the legislature to service debt when due;\(^5\) and (3) submission of a semi-annual report of their activities to the Governor who is to have it published and presented to the legislature.\(^6\)

Chapter 129 of the Ohio Revised Code outlines the authority and duties of the Commissioners. In addition to repeating the essence of the constitutional provisions discussed in the preceding paragraph, most of the first twenty-one sections of Chapter 129\(^7\) are applicable

\(^2\)Ohio Constitution, Article VIII, Sec. 8.
\(^3\)Ibid., Article VIII, Sec. 6. See, supra, Chapter V, p. 126. Included when the Constitution was adopted in 1851, this section provided a mechanism for extinguishing the then-outstanding debt. Because serial bonds are now used, the sinking fund requirement is somewhat of an anachronism.
\(^4\)Ibid., Article VIII, Sec. 9.
\(^5\)Ibid., Article VIII, Sec. 10.
\(^6\)Ibid., Article VIII, Sec. 11. According to William E. Bright, Comptroller of the Ohio State Treasury and a member of the Commissioners' staff, no separate reports of the Commissioners' activities are published. The only regular report—which is no more than a brief summary of state indebtedness—appears as a part of the Ohio Treasurer's Report. See, for example, ibid., 1963, pp. 64-71.
\(^7\)Ohio Revised Code, Secs. 129.01-129.21.
mainly to debt incurred within the $750,000 constitutional debt limit. Since all of Ohio's postwar guaranteed debt has been authorized by the amendment device, sections 129.01 through 129.21 will not be discussed here.

Authority and responsibility of the Commissioners

The duties of the Commissioners in connection with the several borrowing programs carried out or authorized in the postwar period are specified in the particular constitutional amendment sanctioning the borrowing and in the statutory enactments which implement the constitutional authorization. Although discussion of the various borrowing programs appears below, it is useful at this point to extract from the constitutional and statutory laws which underlie these programs provisions relevant to the Commissioners which are common to all the postwar borrowing programs. Usually the Commissioners are authorized to: (1) arrange for advertising a proposed sale, receive and evaluate the bids of potential bond purchasers, and award the bonds or notes sold; (2) determine if any of the submitted bids are acceptable and reject all bids if none are satisfactory to them; (3) fix the rate of interest to be paid (based on bidder's prices, of course); (4) determine whether the bonds shall be made callable. 8

Among the requirements of borrowing which are generally prescribed for the Commissioners by the legislation authorizing a borrowing

8This discussion is based on the Ohio Constitution, Article VIII, Secs. 2b-2g; and the Ohio Revised Code, Secs. 5528.01, 129.30, and 129.50.
program are: (1) the maximum annual or aggregate amount to be borrowed; (2) the last date when any debt can be contracted; (3) the method by which borrowing is to be done (i.e., public or private sale); (4) the rate at which debt is to be retired; (5) minimum advertising requirements such as where, when, and by what medium forthcoming bond or note sales must be announced; (6) the structure of the funds from which debt will be extinguished and the sources of funds to accomplish this; and (7) the manner in which debt proceeds will be allocated.

Among the authorizations sometimes (but not always) delegated to the Commissioners are: (1) authority to determine precisely when and how much to borrow (up to the maximum authorized in the amendment); (2) authority to require that particular taxes be levied to finance the debt service (although none of the programs have granted the Commission any discretion as to which tax or group of taxes would be used); (3) authority to administer the distribution of the debt proceeds in conformity with the designated purposes; and (4) authority to invest certain excess moneys held for purposes of debt service (in specified kinds of securities).

From the foregoing it is clear that the Commissioners have both considerable authority and substantial responsibility for planning Ohio's guaranteed debt structure and managing its borrowing program from the time a particular series of bonds or notes is sold, through the months and years when it is serviced, until the issue is retired. Succeeding sections of this chapter will discuss and evaluate the structure and conduct of Ohio's program of borrowing and will consider in more specific detail the activities of the Commissioners.
Borrowing for veterans' bonuses

In the postwar period, Ohio has twice incurred indebtedness in order to finance bonuses to veterans.⁹ In 1947, an amendment was ratified¹⁰ which authorized the state to borrow up to $300 million, the debt to be backed by "the full faith and credit" of the state, to pay bonuses to residents of the state (at the time of their entry into the armed forces) who served in the armed forces during World War II. Of this total authority, the state used only $212.5 million¹¹ and the legislature appropriated from general revenues an additional $25 million to be expended for such bonuses.¹² The last of the World War II bonus debt was retired in April, 1964.¹³

World War II bonus borrowing

The World War II bonus debt was particularly significant because it marked the departure from a policy of no guaranteed state debt which had been adhered to since 1922.¹⁴ The legislation creating

⁹Borrowing under the bonus amendments, although not connected with state capital improvements spending, is discussed briefly in this chapter because the use of the state's borrowing capacity for such purposes indirectly affects its ability to use loan financing in its capital improvements program. In addition to the two veterans' bonus amendments approved after 1946, there was one following World War I. This amendment became Article VIII, Section 2a, and it was the first guaranteed borrowing authorization under the 1851 Constitution.

¹⁰Ohio Constitution, Article VIII, Sec. 2b.

¹¹Ohio Treasurer's Report, 1963, p. 64.


¹³Columbus Dispatch, April 23, 1964, p. 1.

¹⁴See reference in n. 19, infra.
the borrowing authority was relatively uncomplicated and well-designed, the state could afford the indebtedness, and the mechanism for administering the borrowing program and the distribution of the bonuses—the Sinking Fund Commission—was easily put into operation.

In the opinion of the writer, the legislation authorizing and implementing the two postwar bonus borrowing programs may well have been the best of all the postwar borrowing legislation in the sense that it shows a remarkable absence of ambiguity and was essentially self-executing. In the case of the World War II bonus program, the Commissioners were authorized to borrow as necessary (up to the maximum amount authorized by the amendment); to distribute the bonuses according to the allocation formula specified in the amendment; and to service the debt first, from the $12 million appropriated annually out of the general revenue fund and second, from the proceeds of an ad valorem property tax levied by the Commissioners at whatever rate was necessary in a particular year.

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15 Not that the amount borrowed was trifling. In discussing the $300 million authorization, Moody's Bond Survey noted that if this amount were issued, Ohio's state debt would be somewhat heavy relative to most other states. Even so, it was impressed by "the state's historical reluctance to incur debt" and it rated the debt Aaa, its highest rating. Moody's Bond Survey, XL (March 8, 1948), p. 590.

16 Except where noted, this discussion of the World War II and Korean bonus debt is based on Ohio Constitution, Article VIII, Secs. 2b and 2d.

17 This constituted a first and best lien on the general revenue fund.

18 The tax, first levied in December, 1950, varied over the years, and was cancelled in August, 1962. Moody's, 1964, p. 1540.
The cost of World War II debt

World War II bonus bonds were sold in two issues—the first $200 million were dated April, 1948, and the remainder of $12.5 million were dated April, 1949—at net interest costs averaging below 2 percent. Thus, by almost any standard applied this borrowing must be described as singularly economical, both in general and as compared with later borrowing done by Ohio. In part, this low cost can be attributed to the Federal Reserve System's policy in effect at the time which helped keep interest rates low. But another factor was the quality of the obligations sold. In its report of the first sale, the Commercial and Financial Chronicle noted that the excellent reception given by the bond market was a "foregone conclusion," particularly because the state had no outstanding indebtedness and had not borrowed since 1922. To this might be added that the state had assigned to these bonds its full faith and credit.

Not only was the interest rate paid on the World War II bonus bonds low, but the longest maturities—both issues carried serial maturities—extended only until 1964. This latter attribute also contributed to the low cost of the borrowing. The total interest cost on these bonds amounted to only $33.9 million or less than 16 percent of the $212.5 million borrowed. Just how inexpensive this is will

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19 Commercial and Financial Chronicle CLXVII (March 22, 1948), 1307; and ibid., CLXIX (May 30, 1949), 2366.

20 Loc. cit.

21 Moody's, 1964, p. 1540.

22 Columbus Dispatch, April 23, 1964, p. 1.
become more obvious when subsequent borrowing programs are discussed. Perhaps even more important was the fact that such a retirement schedule served to replace the state's borrowing capacity in relatively rapid fashion. Certainly this is one of the most important attributes of a sound debt financing program since it makes the state better able to meet future contingencies which might require new debt creation.

Korean Conflict bonus borrowing

Because the Korean conflict bonus borrowing was similar in many respects to the World War II bonus borrowing, only a few additional comments are necessary here. The Korean conflict borrowing totaled $60 million and was accomplished with one issue sold in May, 1957, at a net interest cost of about 2.949. By the end of fiscal 1963, almost $19 million had been retired, and interest payments of about $9.4 million had been made.

The amendment authorizing the Korean conflict borrowing and bonus also was "self-executing" in that the Commissioners were authorized to sell bonds (up to the maximum debt allowed) as necessary to pay bonuses, the Commissioners administered the distribution of bonuses, and they were given the power to levy an unlimited ad valorem property tax annually to obtain funds necessary to service the debt. The

23 Commercial and Financial Chronicle, CLXXXV (May 6, 1957), 2150.

24 Ohio Treasurer's Report, 1963, pp. 69-70. These figures include bonds matured and coupons due but not presented for payment.

25 The Commissioners are currently (August, 1964) levying a twenths of a mill tax. Records of the Ohio Treasurer.
state has pledged its full faith and credit against the indebtedness and, as in the case of the World War II bonus debt, this guarantee was acknowledged in the market and the debt was assigned the highest rating available. The retirement schedule was again made reasonably short, totaling fifteen and one-half years for the longest maturities, and the last bonds are scheduled for retirement in November, 1972.

State Highway Borrowing, 1954-1963

On November 3, 1953, the Ohio electorate ratified a constitutional amendment authorizing borrowing to finance highways (rights of way, construction, and reconstruction), not to exceed $500 million in total and $125 million in any one calendar year. The amendment also provided that no borrowing could be done after March 31, 1962.

Special features of the highway borrowing program

This highway borrowing program was unique for Ohio on several counts. First, it was the largest single borrowing authorization since the debt limit was adopted in 1851. Second, it was the first authorization for debt to finance something other than veterans' bonuses. Third, it was the first authorization in which the state pledged some but not all of its credit (i.e., tax revenues). Finally, many of the details of the debt issuance and management process were greatly different and more complicated than those of the two postwar bonus borrowing programs.

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26Moody's, 1964, p. 1540.

27Ibid.

28Ohio Constitution, Article VIII, Sec. 2c.
Security for highway debt

The highway debt amendment specified that the obligations issued would be revenue bonds "secured by a pledge of moneys derived from fees, excises or license taxes, levied by the state of Ohio, relating to registration, operation, or use of vehicles on public highways, or to fuels used for propelling such vehicles. . . ."29 The significant thing about the security pledged to highway debt was not that a particular tax or group of taxes was pledged--after all, both bonus programs were to be serviced in part from specific revenues.30 Rather, what was significant and a departure from previous policy was that the state here pledged only the revenues from a specified set of taxes and there was nothing, explicit or implicit, to indicate that these taxes would be increased should the existing rates prove to be less productive than necessary to service the bonds.

This narrowing of the state's liability was reflected in the rating assigned to it by Moody's. Debt issued for both bonus programs had received Aaa ratings, but the highway bonds were given only an Aa rating and were accurately (in a legal sense at least) described as limited liability obligations.31 The sole factor accounting for the lower rating seems to be that the state had not pledged its full faith

29 Ibid.

30 In the case of the World War II debt, the state pledged $12 million annually from its general revenue fund with any additional debt service charges to be paid out of the proceeds of an unlimited ad valorem property tax. The Korean conflict debt was secured solely by an ad valorem property tax.

31 Moody's, 1964, pp. 1540, 1542.
and credit, without which the coverage of debt service charges was inadequate to justify the highest rating.\textsuperscript{32}

Cost of the highway debt

In all, $500 million was borrowed between September, 1954, and November, 1961, in fifteen installments.\textsuperscript{33} The bonds sold were in serial form with the longest maturities due in September, 1972. A recent Bureau of Public Roads study of highway bond financing concluded that the $500 million borrowing program had been managed very well and credited the use of a relatively large number of small issues, timed to coincide with construction requirements, as responsible for savings on interest costs.\textsuperscript{34} Moreover, it pointed to the "reasonably short serial maturity schedule" as also providing savings in interest costs over the life of the borrowing program.\textsuperscript{35} This same study found that total interest costs for the highway debt will equal $108.5 million or about 22 per cent of the bond principal.\textsuperscript{36} The cost of this borrowing program is low; just how low becomes even more obvious in a

\textsuperscript{32}Although it described the highway debt as high quality, Moody's rated it only Aa. \textit{Moody's Bond Survey}, XLVI (September 20, 1954), 257. According to Moody's standards Aa bonds, although of high quality, are not assigned the top (Aaa) rating "because margins of protection may not be as large . . . or fluctuation of protective elements may be of greater amplitude or there may be other elements present which make the long-term risks appear somewhat larger. . . ." \textit{Moody's}, 1964, p. vi.

\textsuperscript{33}\textit{Moody's}, 1964, p. 1540.

\textsuperscript{34}\textit{U. S. Bureau of Public Roads, \textit{op. cit.}}, p. 31.

\textsuperscript{35}\textit{Ibid.}

\textsuperscript{36}\textit{Ibid.}
later section of the same Bureau of Public Roads study where financing costs are compared to capital costs for twenty-five highway borrowing programs undertaken by various states between 1952 and 1962. Of all the programs included, Ohio's $500 million program had the lowest ratio (0.22). This is particularly significant because, in some of the programs included in the study, general obligation bonds were issued. (Normally, one would expect programs financed by fully guaranteed bonds to be cheaper than those financed by otherwise comparable limited liability bonds.) Among the general obligation issues the range extended from 0.28 to 1.05; among the limited liability issues it was 0.22 to 1.01; and among toll revenue issues it was 0.80 to 2.48. These facts justify high marks for the Ohio $500 million borrowing program.

Cost of limited liability obligations

But one might still inquire as to what, if anything, the use of limited liability bonds (instead of general obligation bonds) cost the state in interest expense, particularly since there is now available a method for estimating such differentials. The technique referred to is that developed by James Heins. Table 14 shows estimates of annual and total interest savings which would have been achieved had Ohio issued its highway debt as general obligation instead of limited

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37 Ibid., p. 42.
38 Ibid.
39 The Bureau of Public Roads study speculates that Ohio might have further reduced its borrowing costs for the highway debt had it been able to issue fully guaranteed (general obligation) bonds. Ibid., p. 31.
40 See, supra, Chapter V, p. 163.
<table>
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<th>Series</th>
<th>Date of Issue</th>
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<th>Average Maturity (Years)</th>
<th>Interest Cost of Similar General Obligation (%)</th>
<th>Added Annual Interest Payments</th>
<th>Added Payments Over Life of Issue</th>
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liability debt. Of the fifteen issues, ten would have been sold at
lower net interest costs. 41 The interest rate differential ranged from
.08 per cent to .85 per cent. The added annual interest payments
resulting from the bonds' limited liability status amounts to more than
$1.2 million and the added payments over the life of the issues amount
to almost $9.5 million. To the extent that it may be validly assumed
that Ohio would never permit these obligations to go into default, even
if the legally assigned revenues proved insufficient, 42 and given the
generally acknowledged conclusion that Ohio has a large backlog of
needed capital improvements, a premium of $9.5 million for a limited
liability feature that the state would be unlikely to exercise is by no
means a trivial amount. 43

Although the state elected to forego improving the rating on
these bonds and saving some interest expense, it did demonstrate good
judgment by pledging virtually all of its highway user taxes, excises,
and fees as security for the debt. 44 Certain of these revenues can be
used for other purposes such as highway department operation and dis-
tribution to political subdivisions, but only after "the commissioners

41 As might be expected because of the nature of statistical
estimation, estimates of interest costs for five of the issues exceeded
the actual interest rate paid.

42 Supra, Chapter V, pp. 165-166.

43 The premium was about 1.9 per cent of the $500 million
borrowed.

44 For details of the several highway user taxes, see Ohio
Revised Code, Secs. 5728.16, 5728.08, 5735.29, 5735.291, 5735.25,
5735.26, 5735.05, 5735.25, 4503.02, 4507.23, 4921.18, and 4923.11.
The sections are listed by order of priority in which the various tax
proceeds are applied to highway debt service.
certify to the Treasurer of State that the moneys in the Bond Retirement Fund\textsuperscript{45} are sufficient for such principal and interest, may the Treasurer make distribution to the Highway Department and political subdivisions of the collections then in hand or thereafter made in the current year.\textsuperscript{46}

To date the assigned revenues have covered annual debt service charges by a wide margin\textsuperscript{47} and as of the end of fiscal 1963 the state had expended $62.6 million to pay interest on the highway debt and about $185 million had been retired.\textsuperscript{48}

**Borrowing for advance highway right of way acquisition**

In 1959, the Ohio General Assembly enacted legislation which authorized the Director of Highways to purchase right of way by means of a special loan arrangement with the state retirement systems and the workmen's compensation fund.\textsuperscript{49} Under this legislation, the Highway Director can enter into loan agreements with these agencies, the

\textsuperscript{45}The fund out of which the highway debt is serviced. Created by Ohio Revised Code, Sec. 5528.02.


