

COST-REVENUE ANALYSIS OF WISCONSIN  
TAX INCREMENT FINANCING

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## LOCAL FINANCIAL DIMENSIONS OF TAX INCREMENT FINANCING:

### A COST-REVENUE ANALYSIS

Financing local development and redevelopment projects is a difficult endeavor for cities. The costs of major projects are large--often reaching millions of dollars--and are typically incurred at the "front-end" of the development<sup>1</sup> process. Benefits from such projects, on the other hand, are often small in initial years and are typically shared with numerous governments throughout the area. This is especially true of project-induced increases in the local property tax base and associated property tax revenues which are shared by various local taxing jurisdictions, such as the county and area school districts. In some instances the costs and revenues (or more broadly benefits) associated with a proposed development project are negatively imbalanced from a city's perspective and the project is not undertaken by the city, frequently eliminating projects which would produce a surplus in benefits over costs when viewed from the perspective of the whole region.

The federal government's response to this situation has largely been that of subsidizing cities through explicit development grants. The now extinct federal urban renewal program, for example, provided grants to cities for redevelopment projects undertaken in specially designated renewal areas for up to two-thirds of project costs. Similar, but more general grants are also currently used in other federal programs, such as community development block grants, urban development action grants and grants from the Economic Development Administration. All such grants are intended to lower the cost of development efforts to cities and thus

provide an incentive for cities to engage in much needed urban renewal activities.

Many state governments as well have attempted to provide some type of financial incentive to encourage their cities to engage in socially desirable development projects. One of the most popular of these efforts among states is tax increment financing (TIF), a device which has been adopted by at least 37 states through 1981.<sup>2</sup>

Under tax increment financing, property tax revenues from numerous local taxing jurisdictions are diverted to a city or its designated development authority as partial repayment for development expenditures which have been made in specially designated TIF districts--districts which typically contain blighted or deteriorating property or possess unique development potential. Expenditures that are made within TIF districts commonly include the purchase, clearance and assembly of land, street improvements, construction of parking facilities, and so forth. After the development expenditures have been made by a city and as property values increase within a TIF district over time, the property tax revenues of all local governments are partially diverted to the city as reimbursement for the development expenditures which have been made. Thus, for example, county and school district property taxes are given to the city (in the form of "tax increments") as partial repayment for the expenditures which have been made by the city in the district. When the development expenditures have been completely recovered by the city (or for a period up to 20 years in most states), the TIF district is

terminated and the tax base within the TIF district is returned to full use by all local governments.<sup>3</sup>

Like its federal program counterparts, tax increment financing is intended to give cities an incentive to undertake development projects which they otherwise would not undertake--due to the maldistribution of project-related costs and benefits over time. For example, the preamble to Wisconsin's tax increment financing law states:

The legislature finds that the existing system of allocating aggregate property tax revenues among tax levying municipalities has resulted in significant inequities and disincentives. The cost of public works or improvements within a city or village has been borne entirely by the city or village, while the expansion of tax base which is stimulated--benefits not only the city or village but also all municipalities which share such tax base. This situation is inequitable. Moreover, when the costs to a city...of a public improvement project exceeds the future benefit to the city..., the city... may decide not to undertake such project. This situation has resulted in the postponement or cancellation of socially desirable projects.<sup>4</sup>

Tax increment financing unlike its federal program counterparts, however, creates the development incentive for cities through the diversion of local property taxes, rather than the subsidization of development expenditures through explicit development grants.

Development expenditures by a city--however they are financed--are an investment by the public and must be evaluated as such. Regardless

of the broad benefits derived by society from a particular development project, cities and other local governments are concerned with the practical issue of having enough revenue to pay anticipated costs, especially in times of tightening public fiscal resources. A dollar spent today represents a dollar that cannot be spent tomorrow. Likewise, a dollar invested today must produce more than a dollar tomorrow to meet future government needs.

Despite the apparent popularity of tax increment financing among states, a detailed financial analysis of TIF has not been undertaken to date. This is largely due to the short experience of most states with TIF and due to the fact that the cost and revenue streams associated with individual TIF projects extend far into the future, thus making ex post analysis difficult. This study develops a conceptual framework by which the costs and revenues associated with a TIF project over time may be measured. This is done here for both the city which undertakes the TIF project (referred to as the "sponsor" government) and other local governments which make tax increment payments to the city (referred to as "contributor" governments). Using this framework, discounted cost-revenue analysis is conducted on 16 Wisconsin TIF projects, with the point of reference being the number of years required for the net present value of revenues for each project to exceed the net present value of associated costs. The results of this analysis for each project are reported for the sponsoring city (or village) government and the county government involved, the example here of a contributor government.<sup>5</sup>

To accomplish this, the paper proceeds as follows: (1) description of how tax increments are generated; (2) development of a conceptual timestream for TIF project-related costs and revenues; (3) discussion of discounted cost-revenue analysis; (4) presentation of results; and (5) summary.

