Inflated Implementation



Responsible Usage of Tax Increment Financing

BY JACOB GRUBMAN

Introduction

Tax increment financing (TIF) is an economic redevelopment tool that redirects property taxes from local jurisdictions to funds that support development in specially designated districts. Since first emerging in 1952, TIF has been introduced in forty-nine states and Washington, D.C., as it provides an attractive option for policymakers seeking development in their municipalities. At its most basic, TIF has become increasingly popular because it allows policymakers to pursue economic development initiatives without tax increases, the accompanying loss of political capital, and the limitations that apply to other forms of debt; it can be used for a variety of development projects, from building rehabilitation to infrastructure construction. Because TIF redirects property taxes from local governing bodies to designated redevelopment funds, TIF proponents have argued that TIF fairly redistributes development financing responsibilities to all of the governing bodies that benefit, rather than allowing the other taxing bodies to freeload on municipal finances.¹ Critics,

1. Jack R. Huddleston, "Intrametropolitan Financial Flows Under Tax Increment Financing," *Policy Sciences* 19, no. 2 (1986), 143. meanwhile, have argued that TIF encourages inefficient and improper allocation of funds with inadequate oversight and unfair practices.

The tool functions by redirecting property tax according to changes in assessed value. While TIF designation requirements vary by state, most legislatures require municipalities to apply a "but-for" test, determining that development would not occur in a given area but for TIF adoption. (As will be discussed, adherence to the "but-for" test is vital for true success in TIF adoption, as it guarantees more efficient use of municipal resources and preservation of tax dollars.) Once the municipality designates an area as a TIF district, the area's aggregate Equalized Assessed Value (EAV)-a fraction of the properties' market valueis frozen for the local taxing bodies. The municipality seeks to attract private investment within the TIF district through subsidies or other incentives, with the goal of increasing property values in the area to repay the public's investment. As the area's EAV increases, properties within the TIF district continue to pay taxes according to the normal tax rates, but the local taxing bodies collect only on the original frozen EAV. The taxes paid on any additional EAV (theoretically created by TIF development) are redirected to a dedicated TIF fund that is used to repay debt on previous public investment and support future TIF projects. The taxable EAV thus remains frozen for the life of the TIF (twenty-three years in Illinois but varying by state), while the incremental EAV continues to grow and provide new development funds.

Controversy has arisen over the collection and use of TIF funds. In the perfect implementation of TIF, districts would redirect only property taxes that increase as a result of TIF investment. Most states, however, lack a distinction in the funds that TIF districts redirect; with no inflation index or other methods for isolating TIF-induced growth, districts receive (and taxing bodies are stripped of) funds emerging from natural and inflationary growth in addition to TIF-induced growth. Theoretically, over collection of property taxes would be adjusted according to the district's needs each year, as surplus funds would be redistributed among the taxing bodies. In reality, however, surplus funds frequently remain untouched in TIF funds with vague commitments, allowing TIF funds to increase without spending revenues in the year collected.² In 2010, for example, Chicago news outlets identified surpluses of between \$700 million and \$1.16 billion in TIF funds.³ The accumulation of surplus has led some to question the use and scale of TIF funds, criticizing TIF as City Hall's "piggy bank,"⁴ and, indeed, as the city faced a \$654-million deficit for 2011, Mayor Richard Daley declared a \$118-million TIF surplus, with \$40 million returning to the municipal budget.⁵ Still, Chicago (and Illinois) have made no adjustments to base EAV totals, allowing the districts to continue to collect more funds than they create and more than they use.

This paper seeks to examine the impact of inflation indexing on TIF in Chicago and the resulting decrease in funds available to TIF districts. Using actual data on property valuation and financial activity reported by Cook County and the city of Chicago, this study applies a retroactive annual-inflation adjustment to frozen EAV for 125 Chicago TIF districts from 2006 to 2009. In shifting base EAV according to inflation of the Consumer Price Index, the study also examines the impacts of implied

2. Rachel Weber and Laura Goddeeris, "Tax Increment Financing: Process and Planning Issues," Working Paper for the Lincoln Institute of Land Policy (2007), 57.

3. Fran Spielman, "Empty Pockets: City has \$27 million," *Chicago Sun-Times*, July 29, 2010. John Byrne, "Daley studying budget options 'very carefully,'" *Chicago Tribune*, July 31, 2010, http://articles.chicagotribune.com/2010-07-31/ news/ct-met-daley-budget-0801-20100731_1_mayor-richard-daley-tax-and-feeincreases-budget (accessed April 28, 2011).

4. Ben Joravsky, "Go On, Smash It," *Chicago Reader*, August 19, 2010, http:// www.chicagoreader.com/chicago/mayor-daley-tif-surplus-chicago-budget-crisis/ Content?oid=2272830 (accessed April 28, 2011).

5. City of Chicago, "City Council Approves Mayor Daley's Balanced 2011 Budget Which Controls Spending, Continues Services and Provides For Future," press release, November 17, 2010, http://mayor.cityofchicago.org/mayor/en/press_ room/press_releases/2010/november_2010/1117_budget.html (accessed April 28, 2011). changes in property tax revenue and overall available TIF funds, as well as property tax revenue for Chicago's governing bodies. The results indicate that current TIF-fund usage would continue to be viable (with enough revenues to cover expenses) without redirecting inflationary growth while decreasing the amount of unused surplus, thus supporting the introduction of an inflation index for base EAV in Chicago TIF districts. The lack of such adjustment, in conjunction with the vast and diverse body of literature on TIF, provides evidence as to the greater problem of TIF implementation without consideration for the most effective and appropriate usage of the policy, ultimately mandating significant modifications to TIF and its implementation process.

The next section of this paper focuses on the history and background of TIF, with a discussion of national and local TIF legislation and the development of blight requirements. Section three analyzes the existing literature on the impact of TIF on property values, employment, blighting factors, and overall municipal and regional benefits. Section four focuses on the supporting factors behind TIF adoption. Section five presents new analysis of the effects of an inflation index. The final section offers considerations for the responsible implementation of TIF.

History and Background

A hot topic in Illinois politics over the last few years, TIF has been present in the United States for well over half a century. California was the first state to enact TIF legislation in 1952, although the policy was slow to make a significant impact on redevelopment strategies in the state and elsewhere. By 1970, only six more states had TIF statutes.⁶ However, with the end of federal urban renewal (and the redevelopment dollars that came with it) in 1974, states had to find new sources of economic development financing,

6. Richard Briffault, "The Most Popular Tool: Tax Increment Financing and the Political Economy of Local Government," *University of Chicago Law Review* 77, no. 65 (2010), 69–70.

a necessity magnified by a prolonged urban fiscal crisis along with tax revolts during that decade.⁷ California, for example, needed TIF when voters rejected a measure approving federal fund-matching grants and loans,⁸ and many states have passed legislation that caps the rate at which property tax assessments may rise each year, meaning a limit to newly available property tax revenues without TIF.⁹ This tool thus became an attractive option as other sources of funding diminished. By 1979, twenty-four states had enacted TIF legislation (including Illinois in 1977), and that number had risen to thirty-three by 1987 and forty-four by 1992.¹⁰ Today, forty-nine states and Washington, D.C. have TIF statutes, with Arizona the only exception after its Supreme Court declared the state's TIF law unconstitutional in 1980.¹¹ TIF is most prevalent in the western and central states, such as California, Colorado, Florida, Illinois, Indiana, Minnesota, and Wisconsin, and it is used particularly heavily in larger cities.^{12, 13}

7. Colin Gordon, "Blighting the Way: Urban Renewal, Economic Development, and the Elusive Definition of Blight," *Fordham Urban Law Journal* 31 (2003–2004), 314.

8. Jeffrey I. Chapman, "Tax increment financing as a tool of redevelopment," in *Local Government Tax and Land Use Policies in the United States*, ed. Helen F. Ladd (Cheltenham, UK: Edward Elgar, 2010), 190.

9. Greg LeRoy, "TIF, Greenfields, and Sprawl: How an Incentive Created to Alleviate Slums Has Come to Subsidize Upscale Malls and New Urbanist Developments," *Planning & Environmental Law* 60, no. 2 (2008), 5.

10. Briffault, "The Most Popular Tool," 69-70.

11. Paul F. Byrne, "Does Tax Increment Financing Deliver on Its Promise of Jobs? The Impact of Tax Increment Financing on Municipal Employment Growth," *Economic Developer Quarterly* 24, no. 1 (2010), 15.

12. David F. Merriman, Mark L. Skidmore, and Russ D. Kashian, "Do Tax Increment Finance Districts Stimulate Growth in Real Estate Values?" *Real Estate Economics* 39 (2011), 22.

13. John S. Klemanski, "Using Tax Increment Financing for Urban Redevelopment Projects," *Economic Development Quarterly* 4 (1990), 24.

While no complete interstate TIF-district registry exists, Illinois is one of the states most active in TIF use. The TIF program grew slowly before 1985 (with only twenty-seven districts across the state),14 until an amendment gave municipalities access to state aid for the inclusion of sales and utility tax increases in the incremental fund.15 That aspect of the program was set to be phased out in a 1988 amendment (the sales tax payments were scheduled to end in 2007), but TIF growth continued into the 1990s. By 1991, Illinois had 238 TIF districts.¹⁶ A 1999 amendment to the state statute introduced stricter eligibility standards, with more diverse findings of blight in proposed redevelopment areas, and municipalities were also required to include housing-impact studies, earlier notice of TIF hearings, new registries for interested parties, and Joint Review Board meetings, consisting of members of the public and representatives of affected taxing bodies.¹⁷ Still, by 2006, the number of districts had increased to 998, with 77 of the state's 102 counties hosting TIF districts.¹⁸

TIF growth was particularly slow in Chicago, which established just ten districts before 1990. In 1998, however, the city introduced twenty

14. Alyssa Talanker, Kate Davis, and Greg LeRoy, "Straying from Good Intentions: How States Are Weakening Enterprise Zone and Tax Increment Programs," Report by Good Jobs First (2003), 12.