\textsuperscript{47}For fiscal 1963 the ratio of revenue to debt service was about 7.8 to 1. Calculated from data made available by the office of the State Treasurer and data in *Ohio Treasurer's Report*, 1963, pp. 66, 70.

\textsuperscript{48}Loc. cit. This includes bonds and coupons due but not presented for payment.

\textsuperscript{49}128 O. L. 1130 (1959), and amended in 129 O. L. 582 (1961); Ohio Revised Code, Sec. 5501.112.
agreements to extend no longer than the end of the current biennium for which highway department appropriations have been made by the General Assembly. The agreements can be renewed for periods not exceeding two years, but cannot be renewed to extend beyond five years from the date of the original agreement. The agreements give to the Highway Director the right to purchase right of way in the names of these agencies and with their funds. The Highway Director agrees to purchase these lands from the retirement systems and workmen's compensation fund for the original purchase price plus an agreed upon interest charge at such time as a highway improvement contract using the land is let (or before) or when the agreement expires, whichever date is earlier. In 1959, the Ohio Supreme Court upheld the legislation, ruling that such obligations did not constitute debts within the meaning of Article VIII, Sections 1, 2c, and 3, of the Ohio Constitution.

During the period between 1959 and April 2, 1964, the Highway Department used this device to finance right of way acquisition. Borrowing from the trust funds proved to be relatively expensive, the rate being 5.5 per cent. In 1961, new legislation was enacted to permit essentially the same technique of right of way acquisition, but in a

50 Ibid.

51 State ex rel Preston v. Ferguson, 170 OS 450, 166 NE 2d 365 (1959).

52 Records of the Ohio Department of Highways.
manner which would be less costly. The new legislation authorized the Highway Director to enter into an agreement with the Commissioners of the Sinking Fund under which the Highway Director would purchase right of way in the name of the Commissioners, the purchase price to be paid by the Commissions. Unlike the original arrangements with the trust funds where funds already in the possession of the trust funds were used, the new arrangement authorized the Commissioners to sell (either on a negotiated or public sale basis) "certificates of obligation" to obtain funds to finance right of way acquisition. The certificates are payable solely from a fund comprised of proceeds of a certificate sale and payments made by the Highway Director for interest expense and purchase of right of way from the Commissioners. Certificates expire at the end of the biennium for which they are issued, they can be renewed, and can be issued without specific limit (but subject to the limit of funds appropriated to the Highway Department for such purposes).

In March of 1964, the Highway Department obtained $25 million from the Sinking Fund Commission as a result of the first sale of certificates of obligation. The Highway Department then repaid more


54 Ohio Revised Code, Sec. 129.41.

55 Ibid., Secs. 129.41, 129.42, and 5501.115.

56 Ibid.

57 The discussion in this paragraph is based on information furnished by Cecil Emmons, Highway Department Finance Officer. Although the legislation authorizing the certificate sales was
than $9.3 million in loans to the state trust funds, liquidating all its obligations with them. The net effect of these transactions was that the Highway Department reduced the interest cost on the advance right of way acquisition loans from about 5.5 per cent to 2.171 per cent, a saving estimated to be $2 million for the remainder of the 1963-1965 biennium. It also obtained slightly more than $15 million for additional right of way purchases.

Whether this admittedly ingenious financing device will provide a permanent method of borrowing will depend on the outcome of a suit, charging the device violates Article VIII, Sections 1, 2c, and 3, of the Ohio Constitution, now pending before the Ohio Supreme Court. At this time only one observation is warranted; namely, if the device is sustained, Ohio's debt structure will be made even more complex and

passed in 1961, the first sale did not occur until March, 1964, due to delays in locating a lender and obtaining a favorable opinion from bond counsel.

In all, between 1959 and 1964, the Highway Department borrowed and repaid more than $17 million under the trust fund arrangement.

At the present time (1964) these balances are invested in United States government securities and are yielding about 3.7 per cent.

Comments made to the writer by various state officials indicate that the only reasons for using this device are the scarcity of funds in the Highway Department and the constitutional prohibition against raising funds through more conventional borrowing techniques.

The suit is an original action, filed in March, 1964, by Paul J. Lynch, a former member of the Ohio General Assembly. As of August, 1964, the Court had not decided the case. See Columbus Dispatch, April 2, 1964, p. 8B.
its management will become more costly and difficult. While such a development probably would not materially affect the state's credit rating and borrowing ability, it would seem to involve some loss of quality in its composite borrowing program.

**Capital improvements borrowing, 1956-1962**

The Ohio Constitution was amended on November 8, 1955, to permit borrowing up to $150 million for various non-highway capital improvements. The amendment limits total borrowing in any one calendar year to $30 million, requires that all borrowing be done before January 1, 1965, and requires that all debt be discharged within twenty years from date of issue.

**Security for capital improvements debt**

The state's faith and credit is pledged for the payment of the capital improvements debt. Specifically pledged are "all excise

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62 Among the more obvious reasons for greater cost and debt management problems are the fees paid to bond counsel, the greater number of times the state must go into the market for funds, and the need to service additional debt issues.

63 Ohio Constitution, Article VIII, Sec. 2e. Although the majority of the money borrowed under this amendment has been used for various state, non-highway capital improvements, about $16.8 million of it had been loaned to local school districts for classroom construction. Infra, Appendix, Table 20.

64 Just why "faith and credit" as opposed to "full faith and credit" is used seems to be a mystery. The difference was noted in Moody's Bond Survey, IXL (November 25, 1957), 189, but in ibid., IXL (December 2, 1957), 177, it was reported that "bond counsel has indicated that they consider the issue to represent the full faith and credit obligations of the State, payable from taxes unlimited as to
taxes levied by the state of Ohio (except ad valorem taxes on real and personal property, income taxes and fees, excises or license taxes relating to registration, operation, or use of vehicles on public highways, or to fuel used for propelling such vehicles), which excises and taxes so pledged are required by the Constitution to be levied and collected in amount sufficient to meet the principal and interest requirements of such bonds and other obligations so long as any of them are outstanding, which excises and taxes are unlimited as to amount or rate."

In addition to the general pledge of the state's faith and credit, the amendment further provided that, beginning at the date of the first authorization to borrow "and ending on the last day of December, 1964, and continuing during such time as such bonds or other obligations are outstanding, and moneys in the capital improvements bond retirement fund [from which principal and interest are paid] are insufficient to pay all interest, principal and charges for the issuance and retirement of such bonds or other obligations, there shall be levied, for such purposes, an excise tax" on cigarette sales at the rate of one-cent per twenty cigarettes. The revenues from this tax rate or amount. . . ." The same conclusion seemed to be reached (but only implicitly) in a 1957 Ohio Supreme Court case which involved the accuracy of the condensed version of the amendment which appeared on the ballot. State ex rel Commissioners of the Sinking Fund v. Brown, 167 OS 71, 146 NE 2d 287 (1957).


66 Article VIII, Sec. 2e.
shall be paid into the capital improvements bond retirement fund. The amendment appropriates from the retirement fund sufficient funds to service the debt and pay incidental expenses without further appropriation.

Legislation to implement the borrowing program

Following the requirements outlined in the preceding paragraph, the legislature enacted an additional cigarette tax at the rate of one-half cent per ten (or less) cigarettes, the revenues from which were assigned to the bond retirement fund. In the contingent event that these taxes do not yield adequate revenue to service the debt, provision was made for the transfer as required "from the undistributed revenues derived from cigarette excise taxes levied by Sections 5743.02 and 5743.32, Revised Code of Ohio, before any other distribution is made, then from undistributed revenues derived from the proceeds of the State retail sales tax levied by Section 5739.02, Revised Code of Ohio, proportionately from all undistributed revenue derived from all other State excises and taxes, except as noted [in the amendment]." It appears that, in practical effect, if not in law, the state gave an unlimited pledge for the debt issued under the amendment and then established a complicated priority sequence under which revenues from the several assigned taxes would be used to service the debt.

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67126 O. L. 1234 (1955); Ohio Revised Code, Secs. 5743.021 and 5743.321.

opinion of the writer, this complex legislation provides no additional security for the bondholders, but it does create a more complex state fund structure. 69

Short term borrowing and short maturity schedule

Like the highway borrowing program, the capital improvements borrowing program has had some unique features. Of these, the most significant one was the use of short-term borrowing. This had not been done in connection with either bonus borrowing program or with the highway program. In the original legislation enacted pursuant to the amendment, the Sinking Fund Commission was authorized to sell bonds and notes in amounts authorized by the General Assembly. 70 The notes were to have a maximum maturity of two years from the date of issue. The legislation further provided that "all notes shall be sold at private sale to the treasurer of the State of Ohio . . . as investments for state funds. . . ." 71 Finally, it stipulated that the notes would bear interest on their face value "at the highest rate of interest paid on direct obligations of the United States purchased by the treasurer . . . during the calendar year next preceding the date of issue." 72

69 The arrangements have become even more complicated as a result of the latest improvements debt amendment (Ohio Constitution, Article VIII, Sec. 2f). Also see infra, pp. 195-198.

70 126 O. L. 1227 (1955); Ohio Revised Code, Sec. 129.30.

71 Ibid.

72 Ibid.
The first capital improvements borrowing took place with a $25 million two-year note issued on December 28, 1956. This was followed by $1 million and $4 million notes issued in 1957, which matured in ninety-seven days and two years, respectively. Following this, four bond issues totaling $100 million were sold, the first dated December 15, 1957, and the last dated July 15, 1960. No additional borrowing, either with notes or bonds occurred until August, 1961. At this time, a substantial surplus in excess of debt service charges due had built up in the capital improvements bond retirement fund and, in order to reduce these surpluses, $5 million in one-day notes were sold. This technique was used twice more in 1961 when $9 million more one-day notes were issued. The final borrowing under this amendment took place in December, 1961, when $6 million in two-year notes were issued. This issue exhausted the borrowing authority granted in the Ohio Constitution, Article VIII, Section 2e.

In retrospect, the manner in which the capital improvements borrowing program was planned and administered merits considerable praise. The maturities on the debt issued were kept reasonably short, particularly as a result of borrowing $50 million or one-third of the total authorization with notes expiring in two years or less. But even the $100 million in bonds issued carried an average maturity shorter than the law permitted. This reluctance on the part of those

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73This paragraph is based on data in State of Ohio, Ohio Legislative Service Commission, Capital Improvements Bond Issue: Schedules and Legislation. Information Bulletin, 1963-5, December, 1963, p. 3.

officials responsible for the borrowing program to take all the law allows is admirable and the kind of action that reduces the cost and complexity of large programs of loan financing.

Another relevant attribute of the capital improvements borrowing program is the nature of the legislation which provided revenues to service the debt. The additional one-cent cigarette tax assigned to the capital improvements bond retirement fund as the first source of revenues to service the debt was so productive that surpluses frequently remained in the retirement fund. Since these surpluses were available only for paying debt service, there was incentive to issue short-term notes which would at the time of their maturity serve to draw down the earmarked cigarette tax proceeds. In this sense then, the tax legislation (and the productivity of the tax itself) was useful in bringing about a shorter debt maturity and the attendant interest savings.

The advantage to the state in pledging its full faith and credit is reflected in this program by the Aaa rating assigned to the capital improvements bonds by Moody's. Net interest rates on the four issues ranged from 2.65 per cent to 3.10 per cent. As of June 30, 1963, $11,952,441 had been paid out for interest on these obligations and $68,375,000 of them had been retired.

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75 Supra, n. 67.
76 Ohio Revised Code, Sec. 5528.02.
77 State of Ohio, Ohio Legislative Service Commission, Capital Improvements . . . , p. 4.
78 Ohio Treasurer's Report, 1963, pp. 67, 70. These figures include bonds matured and coupons due but not presented for payment.
Capital improvements borrowing, 1964

Although the terminal date for most of the data included in this study is June 30, 1963, it is appropriate to mention briefly the two most recent constitutional amendments authorizing borrowing. The first, authorizing up to $250 million borrowing to finance various non-highway capital improvements, is discussed in this section; the second, authorizing up to $500 million additional debt to finance highway construction is discussed in the following section.

The second capital improvements debt amendment was ratified by the electorate in November, 1963. It authorized borrowing up to $250 million (at a rate of not more than $100 million in any one calendar year), all borrowing to be completed before January 1, 1973, with all obligations to mature within thirty years of their date of issue.

Security for the debt

The "faith and credit" of the state are pledged for obligations incurred under this authorization. In fact the state has pledged exactly the same security for these obligations that was given for the capital improvements borrowing authorized in the 1955 amendment—"all excises and taxes of the state except ad valorem taxes on real and personal property, income taxes, and fees, excises or license taxes relating to registration, operation, or use of vehicles on public highways or to fuels used for propelling such vehicles."80

79 Ohio Constitution, Article VIII, Sec. 2f.
80 Ibid.
But the amendment further specifies that there shall be levied an excise tax on the sale, use, consumption, or storage of cigarettes at the rate of one-half cent per ten (or less) cigarettes. This tax is to be in effect during the period January 1, 1965, to December 31, 1972, and thereafter as long as any obligations issued under this authorization are outstanding and funds credited to the bond retirement fund (created by the amendment) are insufficient to pay all interest, principal, and other costs relating to the obligations. The amendment (Article VIII, Section 2f) creates a bond retirement fund out of which debt service charges are to be paid and appropriates to this fund the proceeds of this cigarette tax. But, because Article VIII, Section 2e, Ohio Constitution effectively establishes a prior lien on cigarette tax revenues, Article VIII, Section 2f, requires that there shall be transferred from the retirement fund created by the 1963 amendment to the retirement fund created by the 1955 amendment, such amounts of money as are necessary (together with balances in the 1955 fund) to pay interest, principal, and charges due in a given year.

Legislation to implement the borrowing program

Pursuant to these somewhat complex requirements, the General Assembly has enacted legislation which 1) levies a one-cent tax per ten or less cigarettes, the proceeds of which are assigned to the retirement fund created by the 1963 amendment; and 2) makes collection of the

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8130 O. L. H971 (1963); Ohio Revised Code, Secs. 5743.023 and 5743.322.
one-cent cigarette tax formerly assigned to the retirement fund created by the 1955 amendment conditional on a determination by the Director of Finance that adequate moneys are not available to service the debt incurred under the 1955 amendment. Obviously, such arrangements are complicated (they have already led to one lawsuit challenging the constitutionality of the conditional levy of taxes just discussed), and they indicate some of the difficulties encountered when particular taxes are assigned to the servicing of a debt issue. In this instance, holders of obligations issued under the 1955 amendment were given a prior lien on all cigarette tax revenues (and all other revenues except those specifically excluded); then the state turned around and gave holders of obligations issued under the 1963 amendment a junior lien on these same taxes. The reasons for such arrangements are not difficult to understand, but their merits are open to question. At best, they give rise to "legitimate" lawsuits by taxpayers, bondholders and other interested parties which delay the state's capital improvements program and defeat the purpose of capital budgeting. In Chapter VII, an

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82 130 O. L. H971 (1963); Ohio Revised Code, Secs. 5743.021 and 5743.321.

83 State ex rel. Lynch v. Rhodes, 176 O.S. 251, 199 N. E. 2d 393 (1964). This suit challenged the legality of Ohio Revised Code, Secs. 5743.021 and 5743.321 as amended by H. B. 971 (1963) on the grounds that: 1) legislative power was unlawfully delegated; 2) there was an unlawful diversion of revenues pledged under Ohio Constitution, Article VIII, Sec. 2e; and 3) the mandatory tax collection requirements under the section just cited were contravened. The Court ruled that Lynch was not a proper party to bring such a suit; thus the issues raised have not been settled.

84 The present Administration is on record as opposing new or increased taxes.
alternative arrangement, which would help eliminate difficulties such as these, is offered for consideration.

The use of anticipatory notes

One other facet of the second (1963) capital improvements borrowing program should be noted. Unlike any of the previous borrowing programs, the legislation enacted to implement the 1963 amendment specifically permits the Sinking Fund Commission to issue anticipatory notes which can either be retired at maturity with either the proceeds of new notes or the proceeds of a bond issue. Although the exact meaning of this legislation is somewhat uncertain, the Commissioners of the Sinking Fund are proceeding on the assumption that anticipatory notes later retired with the proceeds of long-term bond issues do not deplete the total $250 million borrowing authority.

An example of how such borrowing might take place follows: $50 million in one-year notes could be issued annually for five years, each issue being retired out of the proceeds of a $50 million bond issue dated one year later than the respective note issue. The net result of this would be $250 million borrowed in five issues of one-year notes and $250 borrowed in five issues of bonds with maturities of up to thirty years. Six years after the first note issue, all notes would...

85 130 O. L. H 970 (1963); Ohio Revised Code, Sec. 129.50.

86 This information was furnished by William E. Bright, Comptroller of the Ohio State Treasury.

On June 30, 1964, the state incurred its first indebtedness under the 1963 amendment when it sold $25 million in anticipatory notes maturing June 30, 1965. Net interest cost was 2.29 per cent.
be retired and $250 million in bonded indebtedness, less any principal repaid, would be outstanding.