## GENERATION OF TAX INCREMENTS

Under tax increment financing a city creates an artificial tax boundary or district containing a known amount of property value, referred to as "base value," at the time of creation. Then for a period of time specified by state law, the city can make expenditures which promote the development or redevelopment of property within the district.

The expenditures made by the city are reimbursed over time by the payment of "tax increments" from the various governments having taxing power over the property within the district. As property values in the district increase above the base value, tax increments are generated by applying the general property tax rate for each unit of government involved to the growth in the district's tax base, commonly referred to as "value increment."

For example, three units of government use the property tax base of the city illustrated in Table 1 to finance their services. These are the city itself, the county and a local school district. Suppose the city creates a TIF district for purposes of redeveloping a two block area in its downtown and determines that there is \$1.0 million in property value (base value) in the district at the time of creation, which is 1980 in this example. After spending \$79,900 to improve streets in the area, property values in the district are initially (1981) unaffected but then eventually begin to increase.

Since property values fail to increase during the first year, no tax increments are generated for the city. In the second year, however,

TABLE 1

EXAMPLE OF TAX INCREMENT PAYMENTS BY THREE LOCAL GOVERNMENTS

	1981	1982	1983	1984	1985
district actual value	\$1,000,000	\$1,200,000	\$1,800,000	\$2,500,000	\$3,500,000
district BASE VALUE	<u>\$1,000,000</u>	<u>\$1,000,000</u>	<u>\$1,000,000</u>	<u>\$1,000,000</u>	-
VALUE INCREMENT	0	\$ 200,000	\$ 800,000	\$1,500,000	-
taxing jurisdiction	tax rate	tax rate	tax rate	tax rate	tax rate
city	.0065	.0060	.0070	.0065	
county	.0020	.0020	.0025	.0025	
school	.0200	.0210	.0250	.0220	
total annual TAX INCREMENT	\$ 0	\$ 5,800	\$ 27,600	\$ 46,500	
cummulative TAX INCREMENT	\$ 0	\$ 5,800	\$ 33,400	\$ 79,900	
Original City Development Expenditure in TIF District: \$79,900					
Original (BASE) Value of TIF District at Time of Creation (1980): \$1,000,000					
					District Terminated: Original Expenditure Completely Recovered

property values have increased by \$200,000 and tax increments are generated for the city by multiplying the general tax rate for each of the three units of government by the value increment. In 1982, for example, a total tax increment of \$5,800 is generated: \$1,200 by the city itself and the remainder by the county and school district. This process is continued each year until the \$79,900 originally expended by the city is totally recovered. When this occurs, which is after the fourth year in this example, the district is dissolved and the total value in the district is returned to full use by all three units of government.

#### TIMESTREAM OF TIF COSTS AND REVENUES: TWO PERSPECTIVES

Two types of government are directly involved in the functioning of tax increment financing.<sup>6</sup> Sponsor governments are the local jurisdictions which design TIF projects and which make the development expenditures. These are the units of government which are intended to be stimulated into action by the existence of TIF. Secondly, contributor governments are the local jurisdictions which make tax increment payments to the TIF sponsor, but who do not directly participate in the development program. While only one of the two types of government is actively involved in the development process, both are affected by the costs and revenues which are associated with particular TIF projects.

Assuming that tax increment financing causes sponsor governments to undertake development projects which they otherwise would not undertake, it is possible to construct a conceptual framework which identifies the



alternative cost and revenue timestreams for both sponsor and contributor governments. One timestream pertains to the costs and revenues to both types of government when the sponsor government does not undertake a development project (due to a lack of financial incentive), which is referred to here as the "Without Project" Timestream. The second timestream pertains to the costs and revenues which result when a sponsor government is induced to undertake a development project using TIF, which is referred to here as the "TIF Project" Timestream. The two timestreams are considered first for the case of a sponsor government (Figure 1) and in turn for a contributor government (Figure 2).