15. Rachel Weber, "Equity and Entrepreneurialism: The Impact of Tax Increment Financing on School Finance," *Urban Affairs Review* 38, no. 5 (2003), 2003.

16. Rachel Weber, Rebecca Hendrick, and Jeremy Thompson, "The Effect of Tax Increment Financing on School District Revenues: Regional Variation and Interjurisdictional Competition," *State and Local Government Review* 40, no. 1 (2008), 30.

17. Talanker, Davis, and LeRoy, "Straying from Good Intentions," 12.

18. Weber, Hendrick, and Thompson, "School District Revenues," 30.

new TIF districts, followed by fifteen in 1999 and twenty-two in 2000.¹⁹ The number of new districts per year fell over the next decade, but the city nonetheless had 158 active TIF districts in 2009.²⁰ TIF districts accounted for \$20.93 billion of Chicago's \$84.49 billion in real-estate EAV that year, 24.77 percent of the city.

As stated, the 1974 end of federal funding for economic development purposes provided a major turning point in the national history of TIF laws. Prior to 1974, the federal urban renewal program subsidized about 80 percent of redevelopment costs.²¹ While federal funding thus allowed municipalities to avoid most economic development financing costs, the projects undertaken with federal funds struggled with issues of efficiency and were frequently counterproductive for redeveloping communities.²² With little public-private conversation prior to starting redevelopment work, local agencies would frequently assemble land demolishing preexisting property and clearing out residents and businesses—only to find that the previous use was more desirable than any offer available. As a result, local governments began to work more closely with private parties in establishing redevelopment plans.

Today, private developers drive much of the TIF-planning process. The involvement of private parties varies by state, but inter-municipal competition for economic development has substantially limited the

19. Diane Gibson, "Neighborhood Characteristics and the Targeting of Tax Increment Financing in Chicago," *Journal of Urban Economics* 54 (2003), 317.

20. Cook County Clerk, "2009 Tax Increment Agency Distribution Summary," 22 November 2010, http://www.cookcountyclerk.com/tsd/DocumentLibrary/ 2009%20agency%20distribution%20summary.pdf (accessed April 28, 2011).

21. Jack R. Huddleston, "Variations in Development Subsidies under Tax Increment Financing," *Land Economics* 57, no. 3 (1981), 373.

22. George Lefcoe, "Redevelopment Takings After *Kelo*: What's Blight Got To Do With It?" *Southern California Review of Law and Social Justice* 17, no. 3 (2008), 840–841.

governments' bargaining power with prospective businesses.²³ In many states, such as Illinois, private parties are able to create open-ended and vague redevelopment plans without stringent budgetary standards (although some states, such as Wisconsin, require specifically itemized plans).²⁴ The common failure of development initiatives under federal urban renewal was the lack of new investors following demolition; in order to avoid this issue, TIF is faced with contradictory goals. On one hand, the need for a quickly increasing tax increment for TIF to be viable causes redevelopment agencies to focus on areas where developers are likely to invest, but on the other, blighted areas rarely provide opportunities for immediate returns and, with the inclusion of "but-for" tests in TIF legislation, redevelopment areas are frequently required to be areas unlikely to create growth quickly.²⁵

The finding of blight is generally a key component in the TIF adoption process. In most states, TIF can apply only to areas that the municipality identifies as "blighted," a general qualification that, aside from some negative connotation related to the economic viability of the area, has not had a standard definition since TIF's inception over half a century ago. The original goal of eradicating blight was to redevelop urban areas with a focus on housing for working families.²⁶ Redevelopment policies focused on fixing unsafe and insufficient housing. More recently, however, the definition of blight has come to include principles of government involvement in economic development if an area is not meeting its greatest potential either in use or in tax revenue.²⁷

- 23. Klemanski, "Urban Redevelopment Projects," 25.
- 24. Weber and Goddeeris, "Process and Planning Issues," 8.
- 25. Briffault, "The Most Popular Tool," 87.
- 26. Gordon, "Blighting the Way," 315.
- 27. Leroy, "TIF, Greenfields, and Sprawl," 7.

Subsidies have shifted from urban housing development to suburban shopping malls,²⁸ highways, and other unrelated projects.²⁹

The basic foundation of blight eradication thus evolved from aiding the families in neglected urban areas to aiding the areas by pushing residents and businesses out. Some have argued that, rather than legitimately attempting to help low-income areas, municipalities have used TIF and other redevelopment strategies for purposes of gentrification, designed not for the benefit of the lower class but as reassurance to the middle class that their neighborhoods would not be targeted for improvement projects.³⁰ Business leaders saw redevelopment as a way to clear slums out of the areas surrounding the central business districts, and local officials were hesitant to commit the large amounts of money needed for effective housing redevelopment because of the lack of direct financial return residential areas provide.³¹ Improving affordable housing conditions is unlikely to raise a significant tax increment, whereas replacing affordable housing areas with more expensive businesses is more likely to do so.³² These commercial projects can be doubly attractive because they provide a greater increment while adding less strain to the local taxing bodies (as new residents in housing development areas would add to local education costs, for example, while big-box retailers add only revenue).³³

28. Gordon, "Blighting the Way," 307.

29. Gordon, "Blighting the Way," 315.

30. George Lefcoe, "After *Kelo*," Curbing Opportunistic TIF-Driven Economic Development: Forgoing Ineffectual Blight Tests: Empowering Property Owners and School Districts," *Tulane Law Review* 83, no. 1 (2008), 24.

31. Gordon, "Blighting the Way," 316.

32. George Lefcoe, "Competing for the Next Hundred Million Americans: The Uses and Abuses of Tax Increment Financing," USC Legal Studies Research paper, forthcoming in *Urban Lawyer* 43, http://law.bepress.com/cgi/viewcontent.cgi? article=1175&context=usclwps (accessed April 28, 2011), 18.

33. Leroy, "TIF, Greenfields, and Sprawl," 6.

Problems regarding the viability of redevelopment projects in truly blighted areas thus encourage seemingly inappropriate uses of TIF, because TIF projects demand fast-increment growth.³⁴ Viability can be measured in two forms: increments and balances. If a district's property value fails to increase (or decreases), the TIF fund will be unviable because of a small or nonexistent available increment. Even if the district collects some funds through property value growth, the district may also be unviable if expenses continue to exceed revenues, an extension of the issue of limited increment. In either form of TIF development financing (to be discussed in a later section), property values inside TIF districts must grow quickly in order to cover private developers' costs or, more importantly for the municipality, to repay debt issues. Projects that pass the "but-for" test are more likely to provide needed growth in troubled areas, but, while these projects may be successful relative to the local economy, they are still at risk of excessively slow growth. In other words, projects that are beneficial to truly blighted communities may not be commercially viable with TIF because of the high-crime and unemployment rates that make private investment in those areas unlikely in the first place.³⁵

Local officials frequently work more closely with the upper classes, leading to greater development for high-income areas and counterproductive development in the areas TIF originally targeted.³⁶ Projects that are attractive to developers or upper-class interests may, in fact, put residents of blighted areas at further risk. If TIF projects focus on improper forms of development, residents of these areas may be forced to pay higher property tax rates without any greater ability to pay. In this way, rather than aiding issues of poverty in adopting municipalities, improper TIF practices may simply relocate poverty into different parts of cities.

34. Lefcoe, "After Kelo," 26.

35. Lefcoe, "Competing for the Next Hundred Million Americans," 15.

36. Catherine Michel, "Brother, Can You Spare a Dime: Tax Increment Financing in Indiana," *Indiana Law Journal* 71 (1996), 470.

Instead of adhering to the original theoretical definition of blight, some states have instituted counterintuitive and highly subjective definitions of blight, and municipalities stretch even those bounds in establishing findings of blight. Ideally, some scholars have argued, blight should clearly define the harm of particular properties pertaining to the public well-being.³⁷ Some states have eliminated the need to demonstrate this harm in establishing TIF districts by removing blight requirements entirely. In other states, attempts at making blight requirements more strict have only led to increased subjectivity; in Illinois, for example, proposals can meet the requirement based on "obsolescence," "dilapidation," and "lack of community planning," all vague descriptors for an economically deficient area with no specific standards of judgment.³⁸ Even were these standards to exist, the lack of regional planning would likely mean unequal application of such standards, likely giving certain areas an advantage over others in attracting TIF development.³⁹

Even the strongest blight requirements are frequently rendered ineffective because of abuses of the establishment process. Local officials clearly have the incentive to skirt state laws through wide interpretations of blight requirements,⁴⁰ and they are able to do so by contracting consulting firms to identify blight factors in proposed district areas. In most areas, adherence to the definition of blight is left up to the same governments that utilize TIE,⁴¹ and, as a result, consultants are frequently hired with the goal of finding blight wherever redevelopment agencies want to establish new TIF districts.⁴²

- 37. Lefcoe, "After Kelo," 7.
- 38. Gordon, "Blighting the Way," 336.
- 39. Gordon, "Blighting the Way," 320.
- 40. Gordon, "Blighting the Way," 315.
- 41. Lefcoe, "After Kelo," 22-23.
- 42. Lefcoe, "Redevelopment Takings After Kelo," 821.