Two considerations account for this new (for Ohio at least) approach to borrowing. First, the General Assembly has made clear its desire that debt issued under the 1963 amendment be serviced entirely from the one-half cent tax per ten cigarettes which is assigned to the retirement fund by the 1963 amendment.87 But revenues from this tax are to be used first to retire debt issued under the 1955 amendment and, if debt service charges for debt issued under the 1963 program became very large (as they would if the state immediately issued substantial amounts of bonds), the cigarette tax revenues would be insufficient to service fully all the debt.88 By issuing one-year notes all debt service charges on the new obligations are postponed for one year, and by retiring these notes with the proceeds of a bond issue, initial debt service payments can be postponed for at least an additional six months.

A second aspect of this technique involves potential savings in interest expenses. Short-term notes typically carry lower interest rates than do long-term bonds. Insofar as this relationship exists,


the state will realize some interest savings if it makes use of notes. On this basis, one might ask why the state should issue any bonds; it could continue to redeem maturing notes with the proceeds of new notes. A number of factors make such an approach suspect, although they do not necessarily impair its utility. First, by borrowing at short-term, the state is laying itself open to the chance that interest rates, both long and short-term, will rise. Should such developments materialize, the state might at some time in the future find itself paying as much or more for its short-term borrowing than it would have paid on bonds issued before the increase in interest rates. Second, assuming the state does not get caught in a situation of generally rising interest rates, it remains to be seen that the saving on interest costs will be adequate to justify the costs of (particularly those of bond counsel) preparing and marketing greater numbers of debt issues. Finally, such a program undoubtedly would require more administration than the conventional one and necessitate an expansion in the debt management staff. In short, despite the potential interest savings such a program might yield its adoption should take place (if at all) only after careful evaluation has been made of possible drawbacks. Such an evaluation is beyond the scope of the present study.

89An estimate of the saving can be obtained by comparing the 2.29 net interest cost Ohio paid on its notes with a sale of fully guaranteed Aaa bonds by the State of Maryland in June, 1964. The issue amounted to about $37 million with maturities up to fifteen years and sold at a net interest cost of 2.925 or about 0.635 per cent higher than Ohio's notes. Moody's Bond Survey, LVI (June 1, 1964), 705; ibid., (June 8, 1964), 693; and Commercial and Financial Chronicle, CLXXXIX (June 8, 1964), 57.

90According to a confidential statement from one state official, this is precisely what is being suggested by certain state policymakers.
Highway borrowing, 1964

The Ohio Constitution again was amended in May, 1964, to permit borrowing up to $500 million (there is no limit as to the rate at which such borrowing shall take place) for construction and reconstruction of state highways and their urban extensions and for right of way acquisition. All debt must be retired "not later than the year 1989." Although the 1953 highway borrowing amendment permitted only the issuance of bonds, the 1964 one permits use of not only bonds, but other obligations as well.

A change in security provisions

An important policy change may be reflected in the language of the 1964 amendment. In this instance the state has pledged its "faith and credit" for payment of the principal and interest. Specifically, it pledges all available highway user taxes after adequate provision has been made for debt issued under the 1953 amendment. But the "faith and credit" clause suggests that the state is going on record as being willing to raise taxes or levy additional ones if the existing user taxes prove insufficient to service fully debt issued under this amendment. In contrast with this pledge, it will be recalled that the 1953 amendment pledged only existing highway user taxes, called the bonds to be issued "revenue" bonds, and gave no indication of any willingness to accept more than limited liability for such debt. Because there has

91 Ohio Constitution, Article VIII, Sec. 2g.

92 Although the "faith and credit" clause suggests more than the limited liability given to the first highway debt, the statement...
been no judicial definition of the meaning of the "faith and credit"
clause contained in the 1964 amendment, it is not possible to determine
here whether a policy change has in fact occurred.

As of August, 1964, no borrowing had taken place under the
1964 highway debt amendment.

### 93 Nonguaranteed Debt of the State of Ohio

**State Bridge Commission of Ohio**

Of all the agencies, commissions, and universities of the state
of Ohio authorized to issue nonguaranteed debt, the State Bridge Com­
mission has the longest history of debt creation. It first incurred
debt in 1935. Since then it has borrowed relatively small amounts on
several occasions exclusively for the purpose of acquiring bridges, the
tolls from which have been used to service the indebtedness.

**Portsmouth-Fullerton Bridge**

Although the Bridge Commission had debt in the amount of
$1,540,000 outstanding at the beginning of 1947,94 its first borrowing

 accompany the $25 million Improvement Note issue has a comment
regarding the 1964 highway debt amendment which suggests that new
highway debt would be secured exactly as was the highway debt issued
under the 1953 amendment. Cf., *Official Statement, 1964-A Improvement
Notes*, p. 11.

For a discussion of some legal developments which have
affected nonguaranteed borrowing in Ohio see *supra*, Chapter V,

94 *Supra*, Chapter V, Table 10, p. 156. This was the balance
outstanding of debt originally incurred between 1936 and 1938. State
of Ohio, State Bridge Commission, *Annual Report for the Year Ending
December 31, 1963*, (pages not numbered). Hereafter cited as *Bridge
Commission Annual Report (year).*
in the postwar period did not occur until August, 1957. At this time it issued $3.5 million in revenue bonds to purchase the Portsmouth-Fullerton Bridge at Portsmouth, Ohio. The principal and interest on the bonds are payable solely out of bridge tolls derived from transit over the bridge.

The bonds are twenty-one year term bonds due in 1978 on which the Bridge Commission is paying a net interest cost of approximately 4.70 per cent. The extra expense of nonguaranteed borrowing is quite evident here, for at the time this issue was marketed, Ohio received a bid for a series of its highway bonds of 3.68 per cent, or about 1 per cent less than the Bridge Commission paid.

Operation of the bridge has been successful, and as of December 31, 1963, $697,000 of the Portsmouth-Fullerton Bridge debt had been retired, leaving a balance of $2,803,000 in debt outstanding.

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95 Ibid.
97 Estimated from data in Moody's, 1964, p. 1545.
98 Official Statement, Series O Bonds, p. 7. In fact, the Commissioners of the Sinking Fund rejected this bid and reoffered and sold them (Series 6) one month later at 3.32 per cent. The Bridge Commission bonds were unrated by Moody's. This probably contributed to the higher cost. According to J. William Shultz, Secretary-Treasurer and General Manager of the Bridge Commission, the bond sale was probably also hurt by the difficulty the West Virginia Turnpike was beginning to encounter. There might seem to be no relationship between these two, but as Roland I. Robinson has pointed out, investors in state government securities are a conservative and sometimes irrational breed. Postwar Market for State and Local Government Securities (Princeton: Princeton University Press, 1960), pp. 11, 14.
The $697,000 in debt retired was $257,000 more than was contemplated at the time the sinking fund provisions were set up in 1957.\textsuperscript{100}

Ironton-Russell Bridge

The only other borrowing done by the Bridge Commission in the postwar period took place in June, 1963. At this time, $1,550,000 of bridge revenue bonds were sold to finance the purchase of the Ironton-Russell Bridge at Ironton, Ohio.\textsuperscript{101} Like the Portsmouth-Fullerton bonds, these were made payable (both interest and principal) solely from bridge tolls derived from transit over the bridge.

Ironton-Russell revenue bonds are term bonds due June 15, 1989. The net interest cost of about 3.85 per cent paid on these bonds is substantially below the 4.70 per cent rate paid on the 1957 bonds and reflects particularly a generally better market for such securities in 1963.\textsuperscript{102} The lower cost may also reflect a somewhat broader demand for the 1963 series, brought about, in part, by the fact that Moody's rated these bonds (Ba) whereas it did not rate the 1957 issue.\textsuperscript{103}

\begin{itemize}
  \item \textsuperscript{100}Trust Indenture . . . , p. 13.
  \item \textsuperscript{101}Moody's, 1964, p. 1545. Unless otherwise noted, the remainder of the discussion of these bonds is based on data in Moody's, 1964, pp. 1544-1545.
  \item \textsuperscript{102}For example, Baa bond yields in June, 1963 were down to 3.62 per cent from 4.43 per cent in August, 1957. \textit{Ibid.}, pp. a21-a22.
  \item \textsuperscript{103}But it is not clear that a Ba rating is better than no rating. Among other things, Moody's considers Ba bonds to have a future which "cannot be considered as well assured." \textit{Ibid.}, p. vi. According to Mr. Shultz, the Bridge Commission was not happy with the Ba rating and told Moody's so—but to no avail.
\end{itemize}
None of the Ironton-Russell bonds has yet been retired. Pursuant to the Trust Indenture securing these obligations the Bridge Commission will establish a sinking fund for the redemption of bonds and the first redemptions can take place not earlier than June 15, 1966.  

The Ohio Turnpike

The Ohio Turnpike Commission was established in 1949 by the General Assembly for the purpose of building one or more toll turnpikes in Ohio. Costs involved in such construction were to be financed initially out of the proceeds of non-guaranteed revenue bonds to be secured by the tolls received from the turnpike operations. At such time as all bonds were retired, the turnpike would become part of the state's highway system and tolls would be cancelled.

Sale of turnpike bonds

In June, 1952, the Ohio Turnpike Commission sold $326 million of turnpike revenue bonds to finance its first project, a 241 mile road crossing the northern section of the state. Although larger toll road bond issues have since been sold, at the time this was the largest such issue to be sold at one time. Construction began in

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104 Official Statement, Relating to $1,550,000 State of Ohio Bridge Revenue Bonds, Ironton-Russell Bridge, pp. 3-5.

105 Ohio Revised Code, Secs. 5537.01-5537.23.


108 Moody's Bond Survey, XLIV (June 9, 1952), 423-424.
the fall of 1952, the first section of turnpike was opened to traffic in December, 1954, and the entire turnpike was opened on October 1, 1955.109

Considering such factors as the record size of the Ohio Turnpike bond issue sold in 1952, the lack of experience of the state in building and operating such a project, and the rising costs of and possible shortages of materials in 1952, the issue was well-received by the bond market. Although the issue was not rated initially by Moody's because they do not, as a matter of policy,110 rate such bonds when the project has no financial history, the issue was considered to be attractive to those with a degree of speculative bent.111 As Moody's Bond Survey observed at the time the sale was reported, "it had attracted widespread interest [despite its size] of institutional and individual investors and those speculatively minded and was an immediate sellout."112

This popularity was reflected in the net interest cost of 3.31 per cent paid on the Ohio Turnpike bonds,113 a rate which is well in line with the average rate paid on similar toll revenue bonds issued during the early 1950's.114

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110It was subsequently rated Baa.
111Moody's Bond Survey, XLIV (May 26, 1952), 447.
112Ibid., XLIV (June 9, 1952), pp. 423-424.
113Calculated from data in Moody's, 1964, pp. 1544-1545.
Interest premium on turnpike borrowing

In some respects, however, the cost of the turnpike borrowing must be termed quite expensive. It has been estimated that the interest charges on these obligations will total more than $245 million, or approximately 75 per cent of the principal when the last of the bonds are retired in 1992.\[115\] In contrast is the $108.5 million total interest cost on the $500 million state highway borrowing authorized by the 1953 amendment. This represents only about 22 per cent of the principal.\[116\]

At least two reasons account for the greater interest expenses connected with the turnpike debt. First is its nonguaranteed status. Using Heins' formula for estimating the cost of comparable bonds carrying the state's guarantee, an interest cost of 2.945 per cent is obtained. This is more than 0.4 per cent less than is paid on the turnpike bonds. Based on the Turnpike Commission's debt retirement schedule, this lower rate could result in a total saving of more than $27 million over the life of the Turnpike bonds.\[117\] Second is the long


\[117\] Derived as follows: estimated (actual) total interest cost - $245,246,000 (*Ibid.*); maximum maturity of bonds - 40 years; net interest cost (actual) - 3.31 per cent; and net interest cost (theoretical) - 2.945 per cent. Therefore:

\[
\frac{245,246,000}{40} = 6,131,150 \text{ average annual interest cost;}
\]

\[
0.0331x = 6,131,150 \text{ and } x = 185,231,118 \text{ where } x = \text{ average debt outstanding;}
\]

\[
(185,231,118)(0.02945) = 5,455,056 \text{ average annual interest cost (theoretical);}
\]
maturities on the turnpike bonds. Although the Turnpike Commission has begun to purchase a portion of its bonds on the open market with moneys in its sinking fund, reducing the average maturity of total turnpike debt, its original estimates as to when all the debt would be retired have proved to be overly optimistic and even these were based on a retirement schedule which exceeded that for Ohio's limited liability highway bonds.\(^{118}\) Under the circumstances, the longer maturities on the turnpike bonds are justifiable; the bonds are supported entirely out of toll receipts which may not flow in fast enough to permit nearly as short a retirement schedule as was possible for the highway bonds.

But the annual net revenues have been exceeding annual interest charges by progressively larger amounts, and the Ohio Turnpike is proving to be a well-planned and managed project.\(^{119}\) All indications are that it will yield sufficient revenues to service turnpike debt and probably retire all outstanding debt long before 1992.

\[
(5,373,880)(40) = \$218,202,240 \text{ total interest cost,} \\
1952-1992 \text{ (theoretical);} \\
\$245,248,000 - 218,202,240 = \underline{\$27,052,957} \text{ total savings.}
\]

\(^{118}\) Original estimates called for retirement to begin in 1957, but in fact retirement did not get underway until 1961. Bureau of Public Roads, ibid. When the bonds were sold it was also estimated that they could be retired within seventeen years after completion of construction. Moody's Bond Survey, XLIV (May 26, 1952), 447. But this was only an estimate of what might be possible, and the minimum annual requirements for debt redemption established in 1952 contemplated a retirement schedule extending until 1992. Moody's, 1964, p. 1545. As of December 31, 1963, the rate of retirement of turnpike bonds was nearly $6 million ahead of the minimum annual requirement schedule. Ohio Turnpike Annual Report, 1963, p. 5.

Based on the preceding comments, the only major criticism of the turnpike financing involves the use of revenue bonds. Without debating the merits of debt financing for such a project, the use of the revenue bond device may be questioned since it is, almost certainly, a more costly method than either general obligation or limited liability bond financing.\textsuperscript{120} Even though the state adopts a policy of building toll highways, there is no reason that derives directly from that policy decision to preclude the initial financing from the proceeds of guaranteed or limited liability bonds.\textsuperscript{121} Several states (e.g., New Hampshire, New Jersey, New York, and Connecticut) have adopted such a policy and have secured savings in financing costs.\textsuperscript{122}

\textsuperscript{120}This point is argued persuasively in Bureau of Public Roads, \textit{op. cit.}, pp. 20, 44. It is also conceded by Charles L. Dearing, a proponent of toll roads and toll revenue bonds, in "Turnpike Authorities in the United States," \textit{Law and Contemporary Problems}, XXVI (August, 1961), 750.

It is interesting to note that Ohio seemed to concede that the revenue bond device for financing highways was too expensive when, in 1956, the Chairman of the Ohio Turnpike Commission, stated that "a federal highway [Interstate] program . . . will accomplish the same transportation objectives as the toll road system [originally envisioned in Ohio] . . . without the almost crushing burden of interest and financing charges which a system of highways now constructed from the proceeds of revenue bonds would entail." (Emphasis added). Quoted in \textit{Ohio Turnpike Annual Report, 1956}, p. 38. This statement came after the Turnpike Commission had been informed, earlier in 1956, that the sale of revenue bonds to finance a second project was not then feasible. \textit{Ibid.}

\textsuperscript{121}There is, however, the penalty that under the Interstate highway program toll roads are not eligible for federal aid (23 U.S.C. 101, 122). This makes the toll road device less attractive than formerly. But, since 1960, there is evidence of new interest on the part of some states (e.g., Delaware, Florida, Kentucky, Maryland, Massachusetts, and Oklahoma) in toll roads. Bureau of Public Roads, \textit{op. cit.}, p. 35.

\textsuperscript{122}\textit{Ibid.}, p. 45.
State university borrowing, 1947-1963

In 1947, debt owed by Ohio's state universities totaled slightly more than $1 million. Since then, however, university debt has shown a steady and sometimes steep upward trend. At the end of 1963, it amounted to about $88 million. Although total university debt is still much smaller than outstanding turnpike debt, present indications are that the former will sustain its upward trend—perhaps at an increased rate—while the latter will display a steady downward trend until all of it is retired. Given the college enrollment projections which suggest that there may be no letup for the state's schools in furnishing the facilities which are usually financed with revenue bonds (e.g., dormitories, dining facilities, and student centers), and given Ohio's reluctance to finance such facilities out of current revenues or from the proceeds of guaranteed borrowing, it is not implausible to assume that in only a few years university debt may displace turnpike debt as the largest nonguaranteed debt outstanding in Ohio.