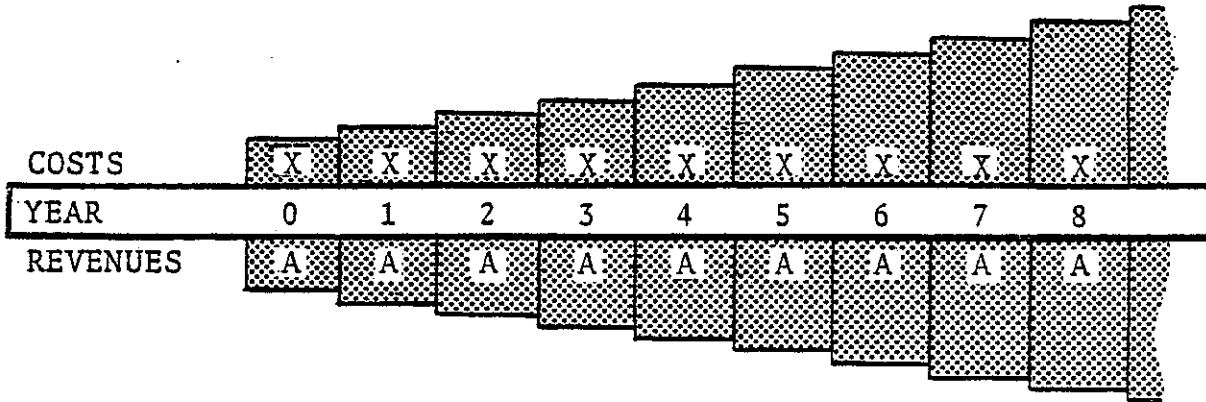
Suppose, for example, that a city is concerned about the general physical deterioration which is occurring in its downtown area. If the city decides that the costs of a redevelopment project outweighs the benefits and decides to do nothing, the "without project" timestream of city costs and revenues shown in Figure 1 would result. Normal public service expenditures X would continue to grow in current dollar terms, largely due to the impact of inflation on public expenditures. Property tax revenues A from the property in the area might also increase over time due to the impact of inflation on property values, although this is not necessarily so in areas experiencing rapid economic decline or in cities where property reassessments are done infrequently.

If the city decides to undertake a redevelopment project for the area due to the existence of TIF, a different "TIF project" timestream may take place. In terms of city costs, redevelopment expenditures Y -- possibly for street improvements, increased parking, etc. -- will be

FIGURE 1

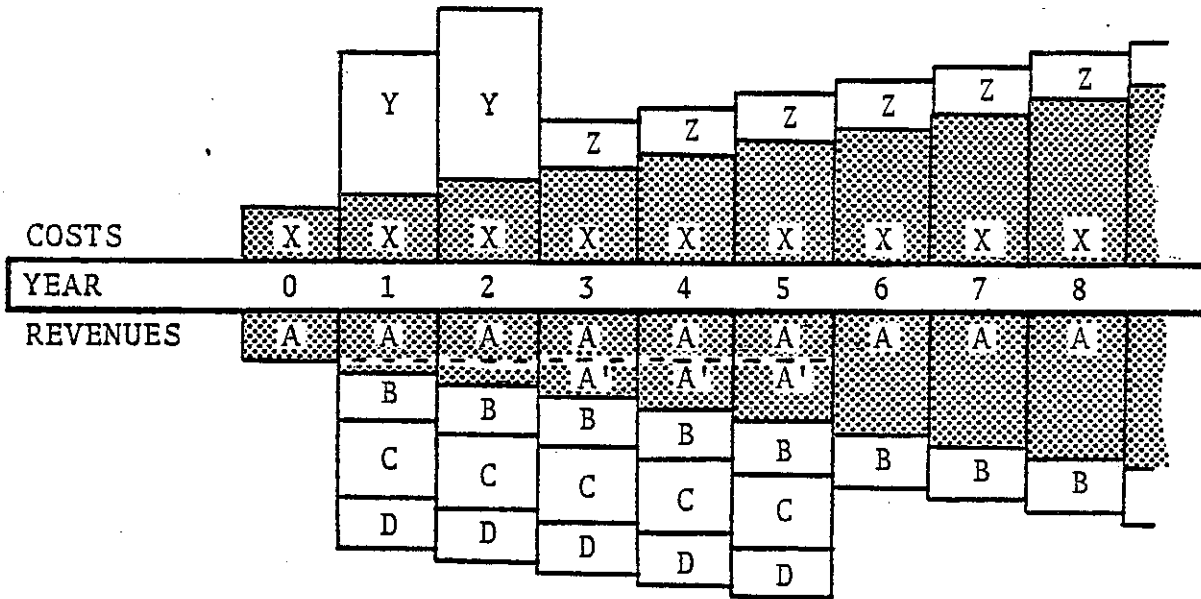
COSTS AND REVENUES FOR SPONSOR GOVERNMENT, WITHOUT AND WITH TAX INCREMENT FINANCING PROJECT