Some property owners and local taxing bodies have countered seemingly inappropriate findings of blight with legal action in attempts to avoid increased property taxes or the condemnation of property (for individuals) or the loss of captured property taxes (for taxing bodies). However, the courts have in general sided with the municipal governments, identifying a finding of blight as a legislative matter.⁴³ Courts frequently rely on the private developer's word that TIF is necessary for development, leading to nearly uniformly positive decisions in favor of the municipality.⁴⁴ Because blight findings are considered a purely legislative responsibility, the plaintiff then effectively must show an inappropriate use of the legislative process as a whole in the form of fraud or another violation.⁴⁵

Two theoretical solutions to the contradictory definition and goal of blight eradication have emerged. Some have argued for a stricter definition of blight. One argument is to center blight findings around the statistical measure of tax revenue. If an area is facing a shrinking tax base —presumably from a lack of redevelopment investment that leaves properties vacant or deteriorated—the taxing bodies can only benefit from projects whose main objective is to increase the tax base; local governments would have little reason to protest if the promise of future tax revenue increases were to replace current decreases.⁴⁶

A second solution posed by some researchers has been to eliminate the blight requirement or separate TIF into tiers for blighted and nonblighted properties. The argument against stricter blight definitions is that viability would remain a major concern for newly created districts even if they returned to the original principles of the program by focus-

43. Briffault, "The Most Popular Tool," 80.

44. Briffault, "The Most Popular Tool," 77.

45. Josh Reinert, "Tax Increment Financing in Missouri: Is it Time for Blight and But-For to Go?" *Saint Louis University Law Journal* 45 (2001), 1048–1049.

46. Lefcoe, "After Kelo," 26.

ing on truly underdeveloped areas. A blight definition focusing on areas with declining property values, for example, would be unable to accumulate any increment for development, leading some scholars to suggest the use of a different tool for developing the types of areas for which TIF was originally intended.⁴⁷ Some have posited that tightening blight requirements would forego a large amount of development in non-blighted areas in exchange for a small increase of investment in blighted areas.⁴⁸ Eliminating the blight requirement would allow for a greater level of honesty on the part of local officials while most likely leading to only slightly more districts than are currently created (because municipalities so frequently ignore the intentions of the law).⁴⁹ In a discussion of alternatives to blight requirements, Reinert (2001) suggests a switch to a more realistic test, allowing developers to utilize TIF in areas where it is financially viable, while including a state fund-matching program to allow development to continue for truly blighted communities.⁵⁰

Impact of TIF

Regardless of findings of blight, the logistics of TIF growth are such that the tool is viable only if property values increase significantly enough to pay for the public's investment. As a result, much of the TIF process focuses on ensuring that the bonds will be repaid. While encouraging the self-sufficiency of TIF districts, the result of this is that tax-base growth is regarded as the program's most important goal.⁵¹ Thus, numerous studies have focused on the success of TIF in creating new property value

47. Richard F. Dye and Jeffrey O. Sundberg, "A Model of Tax Increment Financing Adoption Incentives," *Growth and Change* 29 (1998), 102.

48. Lefcoe, "Competing for the Next Hundred Million Americans," 15.

49. Reinert, "Is it Time for Blight and But-For to Go?" 1051-1052.

50. Reinert, "Is it Time for Blight and But-For to Go?" 1051-1052.

51. Briffault, "The Most Popular Tool," 87.

growth, and the results have been contradictory. Anderson (1990) demonstrated that property value growth in adopting cities in Michigan was, in fact, higher than property value in non-adopting cities.⁵² Man and Rosentraub (1998) came to a similar conclusion in their study of Indiana districts. In fact, measuring data from the late-1980s, the study found that the value of owner-occupied housing was far higher than it would have been otherwise.⁵³ In a more recent study of Wisconsin TIF use, Merriman, Skidmore, and Kashian (2011) showed that while properties outside of TIF (but in the same municipality) grew more slowly than TIF properties, even those outside of the districts grew more quickly than properties in municipalities without TIF.⁵⁴

Certain factors have also been identified as encouraging growth in TIF districts. Byrne (2006) identified a set of factors associated with TIF districts with increasing property value. The study found that newly created TIFs grew at a faster rate than old districts and that districts were more successful with larger, older buildings, more vacancies, lower population density, a higher percentage of white residents, and a location closer to the city center.⁵⁵ The existing literature generally shows that property redevelopment early in the life of the TIF is most effective

52. John E. Anderson, "Tax Increment Financing: Municipal Adoption and Growth," *National Tax Journal* 43, no. 2 (1990), 161.

53. Joyce Y. Man and Mark S. Rosentraub, "Tax Increment Financing: Municipal Adoption and Effects On Property Value Growth," *Public Finance Review* 26, no. 6 (1998), 541. "The results demonstrate that, after holding other factors constant, if the city adopted a TIF program in 1988, by 1990 the median value of owner-occupied housing in the TIF district and surrounding community was 11.6% higher...than it would have been otherwise. Property values had grown nearly 15%...if TIF was adopted in 1986; approximately 18%...if adopted in 1985; and 7.7%...if adopted in 1984."

54. Merriman, Skidmore, and Kashian, "Real Estate Values," 17.

55. Paul F. Byrne, "Determinants of Property Value Growth for Tax Increment Financing Districts," *Economic Development Quarterly* 20, no. 4 (2006), 325–326.

in raising property values, while infrastructure work is most effective following most redevelopment activity.⁵⁶

Claims of increased property values must be tempered, however, by the findings on the municipality's net gains under TIF. In a Monte Carlo analysis of TIF districts in Minnesota, Kriz (2003) showed that even for areas with a zero probability of development without TIF (meaning that it fully passes the "but-for" test), the average net value of TIF is negative and municipalities have only a 30 percent chance of achieving a net gain.⁵⁷ If this is the case, then TIF tends to provide municipalities with a net loss, even with increased property values and growth that would not have otherwise occurred. That the government loses tax money for development should not preclude TIF usage, but these considerations should weigh on the decision to adopt TIF.

However, it is also important to consider the external effects of TIF adoption, as some consider overall growth of the municipality to be the more accurate measure of TIF's success.⁵⁸ In a study of northern Illinois municipalities, Dye and Merriman (2000) identified a negative relationship between TIF adoption and overall municipal EAV growth rates. Controlling for other variables, their study found that adopting municipalities grew 0.79 percent slower than non-adopting municipalities; the reason for this, they found, was that non-TIF areas of adopting cities grew 1.31 percent per year less than non-adopting cities.⁵⁹ The general

56. Kieran P. Donaghy, Andrea K. Elson, and Gerrit J. Knaap, "Optimal Investment in a Tax Increment Financing District," *The Annuals of Regional Science* 33 (1999), 320.

57. Kenneth A. Kriz, "Tax Increment Financing: Its Effect on Local Government," *University of Minnesota Center for Urban and Regional Affairs Reporter* 33, no. 2 (2003), 6.

58. Byrne, "Determinants of Property Value Growth," 326.

59. Richard F. Dye and David F. Merriman, "The Effects of Tax Increment Financing on Economic Development," *Journal of Urban Economics* 47 (2000), 326. idea supporting this finding is that TIF districts reallocate resources inefficiently, utilizing government subsidies to shift value rather than encourage value growth.

The concept of inefficient reallocation of resources applies, as well, to regional economies. As stated, no regional bodies collect TIF information beyond limited areas.⁶⁰ However, the same principles indicating inefficient relocation of businesses within TIF-adopting municipalities (that the TIF subsidy is counterproductive if it only shifts business within the community rather than creating it) are present for the regional economy. If a business relocates to a nearby city, that city may see some benefit, but the movement is just as detrimental to the regional economy as intramunicipal relocation is for city economies.⁶¹ In particular, some studies have found that commercial TIFs do nothing more than redistribute sales within a given metropolitan area.⁶² A lack of regional communication is further troubling because of concerns over suburban sprawl. Exclusionary housing and emphasis on big-box retail, two major factors in the increase of suburban sprawl, have become common uses of TIF dollars.⁶³

A section of the existing literature breaks down the effects of TIF further, basing analysis on the type of district. Districts may be designated for purposes of commercial, industrial, residential, or mixed-use development. Several studies have focused on the effects of TIF in general, but much of the existing literature also distinguishes between types of districts in order to identify the most beneficial use of TIF. As is the case for other aspects of the existing literature, the conclusions are contradictory. In a study of property values, Byrne (2006) found

60. Briffault, "The Most Popular Tool," 83.

61. Alyson Tomme, "Tax Increment Financing: Public Use or Private Abuse?" *Minnesota Law Review* 90 (2005), 235.

62. Briffault, "The Most Popular Tool," 83.

63. Leroy, "TIF, Greenfields, and Sprawl," 6.

that industrial districts experience highest annual growth.⁶⁴ Dye and Merriman (2003) also show that industrial districts encourage industrial growth outside of the district. Weber, Bhatta, and Merriman (2003), however, indicate that presence within an industrial TIF district may lead to initially devalued industrial properties.⁶⁵ Evidence from Merriman, Skidmore, and Kashian (2011) also showed that industrial districts (as well as residential districts) returned less than a dollar of increment for every dollar of public investment.⁶⁶ That said, industrial development also receives far less funding than other forms of development. As of 2003, commercial development had attracted 85 percent of Chicago's overall TIF investment, and more than half of the city's TIF districts were designated as commercial districts.⁶⁷ Industrial development, meanwhile, accounted for 3 percent of the city's total investment.