Special features of university borrowing

State university borrowing in Ohio is characterized by a number of factors not common to any of the other nonguaranteed borrowing programs of the state. First, such borrowing programs are handled by six separate agencies. Within the limits of the relevant statutes,

123See supra, Chapter V, Table 10, p. 156.
124See supra, Chapter II, p. 41, n. 18.
125For a summary of the Ohio statutes under which universities can borrow, see supra, Chapter V, Table 11, pp. 158-159.
each of the six state universities or colleges has exclusive control over its borrowing program.\textsuperscript{126} Second, in marketing their obligations the state universities tap not only the conventional sources of funds (i.e., the so-called municipals market), but also government agencies both at the state and federal level. Finally, the universities have become such frequent borrowers that their debt structures become extremely complex. The effect of these circumstances is that university debt management becomes a far more complicated proposition than is the management of any other nonguaranteed borrowing program.

State university borrowing from state of Ohio retirement systems

Between 1947 and 1956, virtually all borrowing done by Ohio's state universities was in the form of bond issues sold to the state's teachers and employees retirement systems.\textsuperscript{127} These transactions were negotiated affairs and the universities had little direct involvement with investment bankers or the open, municipal market. Two principal reasons account for the universities dependence on the state trust funds. First, the general pattern of interest yields earned by the retirement systems during this period\textsuperscript{128} was low enough that interest

\textsuperscript{126}Apparently the newly created Board of Regents (Ohio Revised Code, Secs. 3333.01-3333.99) has no legal control over university debt policy.

\textsuperscript{127}This information was obtained from the records of the State Teachers Retirement System of Ohio. Hereafter cited as STRS.

rates which the universities would find attractive were also attractive to the retirement systems.\textsuperscript{129} Thus there was some common (and economically sound) ground for university (borrower) – retirement fund (lender) arrangements.

A second reason for the universities' reliance on the retirement funds involved the constitutional prohibition against state debt. Bond counsel apparently were unwilling to give a favorable opinion on nonguaranteed debt issues of universities, without which such securities are practically unmarketable, except in special "arranged" transactions. The basic problem derived from the Ohio Supreme Court's decision in the first Public Institutional Building Authority case.\textsuperscript{130} In the syllabus of its decision the Court held that "where additions or improvements are made to property owned by the state, and the whole or a part of the revenue arising from the use of the combined existing property and such additions or improvements is pledged by the state or its authorized board or agency as the sole and exclusive source of payment of the construction cost of such additions or improvements, an indebtedness is

\begin{itemize}
\item \textsuperscript{129}This should be qualified slightly since at the time much of the university borrowing from the retirement systems was taking place, the retirement systems were somewhat limited in what they legally could invest their funds. See \textit{ibid.}, p. 31, for a summary of changes in the statutory investment authority of the retirement systems.
\item \textsuperscript{130}\textit{State ex rel Public Institutional Building Authority v. Griffith}, 135 O.S. 604, 22 N.E. 2d 200 (1940). But had there been no question about the legality of university debt, it is still doubtful that the schools would have become frequent or heavy borrowers in the open market. University revenue bonds were not initially popular with investors and the universities undoubtedly would have had to pay unacceptably high interest rates. See, \textit{infra}, pp. 219-222.
\end{itemize}
incurred by the state within the contemplation of the state constitutional debt limitation.\textsuperscript{131} This decision seemed to suggest that revenue bonds secured by the revenues from a dormitory constructed on state owned property or by the revenues from state owned dormitories already in place constituted debt of the state.\textsuperscript{132} If this were the situation the bonds would be invalid unless authorized by constitutional amendment. Apparently this was the interpretation given to the decision by bond counsel.

In a 1952 case\textsuperscript{133} upholding the legality of City of Columbus off-street parking revenue bonds secured in part by revenues from on-street parking meters, the Court distinguished the Public Institutional Building Authority decision in such a way that bond counsel could then approve certain nonguaranteed university bonds, both where they are payable from the revenues of the dormitory constructed with the bond proceeds and where they are payable from the revenues of both new and existing dormitories. The first instance of a university bond issue being approved by bond counsel seems to have occurred in 1954 in connection with bonds issued by Bowling Green State University.\textsuperscript{134}

\begin{itemize}
  \item \textsuperscript{131}Ibid., pp. 604-605.
  \item \textsuperscript{132}Presumably, if a state university had used part of the proceeds from a nonguaranteed debt issue to purchase land upon which a dormitory was erected, this would be consistent with the Public Institutional Building Authority case. This is, however, merely conjecture since no relevant decisions have been found.
  \item \textsuperscript{133}State ex rel Gordon v. Rhodes, 158 O.S. 129, 107 N.E. 2d 206 (1952).
  \item \textsuperscript{134}Ohio Municipal Advisory Council, Report No. 4866, June 14, 1954. This report contains a reproduction of a letter to the Council from Squire, Sanders and Dempsey, a leading bond counsel in Ohio. It
Diminished use of the retirement systems

The receipt of favorable bond counsel opinions in 1954 did not mark any dramatic shift in the universities' bond marketing policies. Even though it was about this point when the now well-publicized needs for additional student housing occurred and university indebtedness began increasing accordingly, only one or two of the state's universities began making appreciable use of the public or open investment market. A major reason for this was that the portfolio development policies of the state retirement systems remained such that there was still room for substantial amounts of state university debt. Indeed, it was during this period (1954-1959) that the retirement systems became substantial holders of university bonded indebtedness.\(^{135}\) This pattern continued until the end of the decade. After this, the retirement systems adopted a policy of reducing their position in university revenue bonds. The retirement systems have continued this policy through 1964.\(^{136}\)

\(^{135}\)For example, the holdings of the STRS (the largest purchaser of university bonds among the three retirement systems) increased from $4.2 million at the end of August, 1954, to $13.6 million at the end of August, 1955. Thereafter its holdings increased to a maximum of $25.3 million on August 31, 1959. Annual Report of the STRS, selected years.

\(^{136}\)However, they continue to purchase on occasion, as in 1962 when STRS purchased $950,000 in 5 per cent student union revenue bonds of Central State College. This was an extremely high yield and presumably reflects the limited marketability of this school's bonds. Of the is not possible to determine positively from the report whether the 1954 Bowling Green bonds were the first of their type to be approved in Ohio, but based on the letter plus information derived from the records of the STRS, this is probably true. Moreover, a 1953 letter from the president of one of the state universities to the STRS indicated that university bonds had not yet been approved.
Housing and Home Finance
Agency lending

In 1950, the federal government inaugurated a program of loans at low interest rates to facilitate the construction of college housing facilities. The purpose of the program is to supplement, not sup­plant, private participation, both by the borrower and by private lenders, in the financing of housing projects. Although there is some evidence that the program has included a subsidy element for univer­sities, and that the private investment market believes it is being competed with less than fairly, the program has facilitated university borrowing both from the federal government and in the municipal market.

Although the HHFA lending program began dispensing funds by 1952, it remained a comparatively small program until about 1956. Prior to 1956, HHFA loans had never amounted to as much as $10 million in a single calendar year, but after that time the volume increased rapidly. It was about this time that Ohio state colleges and univer­sities began making use of the HHFA program.

six state schools, only Central State has sold no bonds publicly. Records of STRS and Moody's, 1964, pp. 1546-1548.


138Ibid., Vol. I, p. 172. Also see Heins, op. cit., p. 52, who suggests that federal loans made to the states amount to a subsidy because the interest rate on such loans is usually well below the market rate.

139This delay in applying for a loan from HHFA can be accounted
University refunding

During the period when Ohio universities began negotiations with the HHFA, a problem arose in connection with the informal indentures which secured outstanding debt held by the retirement systems. The wording of these indentures was ambiguous and it was doubtful that the universities could pledge the earnings of dormitories to be constructed with HHFA loan proceeds as security for the new debt. At least bond counsel could not state unequivocally that existing bonds held by the retirement systems did not have a prior lien on the earnings of new dormitories. Under these circumstances loans from the HHFA (or from public lenders) were not possible.

If existing obligations did hold a prior lien on the earnings of future dormitories—and since the universities needed funds (which the retirement systems could not supply at rates satisfactory to the universities) for additional dormitory construction—there was no choice except to refund existing debt with new obligations secured by an open-end indenture. Initiated in 1957 with a public sale of $6 million in bonds by the Ohio State University, the universities began refunding operations. In 1958, four of the remaining five state

for by two facts: 1) the legality of university debt had to be established (supra, n. 134), and 2) the retirement systems were able to supply most of the funds needed at acceptable rates.

140Records of STRS.

141However, only $1,335,000 of the total was used to retire outstanding debt. The balance was used for additional dormitory construction. Except where noted, details on Ohio State University finances are based on information furnished by Ernest W. Leggett, Assistant Treasurer of The Ohio State University.
schools also refunded, but each merely exchanged new bonds (issued under an open-end indenture) for the old bonds held by the retirement systems—at a cost of an additional ½ per cent above the existing interest rates.

Throughout the period (1956-1959) when the nature of the security pledged in the original bond indenture was being discussed, the retirement systems had taken the position that they were not entitled to a prior lien on future dormitories' earnings, but they were unable to convince bond counsel of this. One school (Ohio University), however, agreed with the retirement systems and refused to refund. Instead, it filed a friendly suit against the State Teachers Retirement System and obtained a ruling that the original indenture indicated no intention to pledge the revenues from future dormitories for payment of the original debt. The result for this university was that it obtained as much freedom with future dormitory earnings as the other schools, but without the cost of the ½ per cent premium paid by the schools that refunded with the retirement systems.

At the present time the state universities in Ohio are issuing dormitory revenue bonds under open-end indentures which permit the issuance of parity bonds so long as pledged revenues cover annual debt

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142 Ohio University did not refund. See infra, p. 217, and infra, n. 143.


144 Of course Ohio State University accomplished the same thing, but earlier, by its public sale of replacement bonds.
service by 1.35 times. In addition, some of the universities still have outstanding bonds secured by closed-end indentures pledging the revenues of specified dormitories built before the open-end indentures were executed.

University housing commission borrowing

The Ohio Revised Code, Chapter 3347, permits borrowing to finance university facilities by a commission comprised of university officials, but which is a legally separate entity which cannot pledge the credit of the university. In essence, the housing commission device permits universities to supplement their debt incurring capacity since the 1.35 times earnings requirement specified in the open-end indenture already discussed does not apply. To date, only Ohio State University has found it desirable to use this device.

Each project financed by a university housing commission is secured by a closed-end indenture. The security pledged for outstanding debt consists only of the revenues from operation of the particular facility constructed or acquired. Because the Ohio State University has on occasion found itself in need of additional facilities at the same time that coverage of debt service on bonds issued under its open-end

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145 This is a requirement of HHFA.
146 The universities also issue bonds to finance such enterprises as student unions and athletic facilities. Usually these are covered by separate indentures, either open- or closed-end.
147 This differs from the authorizations in Ohio Revised Code, Secs. 3345.07 and 3345.11. There borrowing is done by the university and, within limits, the university can pledge its credit.
indenture was approaching the 1.35 times minimum, it has resorted to financing by means of the housing commission approach.\textsuperscript{148}

Marketability and ratings of university debt

Reference has been made to the limited market for debt issued by universities.\textsuperscript{149} To the extent that this condition continues to prevail in 1964, it can be attributed in part to the "conservatism and irrationality" of the municipal bond market noted earlier.\textsuperscript{150} But part of the problem results from the failure of the universities to cultivate and to conform to the requirements set forth by municipal bond buyers, particularly the information reporting requirements.

Limited marketability signifies both an absolute and a relative situation. It is absolute in the sense that the reluctance of the rating services (notably Moody's) to rate many university debt issues precludes certain classes of investors (e.g., out of state banks) from purchasing such obligations for their portfolios. In this respect the market is absolutely smaller. But limited marketability is also a

\textsuperscript{148}Ohio State's financing problems have been complicated by the fact that it began its postwar dormitory building program somewhat later than the other state universities and, once begun, the program has moved forward much more rapidly. Because it entered the period with few dormitories free from debt (which would generate income to meet debt service obligations) it has often been quite near its debt limit (i.e., the 1.35 times debt service requirement) under the basic open-end dormitory bond indenture. Thus, although the university was having no difficulty servicing its debt, it has sometimes been prevented from adding more under the basic indenture, and it has turned to the housing commission device.

\textsuperscript{149}\textsuperscript{Supra}, p. 212, n. 130.

\textsuperscript{150}\textsuperscript{Supra}, p. 203, n. 98.
relative situation in that there may be buyers for such obligations but
only at rates far in excess of what is justified on the basis of the
security for the issues.151

According to Moody's Bond Survey, "one of the most troublesome
aspects of college revenue bonds is competition . . . ,"152 both in the
sense that schools compete against one another and in the sense that a
particular school's dormitories compete among themselves and with pri-
vate, off-campus housing.153 A related concern involves the right of
the school to issue parity bonds if some earnings test is met and the
resulting dilution of earnings coverage on the bonds issued earliest.
This obviously could become a drawback if demand for a school's dormi-
tories were to decline at some future time.154

Another factor limiting the marketability of these securities
results from the refusal on the part of states--at least this is how
rating services such as Moody's characterize it--to accept their respon-
sibilities. Again quoting Moody's Bond Survey:

151 But as the quotation which is reproduced in the following
paragraph indicates, it is possible to view university revenue bonds
as a somewhat hazardous investment. Obviously if they are usually
hazardous, the high rates are justifiable.

152 LII (August 22, 1960), 330.

153 As the Moody's article recognizes, this latter problem--and,
perhaps, even the first--can be handled somewhat by means of parietal
rules. Ibid.

154 Ibid. But at least one study of university borrowing found
that investment bankers preferred the open-end feature. John D. Long
and Arthur M. Welmer, Summary of a Research Report on Financing of
College and University Student Permanent Housing (Washington: American
Investors are imbued with a well-entrenched tradition which regards education as a function of the state. In the senior college and university area the state customarily acts directly. The use of revenue bonds for financing the physical plant without which college and university education would be largely impossible, can be construed as an evasion of the financial obligations of the state. In issuing revenue bonds in the name of one of its agencies, the state is in effect, asking bond buyers to assume inherent financial risks which it is unwilling to undertake itself.\footnote{LII (August 22, 1960), 330.}

Although one may disagree with remarks such as these,\footnote{It is true that the state is shifting risk, at least nominally, but since the universities are paying a premium for this it is difficult to understand why the rating services appear so outraged.} their probable effect is to increase the cost of borrowing.\footnote{It was not possible to ascertain precisely what Moody's refusal to rate costs the typical university, but university officials and investment bankers interviewed by the writer estimated the premium at 1/8 per cent to as much as 1/4 per cent.}

An interesting and useful by-product of the HHFA loan program is the effort made by that agency to improve the marketability of university revenue bonds. These efforts have taken a number of different forms and merit brief mention. Among those which the HHFA considers to be particularly noteworthy are:

1. Prescription of a flow of funds to assure proper distribution of pledged revenues toward uses such as operation and maintenance, debt service, and repair and replacement;

2. Prescription of the content of official statements of bond sales and general improvement of the content of financial reports;

3. Introduction of a standard trust indenture;

4. Meetings attended by HHFA staff and members of the investment community to acquaint the latter with details of university
obligations and meetings with the rating services to induce them to rate university debt;

(5) Preparations, including meetings with investment bankers, to sell publicly university debt held by HHFA;

(6) Development of interim financing programs whereby universities are induced to develop non-government lines of credit;

(7) Development of loan policies such that universities can obtain maximum federal loan funds when they agree to match the federal loan with loans obtained in the capital market.\textsuperscript{158}

Recent reports of a greater willingness by the rating services to rate university debt issues indicate that these efforts are paying off.\textsuperscript{159} Furthermore, some university officials indicate that they are obtaining relatively lower interest rates (after allowing for general changes in the interest rate level) as more of their obligations are placed on the market.\textsuperscript{160} Still, the conservatism of the market remains manifest as is indicated by the paucity of ratings given to university revenue bonds—none of Ohio's state universities have had any of their debt rated—and such conditions undoubtedly add still more to the cost of financing university facilities.

\textsuperscript{158}U. S., Congress, House, Committee on Banking and Currency, Subcommittee on Domestic Finance, \textit{op. cit.}, Vol. II, pp. 488-489.

\textsuperscript{159}\textit{Ibid.}, p. 488.

\textsuperscript{160}This observation was made by Ernest W. Leggett, Assistant Treasurer at the Ohio State University.
Statehouse parking garage borrowing, 1963

The newest addition to Ohio's nonguaranteed borrowing programs is the $6.6 million debt issued by the State Underground Parking Commission in 1963. The proceeds of this debt issued are being used to construct a public parking garage under the Statehouse in Columbus. The bonds are secured solely by revenues to be collected from garage users. Operation of the facility is scheduled to begin in late 1964.

The parking garage bonds, which sold at a net interest cost of about 4.03 per cent, are term bonds due in 2003. Because there was no history of operations of the facility, the bonds were unrated by Moody's. According to estimates made at the time the bonds were sold, sinking fund accumulations will be such that retirement--either by calling bonds or by purchasing them in the open market--can begin in 1967. Until the facility begins operations, little can be said regarding the accuracy of this prediction.