"Without Project" Timestream



district created →

← district terminated



"TIF Project" Timestream

added to the existing general expenditures X. In addition, the level or nature of city services delivered to the area may change following the development project, thus increasing city costs by Z.

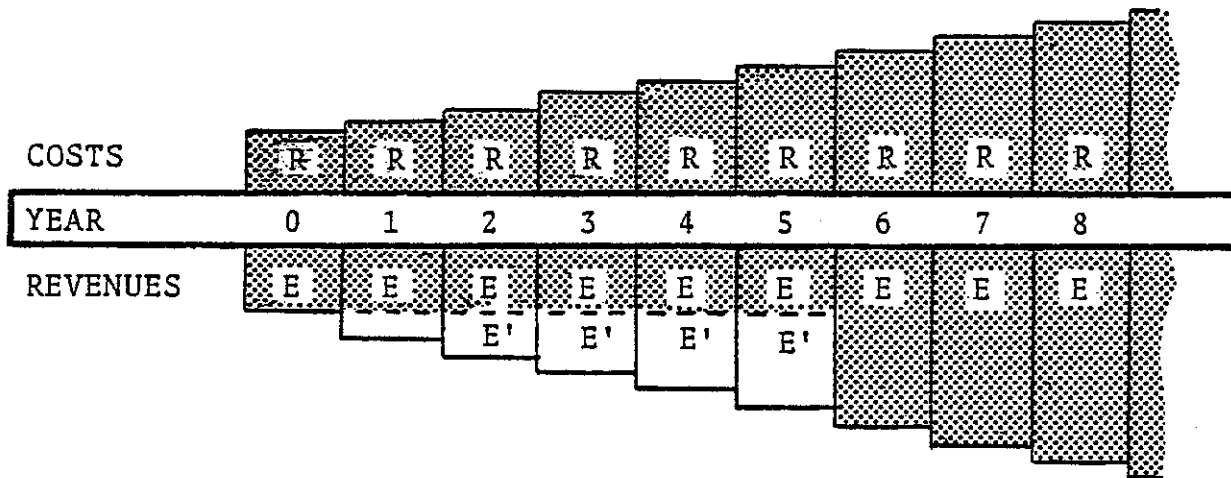
More radical changes happen to city revenues under TIF. First, city property tax revenues increase above what they otherwise would, due to the growth in district values which was caused by the TIF expenditures. For example, new streets encourage existing store-owners to improve their properties and induce new activity to locate within the area. The tax revenue impact of this is shown by area B in Figure 1. In addition to this, the city receives the property tax revenue that contributor governments -- such as the county and school districts -- would have received from the growth in property values within the TIF district. This diversion in funds which is in the form of tax increment payments is shown as areas C (county) and D (school) in Figure 1 and occurs only as long as the TIF district is in existence. In the example, total tax increments to the city (sum of A, B, C, and D) equal total city development expenditures (sum of Y) in the fifth year and, thus, the TIF district is terminated at this point.<sup>7</sup> The net difference over time to the sponsor city between not having a project and having a TIF project is shown by the unshaded area in Figure 1.

A similar set of cost and revenue timestreams can be constructed for contributor governments. The case of the county, for example, is shown in Figure 2.<sup>8</sup> If the sponsor city does not undertake the TIF project, normal county expenditures R are likely to grow over time due to the influence of inflation, while property tax revenues E and E' may either increase (due to inflation) or decrease (in areas experiencing rapid