The type of district is also important for considering the external effects of TIF adoption. In claiming that negative effects outside of TIF districts may outweigh internal benefits, Dye and Merriman (2003) argue that commercial development encourages inefficient allocation of resources because of relocation of commercial activity rather than creation of such activity.⁶⁸ Merriman, Skidmore, and Kashian (2011),

64. Byrne, "Determinants of Property Value Growth," 324.

65. Rachel Weber, Saurav Dev Bhatta, and David Merriman, "Does Tax Increment Financing Raise Industrial Property Values?" *Urban Studies* 40 (2003), 2013.

66. Merriman, Skidmore, and Kashian, "Real Estate Values," 21.

67. Brent C. Smith, "If You Promise to Build It, Will They Come? The Interaction between Local Economic Development Policy and the Real Estate Market: Evidence from Tax Increment Financing Districts," *Real Estate Economics* 37, no. 2 (2009), 215. Totals: \$8,778,000 for industrial, \$243,649,183 for commercial, \$28,696,170 for residential.

68. Richard F. Dye and David F. Merriman, "The Effect of Tax Increment Financing on Land Use," in *The Property Tax, Land Use, and Land Use Regulation*, ed. Dick Netzer (Cheltenham, UK: Edward Elgar, 2003), 57. however, counter this argument with evidence showing insignificant intra-municipal commercial relocation.⁶⁹ Regarding the risk of revenue shifting, industrial TIF districts may be most effective in creating new growth. Some have argued that industrial development can be added more effectively because competition is generally not local (meaning that a company could enter a municipality without pushing another company out) and goods are usually exported, meaning that the municipal population would not have to sustain any additional business through increased purchasing.⁷⁰

While property-tax growth has become the central goal of TIF implementation, many redevelopment officials focus more on other goals of development than property value increase, frequently aligned with older definitions of blight.⁷¹ These goals include combating crime, environmental clean-up, and job creation, among others. Some have posited that TIF can be used to effectively combat crime and environmental issues. Analyzing data on these factors, Carroll and Eger (2006) argue that aggressive TIF implementation can counter the negative effects that high levels of crime and environmental problems have on property values. Their study finds a significant increase in property value after TIF adoption that would be sufficient to offset most of the suppressive effects of crime and environmental issues where they are most present.⁷² In general, however, countering brownfields remains a difficult target for TIF implementation because of uncertainties related to returns on environmental

69. Merriman, Skidmore, and Kashian, "Real Estate Values," 21.

70. Dye and Merriman, "The Effect of Tax Increment Financing on Land Use," 58.

71. Lefcoe, "Competing for the Next Hundred Million Americans," 40.

72. Deborah A. Carroll and Robert J. Eger III, "Brownfields, Crime, and Tax Increment Financing," The American Review of Public Administration 36, no. 4 (2006), 472. clean-up investments.⁷³ Financial viability once again presents difficulties regarding these targets of TIF development.

Proponents also frequently tout job creation as an additionally beneficial effect of TIF adoption, and employment requirements are often specified in redevelopment agreements. However, Byrne (2009) presents evidence that TIF adoption may have limited employment benefits and may, in fact, be detrimental to local employment.⁷⁴ In Byrne's study, only industrial TIF districts increased employment while commercial districts decreased employment;⁷⁵ Byrne hypothesizes that this decrease may be due to inefficient relocation of businesses or the introduction of employment-efficient companies, like the big-box retailers that have become popular in commercial TIF development.⁷⁶ Weber, Bhatta, and Merriman (2003) emphasize the competing results in industrial and commercial districts, suggesting that while industrial districts are more likely to provide jobs, commercial development is more likely to achieve TIF's highest goal, increased property value.⁷⁷

Although much of the literature focuses on changes in property value, a major question in the TIF debate has been the effects of the policy on property-tax rates. TIF can be attractive to local officials because it allows for additional redevelopment funds without necessitating an explicit tax increase. As such, TIF is frequently advertised as a policy that, in itself, does not raise tax rates. However, studies have clearly linked TIF adoption with changes in overall tax rates, meaning that

73. Dina Schlossberg, "Tax Increment Financing," in *Building Healthy Communities: A Guide to Community Development for Advocates, Lawyers, and Policymakers*, ed. Roger A. Clay Jr. and Susan R. Jones (Chicago: American Bar Association, 2009), 139.

74. Byrne, "Promise of Jobs," 19-20.

75. Byrne, "Promise of Jobs," 14.

76. Byrne, "Promise of Jobs," 20.

77. Weber, Bhatta, and Merriman, "Industrial Property Values," 2018.

conclusions on the true effects of TIF on taxpayers are important for future adoptions. When deprived of expected growth in the tax base as a result of TIF adoption, the governing bodies that collect on frozen property values are forced to increase their tax rates to continue to operate. If the district does not fully satisfy the "but-for" test, with all new development attributed solely to TIF investments, the taxing bodies are denied potentially necessary expected funds and must collect more tax dollars from the non-TIF areas of their jurisdictions.⁷⁸ Thus, while the creation of a TIF district does not nominally raise taxes, it is frequently an implicit tax increase nonetheless. Quigley (2007), for example, analyzed the tax levies for each of Chicago's governing bodies in 2005 and found that TIF revenue capturing caused the tax rate to increase from 5.754 percent to 5.981 percent (an increase of 3.95 percent).⁷⁹ Using these figures, Quigley showed that the median taxpayer paid an additional \$92.51 because of TIF, even without an explicit tax increase.

The literature suggests that taxpayers do, in fact, pay more because of TIF adoption. Skidmore and Kashian (2010) found that TIF introduction in Wisconsin increased overall property taxes by a marginal amount (just under 1 percent), while closure of districts reduced taxes by 1.5 percent.⁸⁰ The study also showed that the opposite may be true for municipal-tax rates: Upon adopting TIF, municipal rates decreased slightly before increasing upon the closure of the district. The study gives some indications as to the total effects of TIF on taxing bodies, as

78. Sherri Farris and John Horbas, "Creation vs. Capture: Evaluating the True Costs of Tax Increment Financing," *Journal of Property Tax Assessment and Administration* 6, no. 4 (2008), 11.

79. Mike Quigley, "A Tale of Two Cities: Reinventing Tax Increment Financing," Cook County Commissioner's Office, 1 April 2007, http://www.heartland.org/ custom/semod_policybot/pdf/21830.pdf (accessed April 28, 2011), 31.

80. Mark Skidmore and Russ Kashian, "On the Relationship Between Tax Increment Finance and Property Taxation," *Regional Science and Urban Economics* 40 (2010), 407. municipal governments seemed to shoulder less of the development burden (perhaps confirming the freeloader argument that some proponents push as a reason for using TIF), while the other governing bodies were forced to raise tax rates in order to maintain services. If tax rates do, in fact, increase in order to make up for TIF, properties within the taxing bodies but outside the TIF districts in essence must support redevelopment within the TIF districts.⁸¹ Thus, taxpayers will sometimes pay more for projects financed by TIF than they would have if the municipalities financed the projects without TIF.82 The additional tax also applies for residents of different municipalities if the affected taxing bodies are not limited to just one municipality.83 In Chicago, for example, a TIF-induced tax-rate increase for Cook County would mean that residents of non-Chicago areas of the county would effectively be funding Chicago's development. The same principle also applies for residents of the same municipality: residents of the entire municipality face increased tax rates, but the development provides more benefit for residents within or near TIF districts than for those further from the district.

The conclusion, as put forward by Huddleston (1986), is that municipalities benefit from TIF more than taxpayers do.⁸⁴ By redirecting property taxes through TIF adoption, municipalities collect more money for economic development, but the taxpayers who support the increase in funds do not always experience the benefits of such development. Chicago is a prime example of this disparity, as the municipal government benefited from the approximately 80 percent of property taxes that the other taxing bodies would normally collect, while taxpayers still funded most of the increases in tax collection on the part of the other taxing bodies in the city. This is one reason for strict enforcement of the "but-

81. Weber and Goddeeris, "Process and Planning Issues," 14.

82. Huddleston, "Intrametropolitan Financial Flows," 145.

83. Huddleston, "Intrametropolitan Financial Flows," 150.

84. Huddleston, "Intrametropolitan Financial Flows," 158.

for" test: TIF induces higher tax rates only if the taxing bodies are denied revenue from natural growth (resulting from development that would have occurred even without TIF) or inflationary growth, while growth solely due to TIF should have no effect on the taxing bodies (as the development would not have occurred but for TIF), and the taxpayers would thus pay no more than they would have without TIF.⁸⁵

The "but-for" test is clearly an important facet of TIF because of its implications for property tax rates, and concerns over municipalities' adherence to the test have led many to argue that city governments are using TIF to capture growth rather than to create it. There are three basic forms of property value growth: TIF-induced, inflationary, and natural. Only TIF-induced growth satisfies the "but-for" test; if growth occurs because of inflation or development that would have occurred without TIF, municipalities are simply "capturing"-rather than creating-the additional tax revenue stemming from that growth. While questions persist about the true success of TIF in creating property value growth, studies have provided contradictory results over the capturing of tax revenues. Dye and Sundberg (1998) identified a greater tendency to adopt TIF with higher projected growth (perhaps indicating that municipalities are attempting to capture the expected growth for TIF funds),⁸⁶ but Byrne (2005)⁸⁷ and Gibson (2003)⁸⁸ found the tendency to capture growth to be insignificant.

The issue of capturing property-tax revenue has important consequences for local taxing bodies faced with increasing sections of their tax bases frozen by TIF adoption. In 2009, the city of Chicago received

85. Ibid.

86. Dye and Sundberg, "A Model of Tax Increment Financing Adoption Incentives," 101.

87. Paul F. Byrne, "Strategic Interaction and the Adoption of Tax Increment Financing," *Regional Science and Urban Economics* 35 (2005), 294.