161 Supra, Chapter V, Table 10, p. 156.
163 Calculated from data in Moody's, 1964, p. 1546.
165 But the parking garage is practically guaranteed some income because Ohio Revised Code, Sec. 5538.24, provides that members of Ohio's General Assembly shall be furnished parking space so long as funds are appropriated to pay for this service. As a recent newspaper article pointed out, while the garage is technically self-supporting, it will actually be supported in part out of taxes so long as the legislature appropriates money to pay for its parking privileges. Columbus Citizen Journal, July 4, 1964, p. 11.
The size and burden of debt in Ohio

This study indicates that in the postwar period Ohio has turned away from a policy of financing most capital outlays on a pay-as-you-go basis. Up to this point, however, little attention has been given to the measurement of the weight of Ohio's debt relative to its ability to bear it. The present section is devoted to such an analysis.

It is more or less meaningless to characterize a given volume of debt as "heavy" or "light," unless the debt is compared to that in other states. This approach helps little unless the debt is related to such factors as the state's revenues, expenditures, personal income and population. Only after such adjustments have been made is it particularly meaningful to begin comparing the situation in various states. 166

Table 15 contains a series of debt-related measures for Ohio and selected other states for 1963. The measures are divided into three basic categories: debt-bearing ability, dependence on borrowing, and debt service burdens. The numbers shown in each cell are first, the ratio of the items compared and second, the state's rank relative to the other seven states included. A large ratio and a high ranking in the first category indicate relatively large debt-bearing ability; a small ratio and a high ranking in the second indicate relatively

166 Even then there remains the problem of comparing debts at the local level. See, supra, Chapter V, p. 136.
TABLE 15
MEASURES OF DEBT BEARING ABILITY, DEPENDENCE ON BORROWING, AND DEBT SERVICE BURDEN IN OHIO, SELECTED OTHER STATES \(^a\) AND THE UNITED STATES, 1963

<table>
<thead>
<tr>
<th></th>
<th>New York</th>
<th>California</th>
<th>Illinois</th>
<th>Pennsylvania</th>
<th>Ohio</th>
<th>Texas</th>
<th>Michigan</th>
<th>New Jersey</th>
<th>United States</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Debt Bearing Ability:</strong> (^b)</td>
<td></td>
<td></td>
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<tr>
<td>Revenue (^c) to guaranteed debt</td>
<td>3.85(5)</td>
<td>2.85(7)</td>
<td>3.82(6)</td>
<td>8.47(3)</td>
<td>13.50(2)</td>
<td>7.13(4)</td>
<td>15.62(1)</td>
<td>1.47(8)</td>
<td>4.25</td>
</tr>
<tr>
<td>Revenue (^c) to total debt</td>
<td>1.28(6)</td>
<td>2.52(2)</td>
<td>1.58(5)</td>
<td>1.26(6)</td>
<td>1.86(3)</td>
<td>3.76(1)</td>
<td>1.80(4)</td>
<td>0.79(8)</td>
<td>1.74</td>
</tr>
<tr>
<td>Personal income to guaranteed debt</td>
<td>60.22(6)</td>
<td>37.45(7)</td>
<td>72.77(5)</td>
<td>130.77(3)</td>
<td>241.54(1)</td>
<td>91.34(4)</td>
<td>194.16(2)</td>
<td>35.11(8)</td>
<td>57.47</td>
</tr>
<tr>
<td>Personal income to total debt</td>
<td>20.45(6)</td>
<td>33.02(3)</td>
<td>30.05(4)</td>
<td>19.83(7)</td>
<td>33.30(2)</td>
<td>48.24(1)</td>
<td>22.37(5)</td>
<td>18.90(8)</td>
<td>23.51</td>
</tr>
<tr>
<td><strong>Dependence on Borrowing:</strong> (^b)</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Borrowing to revenue (^c)</td>
<td>7.4(6)</td>
<td>5.6(5)</td>
<td>11.0(8)</td>
<td>7.6(7)</td>
<td>1.6(2)</td>
<td>2.9(3)</td>
<td>3.2(4)</td>
<td>1.3(1)</td>
<td>6.0</td>
</tr>
<tr>
<td>Borrowing to expenditures (^e)</td>
<td>7.0(6)</td>
<td>5.5(5)</td>
<td>10.9(8)</td>
<td>7.4(7)</td>
<td>1.2(1)</td>
<td>3.2(3)</td>
<td>3.2(3)</td>
<td>1.4(2)</td>
<td>5.9</td>
</tr>
<tr>
<td>Borrowing to revenue (^d) plus borrowing</td>
<td>6.9(6)</td>
<td>5.3(8)</td>
<td>9.9(8)</td>
<td>7.1(7)</td>
<td>1.5(2)</td>
<td>2.8(3)</td>
<td>3.1(4)</td>
<td>1.2(1)</td>
<td>5.7</td>
</tr>
<tr>
<td><strong>Debt Service Burdens:</strong></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Debt redemption to revenues (^d)</td>
<td>1.7(3)</td>
<td>2.5(4)</td>
<td>1.4(2)</td>
<td>6.3(8)</td>
<td>5.5(7)</td>
<td>0.9(1)</td>
<td>3.1(6)</td>
<td>2.8(5)</td>
<td>2.9</td>
</tr>
<tr>
<td>Debt redemption to expenditures (^e)</td>
<td>1.6(3)</td>
<td>2.5(4)</td>
<td>1.2(2)</td>
<td>6.1(8)</td>
<td>4.1(7)</td>
<td>1.0(1)</td>
<td>3.1(5)</td>
<td>3.1(5)</td>
<td>2.8</td>
</tr>
<tr>
<td>Interest to revenue (^b)</td>
<td>3.4(7)</td>
<td>2.5(5)</td>
<td>1.9(2)</td>
<td>2.5(5)</td>
<td>2.0(4)</td>
<td>0.8(1)</td>
<td>1.9(2)</td>
<td>3.6(8)</td>
<td>2.1</td>
</tr>
<tr>
<td>Interest to personal income (^b)</td>
<td>.2</td>
<td>.2</td>
<td>.1</td>
<td>.2</td>
<td>.1</td>
<td>.2</td>
<td>.2</td>
<td>.2</td>
<td></td>
</tr>
<tr>
<td>Interest to expenditure (^b)</td>
<td>3.2(7)</td>
<td>2.4(5)</td>
<td>1.9(2)</td>
<td>2.4(5)</td>
<td>2.0(3)</td>
<td>0.9(1)</td>
<td>2.0(3)</td>
<td>3.9(8)</td>
<td>2.1</td>
</tr>
</tbody>
</table>

\(^a\)States are arranged in descending order on basis of 1963 personal income.

\(^b\)Based on per capita data.

\(^c\)Includes all state revenue except liquor store and insurance trust revenue.

\(^d\)Numbers in parenthesis indicate rank.

\(^e\)Includes all state expenditures except liquor store and insurance trust expenditure.

limited dependence on borrowing; and a small ratio and a high ranking in the third indicate a relatively light debt service burden.

Table 15 shows Ohio to have a substantial debt-bearing ability, ranking first once, second twice, and third once. Ohio also appears to be relatively free from dependence on borrowing, again ranking first once and second twice. Only in the case of debt service burden is Ohio's situation somewhat questionable. Here it ranks seventh twice, fourth once, and third once. But it should be noted that the two seventh rankings apply to debt redemption, and this might suggest that the state is retiring its debt more rapidly than are other states. Such a situation might be desirable. Moreover, when interest burdens are compared, Ohio's is not exceptionally large. To summarize, most of the data show that, relative to most of the very prosperous states, Ohio's debt does not seem to be unreasonably large, the state is not excessively dependent on borrowing, and although it is retiring relatively large amounts of debt it does not appear that Ohio is suffering from excessive interest burdens.

One word of qualification is necessary. It is unlikely that a study based on only one year's data will yield entirely satisfactory results. Some of the data used probably misrepresent the usual situation in a particular state (e.g., borrowing in Ohio in 1963 was definitely below recent levels). But with the use of as many states as were included here, it seems reasonable to assume that most of the data presented are useful as rough indicators of Ohio's situation vis-à-vis the other states.
Organization for debt management

At least ten separate agencies are directly involved in managing various segments of Ohio's debt. In the case of direct or guaranteed state debt—which totaled about 52 per cent of total state debt in 1963—management is assigned to the Sinking Fund Commission. In the case of nonguaranteed state debt, management is divided among nine different groups, all of which are practically autonomous—both with respect to one another and with respect to the Sinking Fund Commission.

There is no provision in either Ohio's Constitution or in its statutory law for coordinating the activities of the several debt management agencies. Moreover there seem to be no uniform "rules of the game" regarding how the several debt management agencies exercise their responsibilities.

If one accepts the view held by many fiscal economists and by members of the investment banking community that any default in nonguaranteed revenue bonds would adversely affect the rating assigned by the rating services to a state's fully guaranteed debt, it would seem to be axiomatic or at least desirable that the state would scrutinize closely the activities of its agencies which are authorized to issue nonguaranteed obligations. The absence of such scrutiny is one obvious defect of the state's existing debt management policy.

This comment does not suggest that debt mismanagement exists, but rather that effective coordination is not guaranteed by existing

structural arrangements. In the cases of the Turnpike, Bridge, and Underground Parking Commissions, which together have borrowed on only four occasions since 1947, debt management now is pretty much a matter of sending the debt service payments out on time, complying with the other provisions of their indentures as to the disposition of revenues, and furnishing complete reports on time. There seems to be no intent to enlarge the activities of these three commissions and to the extent this remains policy, their debt should decline steadily and become less and less a factor to be considered in overall debt structure and management.

University indebtedness is another story. In the space of a few years it has grown from negligible amounts to almost $90 million. Yet the state had made little effort to ensure that management of the universities' borrowing program was safely and efficiently conducted. This study provides no complete basis for selection of any policy about the autonomy of state higher education institutions. Clearly, numerous combinations or degrees of centralization are possible. With respect to debt creation and management for the time period covered by this study, university borrowing has been autonomous and uncoordinated. As a result, university administrators have of necessity had to sink or swim in their relations with the bond market without material assistance from any other state agency. While in the main this function has been quite well performed, the logic of debt management suggests the merit of centralized administration regardless of the degree of centralization or decentralization of policy formulation.
Costs of decentralized debt management

To conclude this discussion of the state's debt management organization, some of the ways in which decentralized debt management may contribute to administrative inefficiency and needless borrowing costs are enumerated. Among them are:

(1) Inadequate staffing - individually few agencies can afford to employ debt management specialists; collectively this should be an economical proposition;

(2) Inadequate planning - a corollary of (1);

(3) Failure to develop fully rapport with the bond market - this is particularly costly in the case of less marketable revenue bonds;

(4) Unsatisfactory debt reporting and analysis;

(5) Excessive number of debt issues - marketing an issue is expensive and simultaneous entry into the market by multiple agencies may drive up the cost at which the bonds may be sold.

Timing the sale of debt issues: seasonal influences

Recently Ross and Bonin have presented evidence which suggests that states might do well to select carefully the precise month in which bonds are issued. Based on monthly bond yields for the period


169 Op. cit., p. 120. Also see Bonin, op. cit., p. 130.
November, 1954, to December, 1959, inclusive, they developed an index which revealed a distinct seasonal pattern in the movement of interest rates.

In Table 16, a similar seasonal index of yields of municipal bonds rated Aa is presented. The yields used date from July, 1954, to June, 1963, inclusive. Although the index shows a somewhat less distinct seasonal pattern than did the Ross and Bonin index, there remains some evidence of the existence of a seasonal pattern. Specifically, interest yields seem to reach their peaks in September, declining thereafter—with a few minor exceptions—until they reach their low points in March. Moreover, the range between peaks and troughs is wide enough to suggest that appreciable savings might be realized if issues were sold during the months that are generally more favorable.

Discussions with various officials involved in debt management in Ohio revealed that little conscious effort is made to gear debt issues to take advantage of interest rate declines. A review of recent debt offerings in Ohio turned up only one case where a bid was rejected and reoffered later when interest rates were lower.\textsuperscript{170} The consensus—among both the guaranteed debt and nonguaranteed debt managers—seems to be that when borrowed funds are needed there is little time for

\textsuperscript{170}This was the Series G bond issue authorized by the highway debt amendment of 1953. These bonds (in the amount of $31 million) were first offered in September, 1957, and the best bid was 3.68 per cent. This was rejected and the bonds were reoffered and sold the following month at 3.32 per cent. \textit{Commercial and Financial Chronicle}, CLXXXVI (September 16, 1957), 1206; and \textit{ibid.}, (October 14, 1957), 1678.
TABLE 16
SEASONAL INDEX\(^a\) OF Aa BOND YIELDS

<table>
<thead>
<tr>
<th>Month</th>
<th>Based on Mean</th>
<th>Based on Median</th>
</tr>
</thead>
<tbody>
<tr>
<td>January</td>
<td>100.2</td>
<td>100.0</td>
</tr>
<tr>
<td>February</td>
<td>98.3</td>
<td>97.7</td>
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<td>March</td>
<td>97.8</td>
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<td>April</td>
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<tr>
<td>December</td>
<td>100.4</td>
<td>99.4</td>
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</table>

\(^a\)The index was constructed by centering twelve-month moving averages.

delay to obtain interest savings which would probably amount to only a few basis points. ¹⁷¹

While one might agree that if the notice that funds were needed was not given until the precise moment they were required (allowing for the minimum time necessary to arrange the sale), there would be no room for delay to wait for more favorable interest rates, it does not follow that this has to be the situation. Without attempting to develop the details of such a program here, it should suffice to suggest that the state's debt managers be given a little more notice as to when funds are required, and that they be given more discretion to borrow in advance of needs when the pattern of state borrowing costs and the yield of federal securities (in which temporarily idle borrowed funds could be invested until needed) indicate that such an approach would result in savings.

**Economic fluctuations, capital spending, and borrowing**

Chapter IV discussed the perennial controversy regarding the role states should play in mitigating economic fluctuation. The consensus at the present time seems to be that, although it would be desirable for state and local capital spending and/or borrowing to move contracyclically, given the alleged great backlog of needed projects and the difficulty of financing the majority out of current revenues

¹⁷¹ But some fiscal economists do not agree that the time factor need be nearly as critical as this. See Ross and Bonin, op. cit., pp. 120-121; and news release from the office of Bert A. Betts, California State Treasurer, May 28, 1962.
plus the fact that postwar recessions have been brief and mild, no
great harm is done if spending and borrowing do not move contracycli-
cally. An additional factor accounting for this changed view might
be the belief that time lags make public works programs very inefficient
stabilization devices.

Irrespective of one's view regarding what policy ought to be, it
would be useful to know what actually has happened in Ohio in the
postwar period. Unfortunately, the problems of devising a conceptual
framework within which such an analysis could be undertaken and develop-
ing data satisfactory for use in such an analysis are of major propor-
tions and solution of them was not possible in this study.

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172 Frank E. Morris, "Impact of Monetary Policy on State and
Local Governments: An Empirical Study," Journal of Finance, XV
(May, 1960), 245-249.

173 Ibid., p. 245.

174 Statistical analysis was not attempted here for two basic
reasons. First, the number of observations which could be used to con-
struct most relevant series would be so small that any conclusions
drawn would be virtually meaningless. Second, the kinds of data which
would seem to be required for such an analysis are, in many cases, not
available and the substitution of proxy variables did not appear to be a
satisfactory solution. To mention just one example, there is the
problem that complete information on capital outlays reported on an
accrual basis is not available. It is the opinion of this writer that
the use of capital outlays reported on a cash basis would not be a
satisfactory substitute—or at least there is no reason to assume so.

For examples of studies that deal with various aspects of the
questions raised here, see James N. Duprey, "The Influence of Credit
Conditions on State and Local Governments" (unpublished Ph.D. dis-
sertation, Dept. of Economics, The Ohio State University, 1961),
passim; Frank E. Morris, op. cit., pp. 232-249; and Charlotte D. Phelps,
"The Impact of Monetary Policy on State and Local Government Expendi-
tures in the United States," in Daniel B. Suits et al., Impacts of
Monetary Policy (Englewood Cliffs: Prentice-Hall for the Commission on
Money and Credit, 1964), pp. 621-647. It should be noted that all of
these studies deal with all state and local governments combined. Much
It was possible, however, to assemble several measures which certainly have some relevance to the questions discussed here.Recognizing that these measures have inherent weaknesses which make any conclusions drawn from them very tentative ones at best, it is possible to say that on the basis of visual inspection they did not reveal much clear-cut evidence that capital spending and borrowing in Ohio between 1954 and 1963 followed a contracyclical course. More often than not they seem to have moved in the opposite direction from that which "ideal" fiscal and monetary policy would prescribe.

The use of the call option

An aspect of debt management which is closely related to timing the sale of debt issues involves the use of the call option. Just as proper timing may result in absolute savings on borrowing costs, the judicious use of the call option may result in savings in borrowing of the non-existent data discussed in the preceding paragraph is available on an aggregate basis. Thus, studies dealing with all state and local governments are considerably easier to conduct than those which deal with only one or a few governmental units. The Phelps study is especially relevant here since it contains a critical analysis of earlier studies (including the Morris one just cited) which reveals the problems of obtaining meaningful and complete data.