FIGURE 2

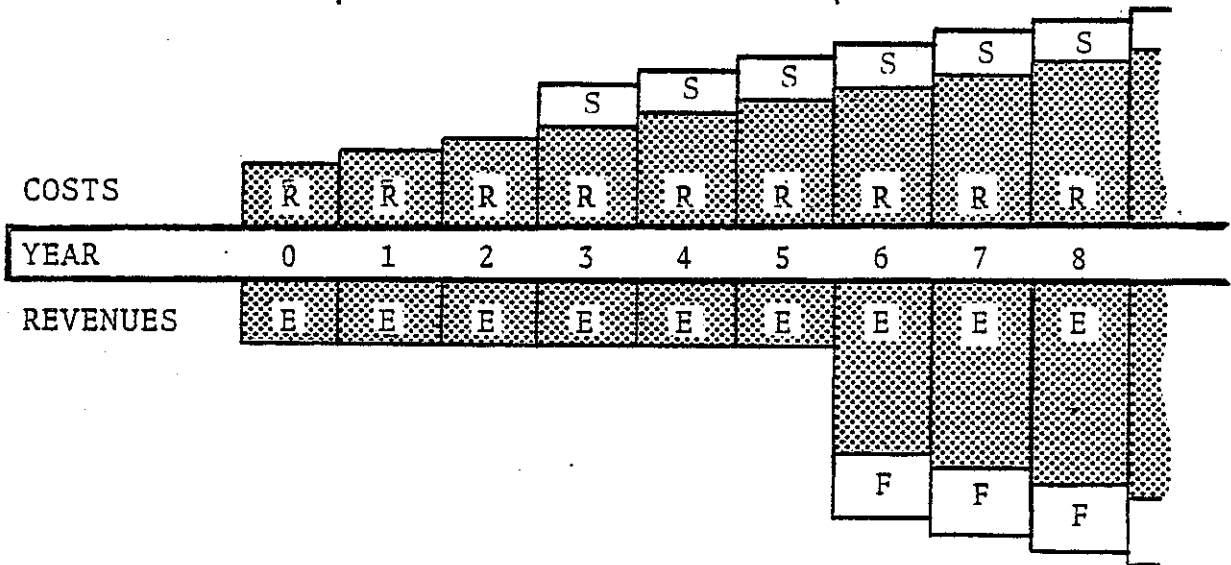
COSTS AND REVENUES FOR CONTRIBUTOR (COUNTY) GOVERNMENT,  
WITHOUT AND WITH TAX INCREMENT FINANCING PROJECT

"Without Project" Timestream



district created →

← district terminated



"TIF Project" Timestream

economic decline).

If the city, on the other hand, decides to undertake the TIF redevelopment project, contributor government expenditures are affected only to the extent that the TIF project alters the level or nature of services delivered by that government to the area. The expenditure impact of this indirect effect is shown as area S in Figure 2. Contributor government revenues, however, are affected in two ways. The short-run impact of TIF to a contributor government is felt in foregone tax revenues. Over the life of a TIF project, county tax revenues on the growth in TIF district value are given to the sponsor city in the form of tax increment payments, including revenues generated by both inflation and TIF induced growth. The opportunity costs of the non-TIF related foregone tax revenues is equivalent to E' in Figure 2.<sup>9</sup> In the long-run, after the TIF district's termination, the contributor government stands to realize a financial gain in the form of tax revenues which it otherwise would not have received without the induced growth associated with the city's TIF expenditures. These gains are represented by area F in Figure 2. The net difference over time to a contributor government by an underlying sponsor government using, versus not using TIF is again shown by the unshaded area.

#### DISCOUNTED COST-REVENUE ANALYSIS

Discounted cost-revenue analysis, which merges features of both cost-revenue and cost-benefit analyses,<sup>10</sup> reduces a government's timestream of

costs and revenues associated with a development project to a single number, "net present value." This is accomplished through the use of the general formula;

$$NPV = \frac{R_t - C_t}{(1 + r)^t} + \frac{R_{t+1} - C_{t+1}}{(1 + r)^{t+1}} + \dots + \frac{R_{t+n} - C_{t+n}}{(1 + r)^{t+n}}$$

where NPV is the net present value for the project under consideration, R is the revenue associated with the project vis-a-vis the revenue associated with the next best alternative use of public funds, C is the cost associated with the project in comparison to the alternative use of funds, t through t + n represent years from the start of the project (t=0) to the end of the analysis (t + n), and r is the cost of borrowed funds for the unit of government, expressed as an interest rate.

Used in this context, net present value represents the financial value today of a project versus the alternative of no project (or a different project), after accounting for the time value of money to a local unit of government.<sup>11</sup> A negative net present value represents a poor financial investment of public resources -- meaning that the expenditures made on the proposed project would be better left unspent (or spent on an alternative project). A positive net present value represents a profitable investment of resources, in that the value today of the expected stream of revenues resulting from the project exceed the value today of the costs or foregone revenues associated with the project over time.