88. Gibson, "Neighborhood Characteristics," 324.

about 19 percent of property tax revenue, with the rest of the revenue going to Cook County, the Forest Preserve, the Metropolitan Water Reclamation District, the City of Chicago Library Fund, the City of Chicago School Building and Improvement Fund, the Chicago Board of Education, Community College District #508, and the Chicago Park District.⁸⁹ As such, TIF redirected about 81 percent of all new property taxes away from the other taxing bodies that year. The board of education—the recipient of 51 percent of total property taxes—is affected to the greatest extent, especially as over one-third of the body's budget comes from property taxes.⁹⁰ In general, TIF critics have argued that TIF causes budgetary stress for the taxing bodies, as they must do without the benefits of natural and inflationary growth that would have occurred even without TIF.⁹¹

In light of the restrictions placed on taxing bodies with the adoption of TIF, much of the existing literature focuses on possible defenses for non-municipal jurisdictions. Lawsuits have been common in some areas, with districts challenging the legitimacy of TIF's redistribution of funds, but the prevalence of TIF usage has likely made legal action an ineffective remedy.⁹² Instead, several TIF statutes feature provisions for indexing EAV bases or allowing for greater agency for school districts in the TIF process. Indexing of the frozen tax base exists in multiple forms in states such as Minnesota (indexed to inflation)⁹³ and Massachusetts (increasing

89. Cook County Clerk, "2009 Cook County Tax Rates Report," November 8, 2010, http://www.cookcountyclerk.com/newsroom/newsfromclerk/Pages/2009 CookCountyTaxRatesreleasedtoday.aspx (accessed April 28, 2011).

90. Chicago Board of Education, FY Budget 2011, http://www.cps.edu/About_ CPS/Financial_information/Pages/Financialinformation.aspx (accessed April 28, 2011).

91. Weber, "Equity and Entrepreneurialism," 625.

92. Weber and Goddeeris, "Process and Planning Issues," 13.

93. Weber and Goddeeris, "Process and Planning Issues," 8.

at least 1 percent per year)⁹⁴, and some have proposed the option of indexing by previous years' average growth.⁹⁵ It has been argued that indexing for inflation would allow taxing bodies to more easily sustain general operations while making viable only those TIF projects that create real (as opposed to nominal) property value growth.⁹⁶ In Chicago, the lack of an inflation index has had significant effects: Quigley (2007) provided analysis of the real effects of inflation on Chicago's taxing bodies, concluding that TIFs within the city siphoned off \$292.34 million in property taxes emerging from inflationary growth.⁹⁷

A second protection for taxing bodies is the possibility of opting out of TIF participation. As of 2003, eleven states allowed jurisdictions to opt out, meaning that their available tax base would continue to increase at the normal level.⁹⁸ The option of non-participation does not necessarily preclude participation, however, as taxing bodies in those areas have often negotiated with redevelopment agencies for additional payments, as well as altered specifications of duration, reporting requirements, and other aspects of implementation.⁹⁹ Several other states where opting out is not available, including Illinois, require some level of input in the TIF process, ¹⁰⁰ although Chicago's Joint Review Board has historically offered little resistance to city hall.

Additionally, despite the taxing bodies' lack of access to the increased property tax base, some evidence has shown that taxing bodies can be at

94. Lefcoe, "Competing for the Next Hundred Million Americans," 28.

95. Lefcoe, "Competing for the Next Hundred Million Americans," 29.

96. Huddleston, "Intrametropolitan Financial Flows," 159-160.

97. Quigley, "A Tale of Two Cities," 9.

98. Weber, "Equity and Entrepreneurialism," 327.

99. Lefcoe, "Competing for the Next Hundred Million Americans," 33.

100. Gibson, "Neighborhood Characteristics," 312.

least partially shielded from revenue shortfalls by other policy mechanisms. Most of the literature focuses on school districts, likely because they attract the greatest share of property taxes. As stated, one danger of TIF adoption is that it requires schools to satisfy the service demands from new development without any increase in the accessible tax base during the TIF's lifetime. However, numerous studies have shown that the school districts do not, in fact, experience significant changes in revenue, largely due to additional state aid.¹⁰¹ In Illinois specifically, for TIF districts designated since 1999, the state reimburses school districts for increases in attendance caused or required by TIF development.¹⁰² Weber (2003) also showed that school districts in municipalities that used TIF got nearly 5 percent larger increases in state aid than those without TIF,103 and in their study of Illinois school district financing, Weber, Hendrick, and Thompson (2008) indicated that neither the presence of TIF nor the amount of TIF coverage has a significant effect on available funds.¹⁰⁴ In this way, TIF effectively relies on state support for the implementation of municipal policy, even without significant oversight from state governments.¹⁰⁵ Also available to taxing bodies are interjurisdictional transfers and agreements for payments in lieu of taxes.¹⁰⁶ In general, Weber, Hendrick, and Thompson caution that, as mechanisms that offset redirected property taxes vary within individual states, the

101. Thomas F. Stinson, "Subsidizing Local Economic Development Through Tax Increment Financing: Costs in Nonmetro Communities in Southern Minnesota," *Policy Studies Journal* 20, no. 2 (1992), 243.

102. Weber and Goddeeris, "Process and Planning Issues," 56.

103. Weber, "Equity and Entrepreneurialism," 636.

104. Weber, Hendrick, and Thompson, "The Effect of Tax Increment Financing on School District Revenues," 37.

105. Weber, "Equity and Entrepreneurialism," 638.

106. Lefcoe, "After Kelo," 39-40.

decision to allow taxing bodies like school districts to opt out should be weighted by full analysis of TIF-induced revenue shifting.¹⁰⁷

TIF Adoption Factors

In general, municipalities introduce TIF to solve a variety of economic issues. As Dye and Merriman (2000) outline, basic motives for economic incentive implementation include market failure, the presence of blighted areas, bidding wars among municipalities (as well as other levels of government), and intergovernmental revenue shifting.¹⁰⁸ Of these, Dye and Merriman indicate that addressing market failures is generally the most effective form of economic incentive, as benefits may apply to both targeted and surrounding areas, while the other goals for economic incentives typically involve negative effects on surrounding areas to match positive effects for areas where incentives are applied. TIF utilizes each of these motives, attempting to attract new development where it would not otherwise occur, improve blighted areas, outbid competing municipalities for new developers, and shift some financing responsibilities from municipal governments to other taxing bodies.

One aspect of TIF that makes it particularly attractive for solving these economic issues is its model of project financing. In general, development financing comes from general obligation bonds, annual expenditure increments, allocation bonds, or TIF bonds.¹⁰⁹ Most TIF bonds are revenue bonds, meaning that the municipality makes no legal

107. Weber, Hendrick, and Thompson, "The Effect of Tax Increment Financing on School District Revenues," 39.

108. Dye and Merriman, "The Effects of Tax Increment Financing on Economic Development," 307.

109. John E. Greuling, "Tax Increment Financing," in *Main Street Renewal: A Handbook for Citizens and Public Officials*, ed. Roger L. Kemp (Jefferson, NC: McFarland, 2000), 214.

commitment to its full faith and credit to repaying the bond.¹¹⁰ Instead, the bond is secured by the creation of new tax increments; thus, the TIF district must see an increase in property value to be able to repay its debt. Municipalities utilize two forms of funding to finance TIF projects. The first form is pay-as-you-go funding, in which developers cover costs and are later provided with reimbursement from the incremental funds, and the second option involves front-funding projects through the issuance of revenue bonds. In general, pay-as-you-go is used for higher risk projects in younger TIF districts, as this form of payment involves less direct obligation on the part of municipalities if property values do not increase enough and newer districts are less likely to have funds reserved for debt payment.¹¹¹ Bonds, on the other hand, are less likely to be used for small projects, as only larger projects merit debt issues.

Much of the debate on TIF funding has centered on subjecting TIF to the constitutional limitations applicable to other forms of debt. Over the past half-century, the federal government has worked to reduce municipalities' issuance of economic development bonds, with the Tax Reform Act of 1986 establishing volume constraints on these types of bonds, as well as necessitating a direct public purpose for these issuances (thus further complicating the assessment of public benefit from a tool that subsidizes private development).¹¹² The idea of applying debt limitations emerges from the concept of "intergenerational equity," whereby future taxpayers are protected from having to pay off the previous generation's debts for benefits they will not experience.¹¹³ Although courts have applied these constraints to TIF debt in several states, several more

110. Weber and Goddeeris, "Process and Planning Issues," 19.

111. Weber and Goddeeris, "Process and Planning Issues," 20-21.

112. Craig L. Johnson, "Tax Increment Debt Finance: An Analysis of the Mainstreaming of a Fringe Sector," *Public Budgeting & Finance* 19 (1999), 49.

113. Phillip J. F. Geheb, "Tax Increment Financing Bonds as 'Debt' Under State Constitutional Debt Limitations," *The Urban Lawyer* 41, no. 4 (2009), 734.

states exempt TIF bonds from such limitations and most have never made an official determination as to how limitations should apply.¹¹⁴ Wisconsin courts, for example, have determined that constitutional limits should apply because the revenue does not come from an independent source and the concept of intergenerational equity still applies to TIFrelated projects.¹¹⁵ In Illinois, however, TIF bonds fall outside of these constraints, theoretically because they are tied to the specific redevelopment projects that they fund and are not an extension of the municipality's ad-valorem taxing power.¹¹⁶ TIF bonds are thus doubly attractive in states like Illinois because they allow municipalities to raise money for economic development without eliminating other debt or forcing a voter referendum to raise taxes for development projects. Because the municipality makes no legal commitment to repaying the bonds, some argue that TIF bonds should not be subject to constitutional limitations and should not be grouped with other forms of debt. However, the negative effects on the city's credit are such that, even though the municipality is not officially required to protect the bonds, the risk of default essentially does make some type of municipal credit necessary.¹¹⁷ Regardless of the implications of TIF's constitutional exemption, some have worried that applying debt limitations may be too much of a shock because of TIF's pervasiveness in economic development.¹¹⁸

114. Geheb, "Constitutional Debt Limitations," 737. Seven states have held that TIF bonds are not a constitutional debt (Colorado, Florida, Indiana, Michigan, Missouri, South Carolina, Utah); seven states have held TIF bonds are constitutional debt (Arizona, Iowa, Kentucky, Oklahoma, South Dakota, West Virginia, Wisconsin).