In a recent survey article, published as "Research in the Capital Markets," Journal of Finance, XIX (supplement, May, 1964), entire issue, the National Bureau of Economic Research reported: "The general consensus at present, so far as we can gather, seems to be that state and local borrowing through the long-term capital markets is somewhat countercyclical, but that short-term borrowing and other devices are utilized to soften the effects on real expenditures, so that real expenditures remain largely unaffected by monetary conditions." (p. 7). But the report went on to observe that so little research had been done in this area that the existence of a consensus was rather surprising.

175 See infra, Appendix Table 23.
cost.\textsuperscript{176} There are a number of circumstances when savings might be achieved by calling an issue in advance of maturity. One such instance would be where the bonds were sold in a period of credit restraint and relatively high interest rates. If it were expected that interest rates would fall appreciably at some later date, the option to call outstanding bonds either for retirement or refunding would offer an obvious advantage. Second, revenue bonds sold to finance an untried facility may carry unusually long maturities because the original revenue estimates were necessarily very conservative.\textsuperscript{177} Operating results may show revenues to be flowing in at a far more rapid rate than debt service outflows. Under such circumstances, it might be wise to use surplus moneys to retire some of the longer—and usually more costly—maturities. Third, the ability to call outstanding debt could facilitate the reorganization of the state's debt structure if such were thought to be a necessary undertaking.\textsuperscript{178}

\textsuperscript{176}The following discussion is based on Bonin, \textit{op. cit.}, pp. 114-117; Shultz and Harriss, \textit{op. cit.}, pp. 538-539; Ross and Bonin, \textit{op. cit.}, p. 119; Ratchford, \textit{American State Debts}, pp. 269-272, 566, and 574; and Carl H. Chatters and Albert M. Hillhouse, \textit{Local Government Debt Administration} (New York: Prentice-Hall, 1939), passim.

\textsuperscript{177}The enterprise may have appeared doubtful to potential investors who therefore required additional interest premiums.

\textsuperscript{178}This would be particularly useful in connection with a policy of contracyclical debt management. During recessions debt issued could carry long maturities. This would have the effect of keeping immediate debt service charges as low as possible. Later, when conditions improve, the state could use the call option to speed up debt retirement. Such a program of contracyclical debt management is discussed in State of New York, Temporary Commission on the Fiscal Affairs of State Government, \textit{op. cit.}, p. 50.
Call options and guaranteed debt

Although the Commissioners of the Sinking Fund have had the authority to include the call option on all issues of guaranteed debt marketed in the postwar period, they have not yet found a circumstance that justified its inclusion. This exclusion probably has not been costly since all bonds issued under the guaranteed borrowing programs have carried fairly short (twenty years or less) maturities. Also, the rates on most of these issues have been relatively low; and barring some unusual shift in monetary policy, interest rates should not dip so far as to change the situation drastically.

Under the two new borrowing programs authorized in 1963 and 1964, the state may issue bonds with maturities up to thirty years. There is no evidence that the state wants to lengthen the average maturity. Rather, it is a matter of necessity and conservatism. Since the earlier capital improvements debt and highway debt have prior claims on the same funds that will be used to retire the new debt and because revenue forecasting is at its best an uncertain venture, the state must be certain that the annual debt service requirements on the new debt are not larger than available revenues. Thus, longer maturities may be issued. Under such circumstances, the call option would be a useful feature to include on at least the longest maturities.¹⁷⁹

¹⁷⁹ In an interview with the writer, William E. Bright, Controller of the Ohio State Treasury, reported that the Commissioners of the Sinking Fund were contemplating use of the call option on the longest maturities of newly issued guaranteed state debt.
Call options and nonguaranteed debt

With the possible exception of a few state university debt issues, all nonguaranteed debt issues sold in the postwar period have included the call option. In the case of the turnpike debt, bridge debt, and parking garage debt, such a feature is practically mandatory since the bonds are term bonds with long maturities. Without the privilege of calling their debt if the necessary funds were available, these enterprises would be faced with the problem of buying their securities on the open market, and as more debt were removed from the market it is likely that they would pay more and more for such purchases.\(^{180}\) This would be even more probable if the debt had been sold in a period when interest rates were high relative to the time when retirement was being attempted.

Although the typical university debt issue is in serial form, it too usually carries the call option. This is probably useful because the longest maturities may run to forty years. Despite the fact that current enrollment pressures keep the universities occupied with problems of expanding rather than contracting indebtedness, the day may come when such needs have been filled and the flow of funds is large.

\(^{180}\)As a matter of fact, all turnpike debt retired to date has been purchased on the open market by the Turnpike Commission. Letter from James D. Hartshorne, Director of Information and Research, Ohio Turnpike Commission, July 28, 1964. The State Bridge Commission has also accomplished some of the retirement of its 1957 Portsmouth-Fullerton bridge debt by means of open market purchases. Telephone conversation with J. William Shultz, Secretary-Treasurer and General Manager, State Bridge Commission of Ohio, July 28, 1964.
enough that thought can be given to acceleration of debt retirement programs. 181

**Summary**

All debt guaranteed by the state of Ohio and issued pursuant to a constitutional amendment is managed by the Sinking Fund Commission. The Commission is comprised of the state's five constitutional officers. Most debt amendments and/or their implementing legislation specify how much total debt can be issued, how much can be issued in a given year, the nature of the debt service schedule, and the source of funds to service the debt; still, the Commission is given broad authority in planning and administering the issuance of debt, in managing and servicing outstanding debt, and in retiring it as scheduled.

Six amendments authorizing borrowing have been ratified in the postwar period. Of the six, two have been for veterans' bonuses—all debt issued under the first of these has now been retired—two have been for highway programs, and two have been for non-highway capital improvements. Of the six, all but one have pledged either the "full-faith and credit" or the "faith and credit" as security for debt issued. The remaining amendment limited the state's liability to the proceeds of existing highway user taxes.

Guaranteed debt issues have been well planned and, with the possible exception of the limited liability highway debt, the funds have

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181 According to Ernest W. Leggett, Assistant Treasurer at The Ohio State University, the present structure of interest rates is such that the university can usually do better by using surplus funds (over the amount immediately needed to retire maturing bonds) to purchase short-term federal securities. But there is no assurance that this will always be the case.
probably been borrowed at the lowest rates attainable. In the case of the highway debt, there is some evidence that it could have been sold at cheaper rates had it carried the state's unqualified backing. Short term borrowing under the first capital improvements program reduced the cost and maturity of this debt. In general, maturities on Ohio's guaranteed debt have been kept short. In the last two debt authorizations, however, there is some evidence that maturities are going to be stretched out. Such a tendency, along with the initiation of a novel form of short-term borrowing to finance highway right of way acquisition, is not a salutary development. But for the most part the state's guaranteed debt structure has been well designed.

Nonguaranteed debt has been issued by four agencies in the postwar period. In terms of volume the Ohio Turnpike debt is easily the leader. But all of its debt was issued in 1952 and, assuming the turnpike remains successful, management of this debt should not become a serious problem. The major drawback of the turnpike debt—and this applies equally as much to all other nonguaranteed debt in Ohio—is its added interest cost relative to that paid on debt guaranteed by the state. Debt also has been issued by the State Bridge Commission and the Underground Parking Commission, but the amounts involved are fairly insignificant and, together, these two agencies have entered the market only three times since 1947.

Although their combined indebtedness is smaller than turnpike debt, the six state universities and colleges have been increasing their debt at a substantial rate. University borrowing is undertaken to finance dormitories, dining facilities, student centers, and athletic
facilities. When university borrowing began in the early postwar period, the legality of the debt was in doubt and most was sold privately to the state retirement systems. But the retirement systems did not consider their investment to be an accommodation; the rates they earned on university debt were comparable to what could be earned elsewhere. Later in the 1950's, university debt was declared legal. This set the stage for its sale on the open market. As the decade progressed, the rate of borrowing accelerated to a point where the retirement systems could not absorb all new university debt; besides, they were finding ways to use their funds more productively. Gradually, they have been reducing their holdings of university debt.

In the middle 1950's the universities began borrowing from the federal government, and they have since made progressively greater use of this source of funds. Although the market has been slow in welcoming university debt, there is evidence that it has opened up much wider in recent years and all but one of the schools have now sold debt publicly.

Both the policy formulation and the debt management activities of state instrumentalities authorized to issue nonguaranteed debt are carried out autonomously. While this study provides no complete basis for comparing centralized and decentralized policy formulation, the logic of debt management does suggest the need for centralized administration. Among the benefits to be derived from such an arrangement would be (1) improved staffing and planning, (2) improved relations with the bond market, (3) more complete debt reporting and analysis,
and (4) avoidance of simultaneous entry into the bond market and need­less competition for available funds.

Measured against the debts of a selected group of the country's most prosperous states, Ohio's debt appears modest. The state ranks high in debt bearing ability, its reliance on debt is not exceptional, and its interest burden is not unusually large. As a result of the relatively short maturity of much of its debt, however, the burden of retiring debt is fairly heavy in Ohio.

Those charged with debt management are of the opinion that they have not been sensitive to fluctuations in interest rates. Furthermore, there is some evidence to support these opinions. Such inflexibility can result in some substantial and needless additional interest expense which might be avoided by paying more attention to seasonal changes in interest rates. Also, to the extent borrowing is insensitive to cyclical fluctuations in interest rates, the state may further aggravate cyclical swings and actually work in opposition to the federal government's attempts to stabilize the economy.

This and the preceding five chapters have reviewed and analyzed state capital expenditures, debt creation, and debt management in Ohio between 1947 and 1963. The following chapter reviews the main findings of the study and suggests some revisions in the laws and policies affecting capital improvements planning and financing.
CHAPTER VII

SUMMARY AND CONCLUSIONS

Capital outlays by the state of Ohio have grown both absolutely and relatively during most of the 1947-1963 period considered here. When adjusted for increases in the price level, however, the postwar growth of capital outlays becomes more modest. In fact, since 1955 capital outlays in constant (1954) dollars have fluctuated sharply without showing a definite upward trend.

The composition of capital outlays, 1947-1963

Not only did highways account for the greatest share—by a wide margin—of the state's capital outlays in every year between 1947 and 1963, but they also accounted for an increasing share. In 1947, 62 per cent of Ohio's capital expenditures went for highways; in 1963, the figure was 90 per cent. Among the non-highway outlays education, mainly higher education, accounted for the largest share. Although the absolute amount spent for higher education increased somewhat between 1947 and 1963, there was no tendency toward an increase in the relative share of the capital outlay dollar going to higher education.

Financing capital outlays, 1947-1963

The importance of alternative financing methods varied substan-tially among the several types of capital outlays and among time
periods. In the entire period from 1947 to 1963, about 29 per cent of all capital expenditures were financed by borrowing. Between 1953 and 1963, the share of capital spending financed by debt creation ranged from about 6 per cent to 76 per cent.

In the highway category, no borrowing occurred between 1947 and 1953. During the period 1953-1963, borrowing financed 27 per cent of all highway outlays. From 1947 to 1963, federal aid was the major source of funds for highway capital outlays, accounting for more than 43 per cent of total outlays.

The increased use of loan finance is also apparent in the non-highway categories of capital outlays. Between 1947 and 1955, borrowing financed only about 10 per cent of capital outlays. The majority of the balance spent came from current revenues and balances. But from 1956-1963, about 37 per cent of the $226 million spent came from borrowed funds. In the latter period, current revenues paid for only 42 per cent of total outlays.

**Capital budgeting in Ohio**

A program of capital budgeting or planning was begun by the state of Ohio in the postwar period. This is a useful innovation which increases the objectivity and uniformity of the capital project selection process. When developed fully—this has not yet occurred in Ohio—there is the chance that the capital budgeting process may reduce logrolling and the number of decisions based on short-sighted interests.

Despite the usefulness of capital budgeting in Ohio, it falls far short of the ideal. When properly developed, such a program
integrates the physical and financial aspects of planning improvements. In Ohio, however, the emphasis has been almost exclusively on the selection and ordering of the projects which the state plans to execute. This process culminates each biennium in the Capital Plan. Among other information, this document contains the Governor's recommendations for projects to be executed in each of the succeeding three biennia. The Capital Plan is submitted to the legislature for use as an information source when appropriations are being considered.

Although capital planning in Ohio has evolved beyond the narrow view that it is mainly a device for expenditure control, it still includes very little in the way of capital improvements financial planning. The statutory and organic laws of the state offer little guidance in this area. But, as suggested in Chapter III, this omission is not necessarily undesirable. At least the state's financial planners are not circumscribed unduly by legal restrictions.

It does appear, however, that the flexibility permitted in Ohio has resulted in less than optimal planning and project creation. The postwar period seems to have been characterized by an excessive discontinuity of capital improvements financial policies. In large part, this has been the result of an unwillingness to spend and disagreement as to the comparative merits of financing capital outlays with tax proceeds or with borrowed funds. There appears to be a logical dilemma. On the one hand, each administration and legislature should have the right to determine current spending and financing policies since, presumably, it is on the basis of these things that they are elected—or defeated. On the other hand, capital improvements needs seldom disappear
or fail to continue multiplying, and vacillation in spending and financing policies leading to fluctuations in capital improvement execution disrupts capital planning. The second section of this chapter discusses this problem and suggests some aspects of capital improvements policy which should, in the opinion of the writer, remain unchanged from administration to administration.

The theory of public borrowing

Because Ohio has been making increasing use of borrowing to finance its capital improvements, and because this has generated considerable controversy, an examination of the theory of public borrowing was made in Chapter IV. Unfortunately, few principles were found; it appears that few exist. A policy of complete pay-as-you-go finance seems extreme, especially where a large backlog of improvement needs exists. Many fiscal economists favor the use of loan finance for at least some part of such a backlog as well as for extraordinary outlays—although there is no observable unanimity regarding what constitutes an extraordinary outlay.

There is a consensus favoring debt financing for self-liquidating outlays. Such a view seems to have become increasingly popular in Ohio since 1947. But this questionable viewpoint ignores the fundamental question of which is more economical: pay-as-you-go or borrowing. Borrowing is also defended by some because it facilitates the distribution of a project's cost over a time period comparable to its life. Although the argument has considerable merit on its surface, it becomes much less persuasive when the borrowing government fails to appropriate from current revenues sums adequate to cover capital
consumption in the current period. Debt financing during recessions may permit a state to maintain or, perhaps, even enlarge capital outlays thereby contributing to economic stabilization. But such countercyclical fiscal policy may be impossible if the state has borrowed too heavily during prosperous periods.

Finally, the use of loan finance during prosperous periods to finance capital outlays may be defended as contributing to economic growth; both because the improvements facilitate expansion and because taxes are held down and the state can offer a climate attractive to new or expanding firms. Undoubtedly, many improvements facilitate economic growth, and this growth may eventually lead to large increases in tax revenues. The problem is knowing which are the growth producing improvements and estimating the probable size of their contribution. The argument that low taxes—a condition that can accompany a policy of substantial use of borrowed funds—will induce firms to locate in a state may have some validity. But, if subsequent developments prove otherwise—as much of the available evidence indicates, the state will have given up potential revenue and it may be very little closer to providing the needed improvements.

Ohio's constitutional debt limit

Ohio's constitutional debt limit was adopted in 1851, and until after World War II, the state incurred little indebtedness either within or outside the limit. Since 1947, however, the Constitution has been amended six times to permit guaranteed borrowing. At the end of 1963, Ohio's guaranteed debt totaled $435 million. Moreover, as a result of the last two of these amendments, the state has an additional
$750 million in unused borrowing authority. Undoubtedly, the debt limit still serves as a brake on debt expansion, but developments such as those just described leave its effectiveness open to doubt.

The debt limit and nonguaranteed borrowing

Since 1947, there has been a growing tendency in Ohio to resort to nonguaranteed borrowing. This development seems to be related to the existence of a debt limit. The courts have generally interpreted the debt limit liberally so that borrowing outside the limit is permitted if the debt is supported out of the earnings of an enterprise financed with the debt proceeds. In the case of state universities, such borrowing has been permitted even where a part of debt service payments has come from existing, debt-free facilities.

In Ohio, nonguaranteed borrowing is done by three semi-autonomous agencies and the six state universities and colleges to finance various self-liquidating improvements such as toll highways and bridges, dormitories, and parking facilities. At the end of 1963, Ohio's nonguaranteed debt totaled about $400 million.

The rate of interest charged for nonguaranteed and limited liability borrowing is usually higher than that charged on comparable debt fully guaranteed by the state. While it is not possible to generalize about the size of the interest premium, it was estimated that the differential ranged from .08 per cent to .85 per cent on the limited liability bonds issued under the 1953 highway borrowing amendment. To pay such premiums is uneconomical if it can validly be assumed that, despite the absence of any legal obligation to service
the debt (beyond the original pledge), the state would not stand by and permit its agencies to default on their obligations. An analogous situation would be the payment of insurance premiums to protect against a financial hazard which had been avoided.