Of critical importance in determining whether net present value is

positive or negative over the life of a development project or in determining the amount of time required for a project to breakeven (turn from negative to positive net present value) is both the size and timing of the revenues and expenditures associated with the project. Later expenditures or revenues are discounted more heavily than early expenditures or revenues and thus have a smaller impact on net present value. In the case of sponsor governments, for example, early development expenditures are offset by early tax increment payments and both have a greater fiscal impact than later "induced" property tax revenue gains. For contributor governments, early foregone tax losses are discounted less heavily than later potential tax revenue gains and thus have a greater fiscal impact on such governments.

Discounted cost-revenue analysis was conducted on 16 Wisconsin TIF projects which were created during the first two years (1975 and 1976) of that state's TIF law. These projects were chosen because they offer the longest record of experience in Wisconsin and because they illustrate the diversity of projects which can be undertaken using tax increment financing.<sup>12</sup>

The discounted cost-revenue analysis was conducted for the sponsor (city or village) government and one contributor (county) government involved with each project. Net present value of the TIF project for each government was calculated using the conditions which would have existed "without the project" as the next best alternative. To conduct the analysis, estimates were needed for:

<u>Sponsor Governments</u>	<u>Contributor Governments</u>
*TIF development expenditures (Y)	*Tax revenues foregone (E')
*Induced city expenditures (Z)	*Induced county expenditures (S)
*Increased city tax revenues induced by TIF (B)	*Increased tax revenues induced by TIF (F)
*Tax increment payments by contributor governments (C and D)	

Estimates for TIF development expenditures, including debt service, were gotten directly from TIF project plans for each of the 16 districts.

Actual tax increment payments were used in the years for which such data existed and were estimated for subsequent years using various assumptions concerning property values and tax rates for all taxing jurisdictions involved.<sup>13</sup> Foregone tax revenues were similarly recorded for years in

which actual data existed and were estimated for subsequent years using the same assumptions that were used for estimating tax increment payments.

The induced expenditure effects on sponsor and contributor governments were assumed to be zero in this analysis due to the lack of empirical evidence in this regard.<sup>14</sup> Of a more problematic nature, no reliable estimates were available for the increased city or county tax revenues which were or would be induced by the TIF expenditures. In particular, definitive estimates were not available on the amount of property value growth which had or would occur within the TIF districts above what would have occurred without the project. To circumvent this lack of information and to examine the importance of this variable on local fiscal impacts, TIF induced value growth was assumed to range between one and five percent above the average value increase for the city as a whole.



To conduct the discounted cost-revenue analysis for the sponsor and contributor governments involved it was also necessary to estimate the time value of money (or discount rate) for local units of governments. Two estimates of this were used in this study. The first, six percent, represented the average interest rate on general obligation debt for the municipalities involved. A second, higher rate of 12 percent was alternatively used to reflect recent trends in municipal borrowing rates and to measure the sensitivity of the analysis to variations in the cost of government borrowed funds.

## RESULTS

Costs and revenues for each of the 16 projects were estimated for up to 30 years following the district's creation and then discounted to present value. The breakeven point--the year in which net present value turns positive--was then determined for both the sponsor government and the county government involved. Table 2 shows the estimated number of years which would be required for each project to breakeven for both governments under alternative induced value growth and discount rate assumptions.

Under the best of circumstances for local governments--high TIF induced value growth and low discount rate--only two of the 16 projects (Fort Atkinson #1 and Madison) would realize positive net present value for the sponsor government involved at the time the TIF district would be terminated and the tax base released to all local governments for full use. Eight of the remaining projects would experience breakeven net present value within 20 years of project beginning and an additional four sponsor governments would experience positive net present value within 30

TABLE 2

NUMBER OF YEARS TO BREAKEVEN FOR SIXTEEN WISCONSIN TIF PROJECTS

Annual Value Increase in TIF District  
above City/Village Average Value Increase