115. Geheb, "Constitutional Debt Limitations," 743.

116. Geheb, "Constitutional Debt Limitations," 741.

117. Geheb, "Constitutional Debt Limitations," 747.

118. Geheb, "Constitutional Debt Limitations," 752.

Chicago's dependence on TIF debt is demonstrated by the city's 2009 budget, which showed a total of \$186.2 million in outstanding TIF bonds.¹¹⁹

Assuming TIF bonds retain their exemption from constitutional limitations in Illinois, there are both benefits and dangers to utilizing this front-funding technique for redevelopment projects. After issuing bonds, front-funding TIF projects allows for more efficiency in the construction process, eliminating the front-end costs associated with organizing financing for the project.¹²⁰ Clearly, any increase in efficiency is valuable for an economic development tool that has drawn criticism for inefficient allocation of funds. Again, some have also argued that TIF bonds are also more desirable for municipalities than general obligation bonds because of the shift in payment responsibilities.¹²¹ However, because TIF bonds come with a high amount of risk, they are also more expensive than general obligation bonds. Dependence on TIF bonds also raises questions as to the true motive of utilizing TIF debt. For insurance purposes, larger TIF bond issues are more beneficial for municipalities in terms of pricing (as rating agencies penalize small issuers);122 while improving pricing, however, the prevalence of larger issues also lends credence to the argument that TIF has simply replaced other forms of financing that are subject to voter input and constitutional limitations,

119. City of Chicago, "Comprehensive Annual Financial Report For the Year Ended December 31, 2009," http://www.cityofchicago.org/city/en/depts/fin/supp_info/comprehensive_annualfinancialstatements/2008_financial_statements1.html (accessed April 28, 2011).

120. Stinson, "Subsidizing Local Economic Development Through Tax Increment Financing: Costs in Nonmetro Communities in Southern Minnesota," 242.

121. Greuling, "Tax Increment Financing," 215.

122. Johnson, "Mainstreaming of a Fringe Sector," 64.

like general obligation bonds.¹²³ Even though municipalities may not be committed formally to repaying TIF debt, the proliferation of TIF debt also brings about questions of the municipality's ability to avoid default. This issue is especially pertinent in an unsure economic period; considering the frequent risk of default that TIF bonds faced in the 1990s, municipal governments will likely be forced to pay off outstanding debt more frequently in the current economy.¹²⁴

The calculation of the actual increment payment is vital because of its direct effect on taxpayers. If local officials overestimate future increments and therefore over-subsidize developers, taxpayers make up the difference through either higher taxes or decreased services.¹²⁵ Even considering the importance of accurate increment payments, however, there is no uniform system for calculating the payment. Two methods exist: technical and political.¹²⁶ While the technical method involves strict adherence to calculated property value increases associated with a given project, the political method is a riskier (and often preferred) method of payment calculation.¹²⁷ In Chicago, for example, individual aldermen have considerable influence on the amount of increment provided to private developers without significant examination of the developer's contributions to property value growth as the project progresses.¹²⁸

In addition to the general characteristics of TIF that have made its adoption attractive for municipalities, a portion of the existing literature

123. Johnson, "Mainstreaming of a Fringe Sector," 52.

124. Geheb, "Constitutional Debt Limitations," 752.

125. Stinson, "Subsidizing Local Economic Development Through Tax Increment Financing," 242 and 247.

126. Weber and Goddeeris, "Process and Planning Issues," 16-18.

127. Weber and Goddeeris, "Process and Planning Issues," 18.

128. Weber and Goddeeris, "Process and Planning Issues," 17.

focuses on the specific attributes of cities that are most likely to adopt TIF. Analysis of the characteristics of municipalities most likely to utilize TIF is less important for proper implementation in Chicago, but these characteristics do indicate some of the motivating factors behind TIF adoption. Man and Rosentraub (1990)¹²⁹ and Dye and Merriman (2000)¹³⁰ each identified larger city sizes as significant, although evidence on rate of population growth has been contradictory. Man (1999) found no evidence of a correlation,¹³¹ while Anderson (1990) showed population growth to be positively related.¹³² Man (1999) also linked recent increases in property taxes with TIF adoption but found that cities with high property taxes overall were less likely to use TIF.133 The composition of municipalities has also been found to be significant, as Dye and Merriman (2000) showed that a larger non-residential segment of the property tax base is linked with adoption,¹³⁴ as was a larger service sector in Man (1999).¹³⁵ Anderson (1990) suggested that the composition of available taxes also has little effect on TIF adoption, as inclusion of

129. Man and Rosentraub, "Municipal Adoption and Effects On Property Value Growth," 537.

130. Dye and Merriman, "The Effects of Tax Increment Financing on Economic Development," 316.

131. Joyce Y. Man, "Fiscal Pressure, Tax Competition and the Adoption of Tax Increment Financing," *Urban Studies* 36, no. 7 (1999), 1163.

132. Anderson, "Municipal Adoption and Growth," 160.

133. Man, "Fiscal Pressure, Tax Competition and the Adoption of Tax Increment Financing," 1163.

134. Dye and Merriman, "The Effects of Tax Increment Financing on Economic Development," 316.

135. Man, "Fiscal Pressure, Tax Competition and the Adoption of Tax Increment Financing," 1164. school districts in the frozen tax base and the municipality's pre-existing portion of the aggregate tax rate were statistically insignificant.¹³⁶

Man and Rosentraub's study is also important in considering the possible effects of lifting blight requirements in TIF statutes: in Indiana, where the finding of blight is not required for TIF adoption, unemployment, vacancy, and poverty (objective factors of blight) were insignificant in the likelihood of municipalities adopting TIF.¹³⁷ That may, however, already be the case, as Byrne (2005) found that the overall level of blight within a municipalities.¹³⁸ In a later study, Byrne (2006) showed that within adopting municipalities, most districts were located in areas with higher vacancy, older buildings, and higher poverty relative to the municipality as a whole, although that study also showed that about 25 percent of TIF districts were located in areas with significantly higher median incomes compared to the rest of the municipality.¹³⁹

At the neighborhood level, perhaps a more productive analysis for Chicago's TIF use, Gibson (2003) found that TIF adoption was more likely in neighborhoods with increasing income, slower growth in retail and manufacturing, higher density of retail, and a certain level of blight.¹⁴⁰ Neighborhoods with a high level of blight, however, were actually less likely to be included in TIF districts.

The presence of intra- and inter-municipal strategic interaction poses questions as to the responsible application of TIF. Strategic interaction (sometimes termed competitive adoption) means that municipalities

136. Anderson, "Municipal Adoption and Growth," 161.

137. Man and Rosentraub, "Municipal Adoption and Effects on Property Value Growth," 537.

138. Byrne, "Strategic Interaction," 293.

139. Byrne, "Determinants of Property Value Growth," 323.

140. Gibson, "Neighborhood Characteristics," 323.

(or smaller areas) utilize TIF simply in reaction to other municipalities' adoption without considering the true effects of TIF. Analyzing data from Chicago-area municipalities, Byrne (2005) found strategic interaction to be a significant motivating factor in TIF adoption,¹⁴¹ and Man (1999) found similar evidence in Indiana municipalities.¹⁴² Gibson (2003) also gave some analysis of this factor at the ward level, finding that while strategic interaction did not exist within the same ward, there was evidence of such activity between wards.¹⁴³ Regardless of the overall effectiveness of TIF in the eyes of adopting municipalities or affected taxpayers, the presence of TIF incentives attracts a greater number of prospective developers. As such, local governments frequently turn to TIF as a reactionary tool, even if there is little net gain.¹⁴⁴

The composition of TIF districts is another important factor, aside from their designation as commercial, residential, or industrial. The gestation period for TIF districts in Illinois is twenty-three years, a length of time that falls within the range of time periods that Huddleston (1982) identified as necessary for TIF districts to develop an adequate increment to service debt.¹⁴⁵ In general, larger districts are more common because they more easily can be found to include factors of blight.¹⁴⁶ However, this represents another failure of TIF in connecting the viability of the tool with the goals that it nominally seeks to achieve. Smaller TIF districts allow for greater accuracy in calculating incentives

141. Byrne, "Strategic Interaction," 294.

142. Man, "Fiscal Pressure, Tax Competition and the Adoption of Tax Increment Financing."

143. Gibson, "Neighborhood Characteristics," 324.

144. Briffault, "The Most Popular Tool," 90-91.

145. Jack R. Huddleston, "Local Financial Dimensions of Tax Increment Financing: A Cost-Revenue Analysis," *Public Budget and Finance* 2 (1982), 46.