**Structure and management of Ohio's guaranteed debt**

The structure of Ohio's guaranteed debt appears sound and its management has been handled well. The various amendments authorizing borrowing and the statutes enacted to implement them have been free from an excess of detail and have allowed the debt managers the degree of discretion necessary to administer a sound debt management program. Despite some evidence that debt to be issued under the latest authorizations may carry maturities of longer duration than other guaranteed debt issued since 1947, the state has demonstrated its desire to pay off its debt with reasonable rapidity. Because a state's ability to meet new financial emergencies is reduced so long as it is committed to servicing large volumes of existing debt, it is usually desirable during prosperous periods to extinguish indebtedness as rapidly as possible.

The questionable practice of limiting the state's liability was discussed above. In the opinion of the writer, this is a needlessly expensive practice. But if the state decides to do it, it should be clearly stated—as it was in the 1953 highway borrowing amendment—in the authorizing legislation. This does not appear to have been done as well in the other three postwar amendments authorizing borrowing for capital improvements. Each has contained some ambiguous language as to precisely what liability the state was accepting. Moreover, all four
capital improvement debt amendments have contained complex requirements as to the initial sources of funds to service the debt. This ambiguity and complexity have resulted in costly litigation; such developments do little to enhance the prestige of the state's debt in the investment market.

**Structure and management of Ohio's nonguaranteed debt**

In Ohio, both policy formulation and the debt management activities of state instrumentalities authorized to issue nonguaranteed debt are carried out autonomously. This study provides no complete basis for comparing centralized and decentralized policy formulation. Neither does it attempt to appraise fully the quality of debt management in the state agencies issuing debt. Enough information was gathered, however, to indicate that, in general, the debt management function has been well performed. At the same time, those responsible for debt management—particularly university administrators—have of necessity had to sink or swim in their relations with the bond market, without any material assistance from other state agencies. Despite the success to date of decentralized debt administration, the logic of debt management suggests the merit of centralized administration, regardless of the degree of autonomy permitted in policy formulation.

**Conclusions**

This analysis of capital spending, debt creation, and debt management, based on Ohio experience from 1947 to 1963, concludes that:

1. The state of Ohio needs greater continuity in its capital improvements financial policy;
2. The state of Ohio should repeal its constitutional limit on state debt. If this is not done, it should adopt a flexible limit;

3. All debt issued by the state and its agencies, commissions and universities should carry the state's full faith and credit backing; and

4. All except legally earmarked revenues should be pooled and state debt should have a first lien on the pooled revenues.

Long term capital improvements
financial policy criteria

In the opinion of the writer, a rational and economical state capital outlay and debt management policy could be developed around criteria such as those which follow:

1. Regardless of economic circumstances, the state should attempt to supply capital improvements when they are needed. Backlogs should be avoided whenever possible;

2. Except during severe economic recessions, the amount of capital improvements outlays financed out of current revenues should equal, at a minimum, the amount of capital consumption in the current period;

3. During prosperous periods, borrowing should be used sparingly and mainly to finance backlogs (which should disappear eventually if these criteria are followed) and unusually expensive non-recurring improvements. But borrowing for non-recurring outlays should occur

only if the rational evaluation of alternatives, based when operationally relevant on cost-benefit and similar analytical techniques, indicates that this is the desirable method of finance;

4. When borrowing is used during prosperous periods, the term of the bonds issued should be made as short as possible. Usually, it should be made substantially less than the expected life of the improvement;

5. During severe recessions borrowing can be used to maintain, and perhaps, to expand capital outlays and the portion of current revenues formerly used for capital outlays can be diverted to current operations; and

6. Although the state may be unable to develop a true, countercyclical capital spending program, it should accept the responsibility to ensure that its program does not aggravate economic fluctuations.

Obviously, however, a policy based on such criteria is an ideal which will take time if it is to be achieved. Indeed, there is a dilemma. While such a policy may be eminently sound from the standpoint of rational and economical planning and execution of capital outlays, it should not be incorporated into the organic and statutory laws of the state. Circumstances change and this may periodically require some variation in policy. Moreover, it is doubtful that the candidates for the public offices in which such policy is developed and executed will soon agree on a more or less uniform policy. For it is precisely these issues involving the nature and size of state spending programs and how they are financed that are central to political campaigns. If programs based on low taxes and low governmental budgets are what earn
the votes, and if articulate spokesmen for the view that higher taxes and larger budgets are sometimes necessary do not reach the electorate, there is little chance that a more rational policy will be adopted and followed without interruption.

If this dilemma is to be solved, it appears that solution must await the development of a consensus which recognizes the merit of continuity in planning and executing capital improvements. Although it is not possible here to specify precisely how and when such a consensus will develop, it does seem that it depends, in large part, on the ability of the planner and the fiscal economist to demonstrate to the public why such continuity is needed. This is a formidable task. But it is not an impossible one. After all, only a few years ago it was practically axiomatic that the federal budget should be balanced, regardless of economic circumstances. Today, however, one finds much less unanimity with respect to this point and, in fact, what some have characterized as an operational consensus in the alternative.

Repeal the constitutional limit on state indebtedness

This analysis concludes that Ohio should repeal its constitutional debt limit and place borrowing authority directly in the hands of the legislature. In this age of complex socio-economic problems, excessive reliance on a town meeting approach to decision-making (i.e., the need to amend the Constitution each time new borrowing authority is desired) seems unsatisfactory.

Such a revision does not need to mean loss of autonomy in policy formulation for state instrumentalities such as the universities.
If the legislature believes that such autonomy is useful for higher education, it can grant to the universities substantial discretion in deciding when, for what purposes, and how much to borrow. After all, the autonomy presently enjoyed by universities and other state agencies was granted by the legislature. There is no reason dictated by this suggestion why the autonomy should not continue.

Even nonguaranteed borrowing could be used if factors, other than the mere existence of a debt limit, justify the use of this technique. Although this study revealed no reasons for issuing nonguaranteed debt, except the need to avoid constitutional restrictions against debt creation, some may exist. The important point is that, in the absence of limits, the state would not be forced to issue nonguaranteed debt, regardless of its cost.

**An alternative: a flexible debt limit**

Because there appears to be no consensus that total repeal of the debt limit is yet acceptable, this may be unattainable in the short run. With this facet of political reality in mind, an alternative, flexible debt limit is recommended for adoption in Ohio. This limit is patterned after the one now in use in Puerto Rico. In essence, the limit provides that total debt service due in a year cannot exceed 15 per cent of the average of the last two years’ annual revenues.

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2Puerto Rico Constitution, Article VI, Secs. 2 and 8.

3A decision as to whether Ohio should adopt the 15 per cent figure or some higher or lower one would require very careful analysis of long-term revenue projections and capital spending plans. On the basis of the annual debt service to revenue ratio in Ohio during the
Such a limit would seem to meet the objections of those who believe the legislature is not to be entrusted with unlimited borrowing authority. At the same time, it avoids the drawbacks of the conventional, rigid limit. First, it automatically permits more debt as the state is better able to afford more (i.e., as current revenues are increased). Thus, if the legislature is willing (and able) to raise taxes, it gets more borrowing power; if taxes are not raised or the yields from existing taxes do not increase, borrowing power does not increase. Moreover, if taxes are cut, borrowing power declines.

Some might object to the limit because it would encourage borrowing during boom periods. But the fact that the limit applies specifically to debt service and not debt, per se, will serve to restrain somewhat this tendency. Interest rates usually increase during prosperous periods and, to the extent such a situation exists, debt service per dollar borrowed will increase and there will be relatively "greater encroachment on the available debt margin . . . ." past decade, it would appear that 15 per cent would be large enough for some time to come. See Appendix, Table 24.

For a good (but partisan) analysis of the Puerto Rico debt limit, see Rafael Pico, "A New Look at Debt Limits," Municipal Finance, XXXV (February, 1962), 14-19. The merits of this ceiling are also noted briefly in Ross and Bonin, op. cit., pp. 110-111.

Or, one might object because a state which attempted to cut spending and revenues would lose some of its debt incurring ability. This criticism of the Puerto Rico ceiling is made by Lorens F. Logan, op. cit., p. 101. To the present writer this seems to be an advantage, not a disadvantage, since as a state becomes less willing to maintain revenues, it probably becomes less able to service additional debt.

Pico, op. cit., p. 18.
Similarly, because of the usual direct relationship between maturities and interest rates, there is some incentive with this limit to hold down the term of debt issued.\(^7\)

During periods of severe economic decline, the fact that the limit is based on more than one year's revenues would aid in maintaining borrowing power (if any existed prior to the decline) or in protecting the state against a situation where debt service charges exceeded the permissible percentage of revenues (if the debt service charges had reached the limit prior to the recession).\(^8\) Here it might be desirable to substitute, say a five-year average for Puerto Rico's two-year one to ensure that borrowing power would be maintained in all but the most catastrophic economic collapse.\(^9\) Furthermore, because interest rates are apt to be low and falling during such a period and because longer maturities can be issued at relatively lower costs during these periods, the state may be able to undertake substantial borrowing while keeping debt service charges at manageable levels.\(^10\)

---

\(^7\)Ibid.

\(^8\)Because the limit is based on average revenues for more than one year, it might actually increase during the initial stages of a recession.

\(^9\)Of course, if a state insists on borrowing to the hilt during expansionary periods, ignoring the need for flexibility during recessions, neither this nor any other limit can ensure that capital outlays can be maintained as revenues decline.

This would also have the advantage of limiting the longer term expansion of borrowing capacity during a boom of only a few months or years.

\(^10\)It is possible that the widespread use of such a limit might give new meaning to monetary policy as an anti-recessionary device.
More important than the fact that such a limit allows some flexibility in financing capital outlays, is the fact that it puts borrowing decisions on a more rational basis than does the conventional, rigid limit. As one Puerto Rico official has observed:

The significant thing is that when new borrowing is contemplated, the basic factors for making a decision must be clearly outlined in advance to a legislature to assist in making a sound judgment. The questions are: should taxes be increased, have revenues increased enough to support more debt, should a larger part of capital improvements be paid out of current income, or is it justifiable to use up part of the available borrowing capacity, and thereby pay out a larger proportion of annual available revenue on debt service?\(^\text{11}\)

All state debt should carry full faith and credit guarantee

This recommendation is based on the fact that this study revealed no reasons for nonguaranteed borrowing except the need to avoid debt limits. Until other reasons are found, and if the limit is repealed or modified as was suggested above, there appears to be no justification for continuing to use expensive, nonguaranteed forms of debt.

Even though debt of all state agencies, commissions, and universities would be fully guaranteed, autonomy in policy formulation could continue. The legislature could ensure that the state's credit rating would not be abused, merely by requiring that any agency granted autonomy in policy formulation must demonstrate to the legislature its ability to service additional debt before it would be permitted to create more. If this were done, the agency would be permitted to

\(^{11}\text{Pico, op. cit., pp. 18-19.}\)
borrow without further legislative consideration. For example, if the present policy of servicing debt created to finance dormitory construction out of dormitory user charges were continued, the legislature could require that a university wanting to issue such debt demonstrate that potential user charges would be adequate to cover debt service. In effect, this amounts to a continuation of present procedures, since the bond market (and even the federal government) already require such a demonstration before funds can be borrowed.

All non-earmarked revenues pooled and against which state debt is a first charge

This recommendation is a corollary to the preceding one. If the state means to pledge its full faith and credit, it might as well do it in the most unequivocal fashion. Of course, pledges of particular revenues to service debt outstanding at such time as this recommendation was adopted would have to be honored. The present proposal, if adopted, would apply to all future debt. Ideally, such a pledge should be incorporated into the Constitution, accompanied by an authorization to bondholders to bring suit (probably against the Treasurer of State) should the pledge not be honored. Such unequivocal pledges and the granting of authority to sue if they are not complied with have been adopted elsewhere, and it is believed that such efforts to protect bondholders do a great deal to enhance the credit rating of a state.¹³

¹²See Puerto Rico Constitution, Article VI, Sec. 8, and New York Constitution, Article VII, Sec. 16.

At the present time, Ohio's Constitution pledges all highway user taxes and revenues exclusively for highway purposes. Depending upon the importance attached to the constitutional earmarking of revenues, it would be necessary to maintain one or two revenue pools. Debt management the duty of only one agency

Whether or not the above recommendations to make all future debt of the state and its agencies, commissions, and universities fully guaranteed and to make debt service a first claim on non-earmarked revenues were adopted, it would be useful to have all debt managed by one agency. Because there appears to be no particular reason to have all the state's constitutional officers involved directly in debt management, the state should consider making debt management the responsibility of the Treasurer as is done in California.

Among the Treasurer's duties in connection with debt management would be the following:

1. Certify to the Governor, the Department of Finance, and the General Assembly the amount of revenues required during the year to service the debt. Regardless of whether state debt was serviced from one or two pooled funds or from separate funds as it presently is, moneys accruing to such funds could not be expended for other purposes until adequate provision had been made for debt service charges;

2. Responsibility for making debt service payments as they fall due;

14Ohio Constitution, Article XII, Sec. 5a.
3. Receive and execute orders from Department of Finance to sell state bonds which have been authorized by the General Assembly or agencies authorized to borrow;

4. Debt reporting and planning responsibilities:
   a) Regular consultation with the Governor, the Department of Finance, the members of the legislature regarding current and expected developments in state finances, future capital spending plans, and the nature of new borrowing legislation;
   b) Responsibility for regular analysis of developments in the bond market regarding borrowing costs, timing of sales, and optimum size of bond issues;
   c) Distribute (no less than annually) reports on trends in new and outstanding debt, debt retired, and interest paid since the last report; state expenditures and revenues; and future capital spending and borrowing plans (based on the consultations discussed in paragraph 4a immediately above). Such reports should be furnished to the administration, the General Assembly, investment bankers and other prospective lenders, and the bond rating services.

A final observation

Even if all the preceding recommendations were adopted, problems involving the planning and execution of capital improvements, debt creation, and debt management would remain and new ones would occur. For example, a great deal more should be done to develop a rational process for selecting the improvements to be executed. Similarly, our knowledge regarding real (as opposed to legal) limits on state spending, taxation, and debt creation is comparatively small.
Despite this caveat, it is the opinion of the writer that, by at least giving the recommendations made here a careful hearing, the state would be nearer a solution to some of the major problems attendant with the need for public improvements merely because it had grappled with them.
BIBLIOGRAPHY
Public Documents


- Commissioners of the Sinking Fund. Official Statement, Relating to $30,000,000 Major Thoroughfare Construction Bonds, Series O of the State of Ohio.
- Commissioners of the Sinking Fund. Official Statement, Relating to State of Ohio $15,000,000 Capital Improvements Construction Bonds - Series D.
- Commissioners of the Sinking Fund. Official Statement, Relating to State of Ohio $25,000,000 Improvement Notes - Series 1964-A.


Books

Abernethy, Byron R. Constitutional Limitations on The Legislature. Lawrence: Governmental Research Center, University of Kansas, 1959.


Bell, George A. State Budget Administration in Maryland. College Park: University of Maryland, 1957.


Frisinger, Hubert H. *Michigan State Highway Expenditure Policy.*


Lindman, Bertram H. *Supplemental Bond Financing for Acceleration of the Ohio Highway Program.* March 14, 1951.


________. *An Economic Criterion for State and City Budget Making.* Lexington: University of Kentucky, 1963. (Mimeographed.)


**Articles and Periodicals**


"Case Note: Constitutional Law - Recent Interpretation of Ohio's Limitation on Indebtedness," *Ohio State Law Journal,* VI (June, 1940), 297-308.


Moody's Bond Survey (weekly). 1947-1964, selected issues.


Unpublished Material


Other Material

TABLE 17

EXPENDITURES FOR REGULAR HIGHWAY CAPITAL IMPROVEMENTS,
STATE OF OHIO, BY FINANCING METHOD,
1947-1963

(Dollar Amounts in Millions)

<table>
<thead>
<tr>
<th>Year</th>
<th>Borrowing Amount</th>
<th>Borrowing %</th>
<th>Federal Aid Amount</th>
<th>Federal Aid %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1947</td>
<td>$9.4</td>
<td>40.9</td>
<td>$13.6</td>
<td>59.1</td>
</tr>
<tr>
<td>1948</td>
<td>10.2</td>
<td>25.1</td>
<td>30.5</td>
<td>74.9</td>
</tr>
<tr>
<td>1949</td>
<td>15.0</td>
<td>78.9</td>
<td>4.0</td>
<td>21.1</td>
</tr>
<tr>
<td>1950</td>
<td>15.0</td>
<td>29.2</td>
<td>36.4</td>
<td>70.8</td>
</tr>
<tr>
<td>1951</td>
<td>14.5</td>
<td>30.6</td>
<td>32.9</td>
<td>69.4</td>
</tr>
<tr>
<td>1952</td>
<td>22.2</td>
<td>33.8</td>
<td>43.5</td>
<td>66.2</td>
</tr>
<tr>
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<td>32.6</td>
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<td>67.4</td>
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<td>39.0</td>
<td>52.6</td>
<td>61.0</td>
</tr>
<tr>
<td>1955</td>
<td>30.0</td>
<td>26.8</td>
<td>24.8</td>
<td>22.1</td>
</tr>
<tr>
<td>1956</td>
<td>102.0</td>
<td>73.4</td>
<td>19.7</td>
<td>14.2</td>
</tr>
<tr>
<td>1957</td>
<td>57.0</td>
<td>28.2</td>
<td>46.8</td>
<td>23.2</td>
</tr>
<tr>
<td>1958</td>
<td>157.0</td>
<td>58.9</td>
<td>84.2</td>
<td>31.6</td>
</tr>
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<td>1959</td>
<td>61.0</td>
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<td>179.9</td>
<td>55.5</td>
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<tr>
<td>1960</td>
<td>31.0</td>
<td>10.0</td>
<td>161.9</td>
<td>52.3</td>
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<td>1961</td>
<td>141.9</td>
<td>51.3</td>
<td>134.9</td>
<td>48.7</td>
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<tr>
<td>1962</td>
<td>62.0</td>
<td>21.2</td>
<td>175.4</td>
<td>60.0</td>
</tr>
<tr>
<td>1963</td>
<td>174.2</td>
<td>54.3</td>
<td>146.5</td>
<td>45.7</td>
</tr>
</tbody>
</table>

Total $500.0   18.9 $1,149.5 43.5 $990.7 37.5 $2,640.2 100.0

\[a\] Excludes outlays for toll facilities.

\[b\] Details may not add to totals because of rounding.