		1%		5%	
		City/ Village	County	City/ Village	County
6%	Brillion	30	27	23	24
	Green Bay	30+	30+	30+	30+
	Hudson	12	30+	9	30
	Milwaukee #1	30+	30+	30	30+
	Platteville	22	30+	17	30+
	Bloomer #1	11	30+	8	27
	Bloomer #2	30+	30+	30+	30+
	Ft. Atkinson #1	5	11	3	10
	Ft. Atkinson #2	13	20	10	18
	Ft. Atkinson #3	18	29	14	26
	Ft. Atkinson #4	29	30	22	27
	Ft. Atkinson #5	20	30	15	26
	Madison	5	14	3	13
	Marinette	13	30+	10	29
	Milwaukee #3	29	30+	22	30+
	Shawano	10	25	8	23
12%	Brillion	30+	30+	28	29
	Green Bay	30+	30+	30+	30+
	Hudson	15	30+	11	30+
	Milwaukee #1	30+	30+	30+	30+
	Platteville	27	30+	21	30+
	Bloomer #1	13	30+	10	30+
	Bloomer #2	30+	30+	30+	30+
	Ft. Atkinson #1	6	13	4	12
	Ft. Atkinson #2	16	24	12	22
	Ft. Atkinson #3	22	30+	17	30+
	Ft. Atkinson #4	30+	30+	27	30+
	Ft. Atkinson #5	24	30+	18	30+
	Madison	6	17	4	16
	Marinette	16	30+	12	30+
	Milwaukee #3	30+	30+	27	30+
	Shawano	12	30+	10	28

years. The average length of time required to breakeven for the 14 projects doing so within the time period included in this analysis was 13.9 years. Two of the TIF projects examined here would not reach a breakeven position for the sponsor government over the 30 year period following the project's initiation.

For counties, the example here of contributor governments, the fiscal impacts of the 16 TIF projects under the "best of circumstances" are more severe. The negative impact on net present value of early foregone tax revenues is difficult to overcome by increased long-run TIF induced property tax revenues. Five of the 16 projects examined would fail to produce positive net present value for the county over the 30 year period following a sponsor government's initiation of a TIF project. For the remaining eleven projects, breakeven periods would range from 10 to 30 years, with the mean breakeven period for this group being 23.0 years.

Under less favorable circumstances for local governments -- low TIF induced value growth and high discount rate -- TIF projects take considerably longer to provide positive net present values for sponsor and contributor governments. Assuming a one percent TIF induced value increase in district values and a 12 percent discount rate, only 10 projects would experience a positive net present value for sponsor governments over the 30 years examined in this study -- which compares to 14 projects under the previous assumptions. For the 10 projects realizing positive net present value for sponsor governments under both sets of assumptions, the average length of time to breakeven increases from 9.7 to 15.7 years as induced value growth decreases and as the time value of money increases.

Under conditions of low induced value increase and high time value of money only three projects would allow affected county governments to breakeven within 30 years following the creation of a TIF district by an underlying city. This compares to eleven projects under the assumption of more favorable conditions.

Table 3 summarizes this information for both sponsor and contributor governments under alternative assumptions pertaining to the size of the TIF-induced value increase within TIF districts and the time value of money to local governments. Under favorable local conditions, nearly two-thirds of the TIF projects examined here would breakeven for the sponsored government involved within 20 years of project initiation. Under less favorable conditions, over 50 percent of the projects would take longer than 21 years to breakeven for sponsor governments. For the county governments affected by the 16 projects considered here positive fiscal impacts are slow in materializing. Under both favorable and less favorable conditions, less than three projects produce positive net present value for the county within 20 years of project initiation.

#### SUMMARY

Tax increment financing is an important development policy for state, sponsor and contributor governments involved with its use. It is important to states which enable its use because of its impact on the overall development which occurs within a state and because of its potential impact on the intergovernmental well-being of numerous units of local

TABLE 3

SUMMARY OF BREAKEVEN PERIODS FOR SPONSOR AND CONTRIBUTOR GOVERNMENTS

Years to Breakeven	Sponsor Governments			
	Discount Rate	6%	6%	12%
	Value Growth	5%	1%	5%
0 - 10		7	3	4
11 - 20		3	6	5
21 - 30		4	4	4
30+		2	3	3

Years to Breakeven	Contributor Governments			
	Discount Rate	6%	6%	12%
	Value Growth	5%	1%	5%
0 - 10		1	0	0
11 - 20		2	3	2
21 - 30		8	4	3
30+		5	8	11

government for which the state has responsibility. Tax increment financing is important to sponsor governments because a new financial resource has been made available for local development purposes. The tool is important to contributor governments because of the revenues they forego in hopes of a longer-run fiscal gain.