146. Gordon, "Blighting the Way," 325.

for developers while fixing a more easily identified problem,¹⁴⁷ and they involve less risk of capturing property tax revenues.¹⁴⁸

Study

Approach

Of the three forms of growth—natural, inflationary, and TIF-induced only growth directly caused by TIF truly aids adopting municipalities. Because of challenges in assessing future development and the effects of alternative economic development tools, natural development is difficult to measure accurately, thus fostering the body of scholarship describing the ineffectiveness of "but-for" tests in TIF legislation. Inflationary growth, however, represents a clearly quantifiable section of TIF growth, equivalent to increases in Consumer Price Index (CPI). In order to eliminate inflationary growth from the funds collected by TIF districts, legislation may adjust frozen (and taxable) EAV for each district in proportion to annual CPI inflation.

This examination introduces an inflation index for taxable EAV through a comparison with changes in total CPI. The data for this study was collected from two sets of reports provided by the Cook County Clerk's office and the City of Chicago. The Cook County Clerk collects data on property value and property tax revenue. County Clerk David Orr has provided annual Tax Increment Agency Distribution Summaries each year since 2006. These reports offer information on all districts in Cook County, with statistics on Equalized Valuation, Frozen Valuation, Agency Tax Amount, and Agency Distribution Percent. The first two categories—Equalized Valuation and Frozen Valuation—are relevant to this study. Agency Tax Amount provides full-collection revenue; the city's reports, however, provide statistics on actual revenue received. The city

147. Weber and Goddeeris, "Process and Planning Issues," 46.

148. Lefcoe, "Competing for the Next Hundred Million Americans," 30.

provides each district's annual reports since 2004. These reports include balance sheets for each calendar year, including revenue and expenses information, as well as fund transfer, debt proceeds, debt servicing, and total balances for the beginning and end of the year.

This study focuses on district valuation and transactions from 2006 to 2009. Over this period, the county clerk provides information for 164 districts, while the city provides information on 159 districts. Because of district retirement and creation, as well as incomplete data from both sources, this study focuses on the 125 TIF districts for which complete balance and valuation information is provided for each year of the study from both the county clerk and the city. (Consult Appendix A for a list of districts and selected figures for each.)

Because the inflation index would apply to valuation figures for each district, I collected frozen EAV amounts for the districts according to year of creation. In some cases, these numbers shifted slightly in the county clerk's reports, so I used the latest available totals for this examination. I then adjusted each frozen EAV amount for each year from 1987 to 2009 (the earliest district involved in this study was the Chatham Ridge TIF District, created in 1986), adding districts into the adjustment in their years of creation. After compiling data on real and adjusted frozen EAV, current EAV, and balance sheet information for each of the 125 districts, I computed the real and percentage changes in EAV, providing new figures for incremental EAV. In order to estimate changes in revenue with an inflation index, I compared the current and adjusted incremental EAV figures, providing an adjusted ratio for each district, and these ratios were applied to the property tax figures collected in the city's annual reports for each district.

The resulting data provides insight as to the effects of an inflation index for tax revenue and the overall sustainability of TIF with such an adjustment to available tax revenue. The original figures give summary assessment of these districts' general financial performance, as well as individual district tendencies. The adjusted data indicates changes in available increment, revenue, and total net profits. As this study introduces a retroactive inflation index, expense figures were kept constant in order to assess the viability of TIF's current usage under the new form of tax reservation.

Results

The original data reported by the Cook County clerk and the City of Chicago shows that the 125 districts considered in this study account for about 16.64 percent of Chicago's \$84.49-billion real estate EAV in 2009. Annualized growth in TIF EAV was 8.43 percent from 2006 to 2009, increasing from just under \$11 billion to over \$14 billion. (As reference, the city's overall real estate EAV had annualized growth of 6.54 percent over that period). TIF district growth decreased each year over this period, with 10.37 percent growth from 2006 to 2007, 8.97 percent growth the next year, and 5.95 percent growth the final year. Fluctuations in inflation for each year of this period, however, show that non-inflationary growth remained more constant. Accounting for inflation of 2.85 percent, 3.84 percent, and minus 0.36 percent for the years from 2006 to 2009, however, the districts experienced annual growth of 7.52 percent, 5.13 percent, and 6.31 percent. Averaging 2.11 percent over these years, inflation accounted for about a quarter of EAV growth.

Year	EAV Growth	Inflation	Non- inflationary Growth	Percentage of Growth Created by Inflation
2006-2007	10.37%	2.85%	7.52%	27.48%
2007-2008	8.97%	3.84%	5.13%	42.81%
2008-2009	5.95%	-0.36%	6.31%	-6.05%
Annualized 2006-2007	8.43%	2.11%	6.32%	25.03%

EAV Growth

Property tax collections of the districts grew at an annualized rate of 15.5 percent over this period, increasing from \$266.7 million in 2006 to \$424.5 million in 2009. Non-property-tax revenue represented about 5.5 percent of total revenue from 2006 to 2009, ranging from 9.33 percent in 2007 to 1.99 percent in 2009. This revenue came mostly in the form of investment interest, along with sales taxes, liquor taxes, and "miscellaneous revenue." Expenses increased each year, as well, with a large increase in the first year (\$165.1 million to \$306 million); however, shifts in expenses can be difficult to project and analyze by year because of the changing needs of each district. Along with these changes in revenue, total net revenue fluctuated over the four-year period.

The total sum of frozen EAV for these districts is \$4.14 billion, using the Cook County clerk's latest available figures for each district. Indexing to inflation, that sum increases to \$5.33 billion. Frozen (and taxable) EAV thus increases by \$1.19 billion. In reality, changes in property value were such that certain districts were valued at less than the inflationadjusted frozen base. When the adjusted base EAV rose above the actual calculated EAV for a given year, the increment was changed to zero instead of counting a negative increment as taxable. The shift in taxable EAV would thus be slightly less, as the total available increment in 2009 decreases by \$1.17 billion (\$9.92 billion to \$8.75 billion, a decrease of 11.82 percent).

The change in taxable EAV would have effects on both TIF and nonmunicipal taxing bodies. The Cook County clerk provides annual summaries of tax rates for all of Chicago's taxing bodies: for 2009, most of the city had a total tax rate of 4.627 percent, 2.366 percentage points of which was levied by the board of education. In total, the area's taxing bodies would have received an additional \$54.92 million in 2009, including \$28.09 million for the Chicago Board of Education. For 2009, then, tax rates would have decreased from 4.627 percent to about 4.553 percent. In total, from 2006 to 2009, the taxing bodies would have received an additional \$209.08 million. These figures fall closely in line with those provided by Quigley (2007), which calculated \$60,292,664 in lost property taxes including several districts not included in this study.¹⁴⁹ (Some

149. Quigley, "A Tale of Two Cities," 9.

	Increme	mtal EAV		
Year	Unadjusted	Adjusted	Tax Rate	
2006	\$6,773,505,815	\$5,928,358,504	5.302%	
2007	\$7,965,396,374	\$6,964,054,667	4.994%	
2008	\$9,101,151,400	\$7,903,611,314	4.802%	
2009	\$9,918,109,167	\$8,745,948,416	4.627%	
Total	\$33,758,162,756	\$29,541,972,901		

Property Tax Collection

discrepancies exist between the calculated figures and the reported figures, as these calculations depend on complete tax collection; for example, in 2009, the actual shift in property taxes may have been closer to \$53.47 million, but annual variations in tax collections make the mathematical approach more accurate in determining the districts' general tendencies.)

The city's annual reports indicate that total fund balance for these districts was about \$1.4 billion in 2009, an increase from \$781.27 million in 2006. For context, the total fund balance for all 151 districts with available 2009 annual reports was \$1.48 billion. A majority of the growth in total fund balance occurred from 2006 to 2007; the total fund balance increased by just 6.05 percent (\$82.24 million) from 2008 to 2009. Accounting for debt, however, the changes in fund balance are more consistent, with annualized growth of 9.15 percent and deviation of no more than 1.1 percent each year. Much of the drastic shift from 2006 to 2007 came in the form of debt proceeds, totaling \$371.55 million for the districts considered here. Debt proceeds totaled \$500,000 in both 2006 and 2008, with none listed in 2009.

Adjusting for inflation, property taxes would have decreased by 12.6 percent, causing total revenue to decrease by 12.34 percent. The difference in percentage decline for increments and property taxes (with property taxes changing at the same rate as increments) is caused by the artificial zero minimum, as the amount of negative property tax negated by this represents a larger portion of total property taxes. Total profits were

	Property Ia	x Collections	
	Unadjusted	Adjusted	Taxes Lost to Inflation
	\$359,131,278	\$314,321,568	\$44,809,710
	\$397,791,895	\$347,784,890	\$50,007,005
23	\$437,037,290	\$379,531,415	\$57,505,875
	\$458,910,911	\$404,675,033	\$54,235,878
	\$1,652,871,375	\$1,446,312,906	\$206,558,468

\$87.03 million in 2009; adjusting for inflation (and keeping expenses constant) decreases that figure to \$33.56 million, a 61.44 percent drop. The average shift in total revenue likely would have been greater in analyzing the full history of Chicago TIF districts, as interest on investments would decrease with lower fund balances, but this analysis accounts for only property tax shifts, as property taxes make up over 90 percent of all TIF revenue.