<table>
<thead>
<tr>
<th>Year</th>
<th>Borrowing</th>
<th>Federal Aid</th>
<th>Current Revenues And Balances</th>
<th>Total Capital Expenditures^a</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Amount</td>
<td>%</td>
<td>Amount</td>
<td>Amount</td>
</tr>
<tr>
<td>1953</td>
<td>$6.5</td>
<td>98.5</td>
<td>$ b</td>
<td>$1</td>
</tr>
<tr>
<td>1954</td>
<td>40.3</td>
<td>98.5</td>
<td>.2</td>
<td>.4</td>
</tr>
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<td>1.0</td>
<td>.2</td>
</tr>
<tr>
<td>1956</td>
<td>105.5</td>
<td>99.7</td>
<td>.1</td>
<td>.2</td>
</tr>
<tr>
<td>1957</td>
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<td>3.5</td>
<td>38.9</td>
<td>.3</td>
<td>3.3</td>
</tr>
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<td>1959</td>
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<td>2.3</td>
<td>100.0</td>
</tr>
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<td>1960</td>
<td>...</td>
<td>...</td>
<td>b</td>
<td>7.1</td>
</tr>
<tr>
<td>1961</td>
<td>...</td>
<td>...</td>
<td>1.1</td>
<td>14.3</td>
</tr>
<tr>
<td>1962</td>
<td>...</td>
<td>...</td>
<td>.6</td>
<td>100.0</td>
</tr>
<tr>
<td>1963</td>
<td>...</td>
<td>...</td>
<td>1.2</td>
<td>100.0</td>
</tr>
<tr>
<td>Total^a</td>
<td>$301.7</td>
<td>94.4</td>
<td>$1.7</td>
<td>$16.1</td>
</tr>
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</table>

^aDetails may not add to totals because of rounding.

^bLess than $50,000.

^cLess than .05 per cent.

Source: Borrowing - estimated from data in U. S. Bureau of the Census, *Compendium of State Government Finances* (various years), Ohio Turnpike Commission, *Annual Report* (various years), and State Bridge Commission of Ohio, *Annual Report* (various years); federal aid - estimated from data in State Bridge Commission of Ohio, *Annual Report* (various years); current revenues and balances - derived as a residual and equal to total capital expenditures less sum of borrowing and federal aid.
TABLE 19  
EXPENDITURES FOR NON-HIGHWAY CAPITAL IMPROVEMENTS, STATE OF OHIO, BY FINANCING METHOD, 1947-1963  
(Dollar Amounts in Millions)

<table>
<thead>
<tr>
<th>Year</th>
<th>Borrowing Amount</th>
<th>Borrowing %</th>
<th>Federal Aid Amount</th>
<th>Federal Aid %</th>
<th>Current Revenue And Balances Amount</th>
<th>Current Revenue And Balances %</th>
<th>Total Capital Expenditures Amount</th>
<th>Total Capital Expenditures %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1947</td>
<td>$0.1</td>
<td>0.7</td>
<td>$0.7</td>
<td>5.0</td>
<td>$13.5</td>
<td>94.4</td>
<td>$14.3</td>
<td>100.0</td>
</tr>
<tr>
<td>1948</td>
<td>$0.1</td>
<td>0.3</td>
<td>1.1</td>
<td>5.0</td>
<td>21.0</td>
<td>94.7</td>
<td>22.2</td>
<td>100.0</td>
</tr>
<tr>
<td>1949</td>
<td>$0.1</td>
<td>0.7</td>
<td>0.8</td>
<td>5.0</td>
<td>14.1</td>
<td>94.3</td>
<td>15.0</td>
<td>100.0</td>
</tr>
<tr>
<td>1950</td>
<td>$0.1</td>
<td>0.2</td>
<td>2.1</td>
<td>5.0</td>
<td>40.0</td>
<td>94.8</td>
<td>42.2</td>
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<tr>
<td>1951</td>
<td>0.5</td>
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<td>1.4</td>
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<td>93.2</td>
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<td>1952</td>
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<td>1.3</td>
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<td>25.3</td>
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<td>14.3</td>
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<td>1955</td>
<td>10.3</td>
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<td>1.5</td>
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<td>60.4</td>
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<td>100.0</td>
</tr>
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<td>1956</td>
<td>6.7</td>
<td>18.1</td>
<td>1.9</td>
<td>5.0</td>
<td>28.5</td>
<td>76.9</td>
<td>37.1</td>
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<tr>
<td>1957</td>
<td>11.1</td>
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<td>1.8</td>
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<td>23.4</td>
<td>64.4</td>
<td>36.3</td>
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<td>1958</td>
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<td>17.1</td>
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<td>41.7</td>
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<td>69.6</td>
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<td>1960</td>
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<td>3.1</td>
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<td>18.9</td>
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<td>1961</td>
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<td>1962</td>
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<td>56.1</td>
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<tr>
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<td>12.1</td>
<td>35.1</td>
<td>34.5</td>
<td>100.0</td>
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</table>

Total $225.7 37.2 $30.4 5.0 $350.0 57.7 $606.1 100.0

aDetails may not add to total because of rounding.

Source: Borrowing - unpublished records made available by Bureau of Census; and State of Ohio, Department of Finance, Annual Report (various years), and; federal aid - estimated at 5 per cent of total capital expenditures; current revenues and balances - derived as a residual and equal to capital expenditures less sum of borrowing and federal aid.
## TABLE 20
EXPENDITURES FOR NON-HIGHWAY CAPITAL IMPROVEMENTS FROM PROCEEDS OF 1955 CAPITAL IMPROVEMENTS BORROWING PROGRAM BY FUNCTION, AS OF JUNE 30, 1963

<table>
<thead>
<tr>
<th>Function</th>
<th>Amount Spent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Higher Education</td>
<td>$52,559,442</td>
</tr>
<tr>
<td>Health, Welfare, and Correction</td>
<td>75,484,651</td>
</tr>
<tr>
<td>Natural Resources</td>
<td>811,378</td>
</tr>
<tr>
<td>Other</td>
<td>532,144</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$129,387,615a</strong></td>
</tr>
</tbody>
</table>

*a$150 million has been borrowed under this authority. Of the remainder not accounted for here, $16.8 million has been loaned to local school districts for classroom construction and $3.9 million is available for use.*

### TABLE 21
GUARANTEED DEBT OUTSTANDING
IN OHIO, 1946-1963\(^a\)

(Thousands of Dollars)

<table>
<thead>
<tr>
<th>Year</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>1946</td>
<td>$...</td>
</tr>
<tr>
<td>1947</td>
<td>...</td>
</tr>
<tr>
<td>1948</td>
<td>194,265</td>
</tr>
<tr>
<td>1949</td>
<td>200,990</td>
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<tr>
<td>1950</td>
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<tr>
<td>1951</td>
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<tr>
<td>1954</td>
<td>135,813</td>
</tr>
<tr>
<td>1955</td>
<td>151,920</td>
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<tr>
<td>1956</td>
<td>236,724</td>
</tr>
<tr>
<td>1957</td>
<td>347,879</td>
</tr>
<tr>
<td>1958</td>
<td>487,332</td>
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<td>1959</td>
<td>527,740</td>
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<tr>
<td>1960</td>
<td>532,613</td>
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<tr>
<td>1961</td>
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</tr>
<tr>
<td>1962</td>
<td>500,491</td>
</tr>
<tr>
<td>1963</td>
<td>435,136</td>
</tr>
</tbody>
</table>

\(^a\)Fiscal year changed from Jan. 1-Dec. 31 to July 1-June 30 on July 1, 1949.

**TABLE 22**

**NONGUARANTEED DEBT OUTSTANDING**

**IN OHIO, 1946-1963**

(Thousands of Dollars)

<table>
<thead>
<tr>
<th>Year</th>
<th>State Universities</th>
<th>State Bridge Commission</th>
<th>Ohio Turnpike Commission</th>
<th>State Underground Parking Garage</th>
<th>Total</th>
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<td>$.....</td>
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<tr>
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<td>675</td>
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<td>$.....</td>
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</tr>
<tr>
<td>1949</td>
<td>b</td>
<td>400</td>
<td>$.....</td>
<td>$.....</td>
<td>b</td>
</tr>
<tr>
<td>1950</td>
<td>919</td>
<td>110</td>
<td>$.....</td>
<td>$.....</td>
<td>1,029</td>
</tr>
<tr>
<td>1951</td>
<td>1,142</td>
<td>$.....</td>
<td>$.....</td>
<td>$.....</td>
<td>1,132</td>
</tr>
<tr>
<td>1952</td>
<td>2,616</td>
<td>$.....</td>
<td>326,000</td>
<td>$.....</td>
<td>328,616</td>
</tr>
<tr>
<td>1953</td>
<td>3,542</td>
<td>$.....</td>
<td>326,000</td>
<td>$.....</td>
<td>329,542</td>
</tr>
<tr>
<td>1954</td>
<td>11,392</td>
<td>$.....</td>
<td>326,000</td>
<td>$.....</td>
<td>337,392</td>
</tr>
<tr>
<td>1955</td>
<td>19,525</td>
<td>$.....</td>
<td>326,000</td>
<td>$.....</td>
<td>345,525</td>
</tr>
<tr>
<td>1956</td>
<td>27,969</td>
<td>$.....</td>
<td>326,000</td>
<td>$.....</td>
<td>353,969</td>
</tr>
<tr>
<td>1957</td>
<td>34,428</td>
<td>3,500</td>
<td>326,000</td>
<td>$.....</td>
<td>363,928</td>
</tr>
<tr>
<td>1958</td>
<td>38,859</td>
<td>3,500</td>
<td>326,000</td>
<td>$.....</td>
<td>368,859</td>
</tr>
<tr>
<td>1959</td>
<td>42,615</td>
<td>3,435</td>
<td>326,000</td>
<td>$.....</td>
<td>372,050</td>
</tr>
<tr>
<td>1960</td>
<td>50,263</td>
<td>3,355</td>
<td>326,000</td>
<td>$.....</td>
<td>379,618</td>
</tr>
<tr>
<td>1961</td>
<td>63,770</td>
<td>3,267</td>
<td>321,313</td>
<td>$.....</td>
<td>388,350</td>
</tr>
<tr>
<td>1962</td>
<td>69,182</td>
<td>2,956</td>
<td>310,567</td>
<td>$.....</td>
<td>382,705</td>
</tr>
<tr>
<td>1963</td>
<td>87,691</td>
<td>4,353</td>
<td>299,380</td>
<td>6,600</td>
<td>398,024</td>
</tr>
</tbody>
</table>

aData except for state universities are for calendar years; state universities data are for July 1-June 30 fiscal year.

bNot available.

Source: University debt from unpublished records made available by the Bureau of the Census; all other debt figures are from the annual reports of the State Bridge Commission, Ohio Turnpike Commission, and the State Underground Parking Garage.
**TABLE 23**

ANNUAL CHANGE IN STATE CAPITAL OUTLAY AND DEBT IN OHIO, ANNUAL CHANGE IN Aa MUNICIPAL BOND YIELD AND DIRECTION OF BUSINESS CYCLE, 1952-1963

(Dollar Amounts in Millions)

(Yields in Percentages)

<table>
<thead>
<tr>
<th>Year</th>
<th>Change in Capital Outlays (^a)</th>
<th>Change in Debt Outstanding (^a)</th>
<th>Change in Aa Bond Yield (^a)</th>
<th>Direction of Business Cycle, Up(+) or Down(-)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1952</td>
<td>$16.0</td>
<td>-$11.7</td>
<td>0.21</td>
<td>+</td>
</tr>
<tr>
<td>1953</td>
<td>2.0</td>
<td>313.7</td>
<td>0.44</td>
<td>+</td>
</tr>
<tr>
<td>1954</td>
<td>57.7</td>
<td>-5.1</td>
<td>0.07</td>
<td>-</td>
</tr>
<tr>
<td>1955</td>
<td>132.7</td>
<td>26.0</td>
<td>-0.24</td>
<td>+</td>
</tr>
<tr>
<td>1956</td>
<td>-2.0</td>
<td>90.4</td>
<td>0.30</td>
<td>+</td>
</tr>
<tr>
<td>1957</td>
<td>-35.3</td>
<td>117.5</td>
<td>0.53</td>
<td>+</td>
</tr>
<tr>
<td>1958</td>
<td>67.4</td>
<td>143.8</td>
<td>0.23</td>
<td>-</td>
</tr>
<tr>
<td>1959</td>
<td>79.4</td>
<td>44.0</td>
<td>0.18</td>
<td>+</td>
</tr>
<tr>
<td>1960</td>
<td>-20.2</td>
<td>12.4</td>
<td>0.21</td>
<td>+</td>
</tr>
<tr>
<td>1961</td>
<td>-37.2</td>
<td>-37.2</td>
<td>-0.18</td>
<td>-</td>
</tr>
<tr>
<td>1962</td>
<td>3.1</td>
<td>-9.2</td>
<td>-0.07</td>
<td>+</td>
</tr>
<tr>
<td>1963</td>
<td>17.7</td>
<td>-58.9</td>
<td>-0.24</td>
<td>+</td>
</tr>
</tbody>
</table>

\(^a\)Increase or decrease between fiscal year shown and preceding fiscal year.

**TABLE 24**

EXPENDITURES FOR DEBT SERVICE AS A PERCENTAGE OF GENERAL REVENUES, STATE OF OHIO, 1953-1963

(Dollar Amounts in Thousands)

<table>
<thead>
<tr>
<th>Year</th>
<th>General Revenues</th>
<th>Interest on Debt</th>
<th>Debt Retirement</th>
<th>Total Debt Service</th>
<th>Debt Service as a Percentage of General Revenues</th>
</tr>
</thead>
<tbody>
<tr>
<td>1953</td>
<td>$ 636,174</td>
<td>$ 7,652</td>
<td>$13,592</td>
<td>$ 21,244</td>
<td>3.3</td>
</tr>
<tr>
<td>1954</td>
<td>717,257</td>
<td>13,541</td>
<td>13,860</td>
<td>27,401</td>
<td>3.8</td>
</tr>
<tr>
<td>1955</td>
<td>754,155</td>
<td>13,629</td>
<td>14,283</td>
<td>27,912</td>
<td>3.7</td>
</tr>
<tr>
<td>1956</td>
<td>823,930</td>
<td>15,066</td>
<td>17,890</td>
<td>32,956</td>
<td>4.0</td>
</tr>
<tr>
<td>1957</td>
<td>902,235</td>
<td>17,037</td>
<td>32,827</td>
<td>49,864</td>
<td>5.5</td>
</tr>
<tr>
<td>1958</td>
<td>1,003,436</td>
<td>22,271</td>
<td>48,528</td>
<td>70,799</td>
<td>7.1</td>
</tr>
<tr>
<td>1959</td>
<td>1,121,971</td>
<td>25,977</td>
<td>51,331</td>
<td>77,308</td>
<td>6.9</td>
</tr>
<tr>
<td>1960</td>
<td>1,291,949</td>
<td>28,067</td>
<td>57,608</td>
<td>85,675</td>
<td>6.6</td>
</tr>
<tr>
<td>1961</td>
<td>1,284,374</td>
<td>27,588</td>
<td>56,483</td>
<td>84,071</td>
<td>6.5</td>
</tr>
<tr>
<td>1962</td>
<td>1,354,621</td>
<td>27,517</td>
<td>80,997</td>
<td>108,494</td>
<td>8.0</td>
</tr>
<tr>
<td>1963</td>
<td>1,412,149</td>
<td>28,059</td>
<td>78,157</td>
<td>106,216</td>
<td>7.5</td>
</tr>
</tbody>
</table>

*Source: Calculations from data in U. S. Bureau of the Census, Compendium of State Government Finances (various years).*
VITA

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1964 . . . . . . Assistant Professor, Ball State Teachers College, Muncie, Indiana

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Studies in Public Finance. Professors L. Edwin Smart, Arthur D. Lynn, Jr., and Clinton V. Oster

Studies in International Trade and Finance. Professor Clifford L. James

Studies in Economic Theory. Professors Clifford L. James, Robert D. Patton, and Diran Bodenhorn