From a sponsor government's fiscal impact point of view, TIF must be seen as a mid-to-longer-run public investment. To the extent that tax increment financing "induces" a sponsor government to undertake a development project which it otherwise would not, sensitivity to the expected length of time for realization of positive financial impacts is critical.

The expected financial gains to at least one of the contributor governments, the county in this case, must be considered extremely long-run under Wisconsin tax increment financing. In general, the present value of foregone tax revenues appears to far outweigh the present value of potential long-run tax revenue gains for the county.<sup>15</sup>

It is important to note that the present analysis has pertained strictly to an estimation of the direct fiscal impacts of TIF projects to sponsor and contributor governments. Also of interest here has been the variation in these impacts under alternative assumptions concerning the time value of money to local governments and the induced effect of TIF expenditures on local property values. Important benefits such as the social value of blight that is eliminated or the economic value of new jobs created by TIF expenditures, although not included in this study, are also important considerations in the analysis of particular development proposals. But while there is merit to the long-standing appeal to broaden the scope of local budget and planning analysis to include as

many social costs and benefits as possible, it is important that the financial dimensions of proposed local development projects be well understood in times of severe local fiscal pressures. To this end, the size and distribution of TIF-related costs and revenues, including the induced effect of TIF expenditures on local property values, and the time value of money are all important factors to be considered by the various local governments that are involved when tax increment financing is used.

## NOTES

1. The term "development" is used in this paper for both new development of areas within a city and for the redevelopment of existing parts of a city.
2. The Tax Incremental Financing Law (Madison, Wisconsin: Wisconsin Legislative Audit Bureau, 1981), p. I-1.
3. The "mechanics" of tax increment financing are further illustrated in the following section.
4. Chapter 105 laws of 1975, Wisconsin.
5. In Wisconsin, only city and village governments can use TIF. Unincorporated townships, counties, school districts and other local property taxing jurisdictions may not use TIF, but do pay tax increments to city and village governments which undertake TIF projects.
6. State governments are a third party involved with the functioning of TIF since they pass the enabling legislation which allows TIF to be used by local governments and in some cases make supplemental aid payments to affected local taxing jurisdictions.
7. Only direct development expenditures Y are reimbursable by tax increments. Induced municipal expenditures Z are typically not recoverable under TIF.



8. Typically there are several contributor governments for each TIF project, usually equaling the number of governments taxing the local property tax base. The timestream for contributor governments will vary from that shown in Figure 2 when supplemental payments are involved.
9. The opportunity cost of TIF related value increases to a contributor government is zero since this benefit would not have occurred without the TIF project.
10. See Eva Galambos and Arthur Schreiber, Making Sense Out of Dollars: Economic Analysis for Local Governemnts (Washington D.C.: National League of Cities, 1978), pp. 62-76 and 101-114 for a descirption of both cost-benefit and cost-revenue analysis.
11. A similar use of discounting and net present value can be found in the private sector application of discounted cash-flow analysis. See, for example, Alvin Arnold, Charles Wartzelback and Mike Miles, Modern Real Estate (Boston: Warren, Gorham & Lamont Publishers, 1980), pp. 372-389.
12. The projects examined here ranged in scope from major downtown redevelopment and industrial parks in larger cities to residential developments in smaller communities. Average project cost including debt service for the 16 projects was \$6.3 million, with a range between \$107,000 and \$32.7 million. Average TIF district "base" value at the time of district creation for the 16 projects was \$8.0 million, with a range between \$106,000 and \$53.0 million. More detailed project information can be obtained from the author upon request.

13. For years in which actual data was not available, tax base and levies for each unit of government involved was assumed to grow at the same rate as the average annual rate of growth for each government over the five years prior to the TIF district's creation. TIF district property values were assumed to grow between one and five percent more than the average value increase for the city or village as a whole. In comparing actual district value growth rates to actual city value growth rates for the period 1978 to 1980, five of the districts grew more slowly and 11 districts more rapidly (between 2 and 5 percent) than the respective city or village involved. TIF induced growth in excess of the rates assumed here would shorten the time required for a project to breakeven, while lower growth rates would have the opposite effect.
14. cursory contacts with county and school districts involved with the 16 projects reported here suggested that no change in service levels or nature were anticipated by these governments in response to the TIF projects.
15. Although not considered here, the fiscal impacts of TIF would be less severe for those contributor governments receiving supplemental or hold-harmless payments from the state.

PREVIOUS OCCASIONAL PAPERS

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