In 2009, twenty-four districts had net losses, and twenty districts had losses over the period of 2006 to 2009. Adjusting for inflation would have caused those numbers to increase to thirty-two for both 2009 and the entire period. Accounting for these decreases in property tax revenue, however, the districts would still have taken in net profits of \$196.18 million from 2006 to 2009, with average median profits of \$279,849 per year. In the data analyzed for this study, expenditures represented about one-fourth of the districts' fund balances for the start of each year. The 2009 calendar year, for example, began with \$1.32 billion, and expenditures for that year totaled \$346.12 million (26.26 percent). In 2009, the TIF districts spent 79.91 percent of their total revenue. Adjusting for inflation, revenue would still have exceeded expenditures for these years, as the figure would have increased 91.16 percent for the districts overall. From 2006 to 2009, the districts spent 74.73 percent of their revenue, a figure that increases to 85.33 percent with inflation indexing. The districts would thus continue to save 14.67 percent of their annual revenue for future projects. Analysis of the median district shows that revenues exceed expenditures by a far greater amount in the typical district. For 2009, the median district's expenses represented about 30.69 percent of its revenue. Adjusting for inflation, the figure increases to 38.53 percent, meaning that the median district would still save 61.47 percent of its revenue with an inflation index. The median district also used just 11.45 percent of its beginning fund balance in 2009, indicating a large excess of unused funds in addition to unused 2009 revenue.

Year	Median	Median Districts		istricts
	Reported	Adjusted	Reported	Adjusted
2006	25.72%	33.77%	57.21%	65.15%
2007	18.60%	20.25%	79.85%	90.59%
2008	28.78%	38.05%	76.75%	88.39%
2009	30.69%	38.53%	79.91%	91.16%
Total	45.08%	53.83%	74.73%	85.33%

Expenses as a percentage of revenue

In total, twelve of the 125 districts have net revenues that become net losses with the application of an inflation index from 2006 to 2009. The Fullerton/Milwaukee TIF District, for example, would have had its net balance decrease from \$417,028 to minus \$2.97 million over this period. The size of this district and its remaining fund balance, however, indicate that it would likely remain viable with an inflation adjustment. The district's EAV had annualized growth of 10.02 percent from 2006 to 2009, with an increment of \$163.48 million in 2009. With the shift in base EAV, the increment would have been 12.81 percent lower, leading to a decrease in property taxes of \$3.38 million. In 2009, however, the district closed with a balance of \$17.69 million; this number would decrease with an inflation index, but the non-inflationary growth rate of 7.91 percent indicates that the district's previous revenues would have made the overall losses for this period sustainable. In general, these twelve districts experienced a decrease of \$15.62 million in property taxes from 2006 to 2009, causing expenses to rise from 93.94 percent of revenue to 113.92 percent. The resulting shortfall totals about \$9.14 million, a low total compared to the total net balances for the 125 districts considered here.

For some districts, property tax collection increased with an inflation index in 2009 due to that year's negative inflation rate. For most districts, previous years' inflation negated 2009 inflationary changes in property tax collection, but districts created in the previous year benefited. For the purpose of this study, none of those districts were included in total figures, but analysis of individual years shows that districts like the 134th/Avenue K-TIF District had lower base EAV with inflation (because it was negative in the only year of adjustment for districts created in 2008), meaning that they would have received slightly more in property tax revenue.

Because of increasing base EAV figures, districts are also at risk of having their incremental EAV reduced to zero if property value growth does not keep pace with inflation. Analyzing 2009 totals, however, the Greater Southwest Industrial Corridor (West)-TIF District was the only district to have its increment completely reduced because of inflation. The district had an increment of \$40.36 million in 2008 and \$22.85 million in 2009 (with a frozen EAV of \$115.6 million). With inflation, however, the increments decrease to \$11.42 million in 2008, and, because of a decrease in assessed value in 2009, the increment is completely eliminated in 2009. As a result, the increment decreases to zero, and without future growth beyond inflation, these districts would become unviable.

In assessing the effects of an inflation index on Chicago's TIF districts, this study shows that nearly all of the districts would remain viable with inflationary adjustment. While, as stated, some districts would have net losses that would have been net revenues without inflationary adjustment, overall growth rates indicate that such losses would not lead to the failure of the district. Only those districts with inadequate growth to accumulate any increment would be unviable, and the evidence shows that just one district of the 125 analyzed would have a zero increment because of inflationary adjustment. The average district, meanwhile, would still retain a majority of its revenue, even with actual expenses over this period.

Discussion

Analysis of total funds and property tax adjustments seems to indicate that an inflation index would allow nearly all of the 125 districts studied here to remain viable while returning a significant portion of the districts' extra funds to the taxing bodies. Arguments against the introduction of an inflation index have centered on the administrative difficulties of applying such an index and the future viability of districts that rely on some type of initial growth to support future development. This study indicates that districts of a variety of ages are able to sustain themselves without including inflationary growth in their tax increments. In general, the districts appear to use only a small portion of their property tax revenue, allowing total fund balances to increase at a high rate from year to year. Indexing to inflation helps to bring revenue to a more appropriate level for the expenses that these districts have incurred in recent years.

Future analysis might focus on possibilities for additional adjustment, possibly factoring in natural growth that would have occurred without TIF. As stated, full adherence to the "but-for" test is the most efficient practice for TIF implementation, and this occurs only when TIF districts receive TIF-induced property tax increments while leaving natural and inflationary growth to the local governing bodies. Some have suggested indexing to previous years' growth. Utilizing the data presented here, initial results seem to show that a full index to previous years' growth may make several Chicago districts unviable. Inflationary adjustment of about 2.11 percent causes districts to lose most of their net profits (while remaining viable), and considering the relatively rapid EAV growth over this period, it seems that indexing to previous growth would have an even more significant effect on TIF funds. However, the real application of such indices would help to provide concrete evidence as to the feasibility of such policies.

Conclusion

Chicago's TIF implementation (and the use of TIF in many other areas) clearly needs adjustment. The existing literature presents mixed success, at best, and regional and municipal losses, at worst. Considering the prevalence of TIF at the national level, the proper implementation of such incentive policies is vital for the protection of tax dollars. Because of the establishment of this policy in so many areas of the country, elimination of TIF may represent too drastic a shift for many municipalities. However, it is clear that additional inter-municipal communication and conclusive results are necessary before TIF expands further.

TIF has achieved popularity on the national level as local policymakers have emphasized the positive aspects of the tool with insufficient consideration for the negative aspects of TIF. Numerous studies of TIF have presented a rich discussion on effective implementation, including the most beneficial types of TIF districts, supplementary policies to regulate the effects of TIF on local residents, modes of financing for TIF districts, the private-public relationship in developing new TIF plans, transparency in TIF decision-making and budgeting, and a variety of other aspects of the tool. The lack of an inflation index in many areas where TIF has become a popular development tool indicates the disconnect that currently exists between scholarly examination of TIF and the eagerness of policymakers to use TIF, even in an imperfect form. While the politically and economically attractive qualities of TIF may tempt legislators to emphasize the benefits that TIF does provide, the only responsible utilization of this tool requires a much more comprehensive discussion of TIF's wide-ranging effects and implications.

Bibliography

Anderson, John E. "Tax Increment Financing: Municipal Adoption and Growth." *National Tax Journal* 43, no. 2 (1990): 155–163.

Briffault, Richard. "The Most Popular Tool: Tax Increment Financing and the Political Economy of Local Government." *University of Chicago Law Review* 77 (2010): 65–95.

Brueckner, Jan K. "Tax Increment Financing: a Theoretical Inquiry." *Journal of Public Economics* 81 (2001): 321–343.

Byrne, John. "Daley Studying Budget Options 'Very Carefully." *Chicago Tribune*, July 31, 2010. Accessed April 28, 2011. http://articles.chicagotribune.com/ 2010-07-31/news/ct-met-daley-budget-0801-20100731_1_mayor-richard-daleytax-and-fee-increases-budget.

Byrne, Paul F. "Determinants of Property Value Growths for Tax Increment Financing Districts." *Economic Development Quarterly* 20, no. 4 (2006): 317–329.

. "Does Tax Increment Financing Deliver on Its Promise of Jobs? The Impact of Tax Increment Financing on Municipal Employment Growth." *Economic Developer Quarterly* 24, no. 1 (2010): 13–22.

------. "Strategic Interaction and the Adoption of Tax Increment Financing." *Regional Science and Urban Economics* 35 (2005): 279–303.

Carroll, Deborah A., and Robert J. Eger III. "Brownfields, Crime, and Tax Increment Financing." *The American Review of Public Administration* 36, no. 4 (2006): 455–477.

Chapman, Jeffrey I. "Tax Increment Financing as a Tool of Redevelopment." In *Local Government Tax and Land Use Policies in the United States*, edited by Helen F. Ladd. Cheltenham, UK: Edward Elgar, 2010.

Chicago Board of Education. "FY Budget 2011." Accessed April 28, 2011. http://www.cps.edu/About_CPS/Financial_information/Pages/Financialinformation.aspx.

City of Chicago. "City Council Approves Mayor Daley's Balanced 2011 Budget Which Controls Spending, Continues Services and Provides For Future." Press release, November 17, 2010. Accessed April 28, 2011. http://mayor.cityofchicago. org/mayor/en/press_room/press_releases/2010/november_2010/1117_budget. html.

Cook County Clerk. "2009 Cook County Tax Rates Report." November 8, 2010. Accessed April 28, 2011. http://www.cookcountyclerk.com/newsfromclerk/Pages/2009CookCountyTaxRatesreleasedtoday.aspx.

———. "2009 Tax Increment Agency Distribution Summary." November 22, 2010. Accessed April 28, 2011. http://www.cookcountyclerk.com/tsd/Document Library/2009%20agency%20distribution%20summary.pdf.

Dardia, Michael. "Subsidizing Redevelopment in California." Public Policy Institute of California (1998).

Donaghy, Kieran P., Andrea K. Elson, and Gerrit J. Knaap. "Optimal Investment in a Tax Increment Financing District." *The Annuals of Regional Science* 33 (1999): 305–326.

Dye, Richard F., and David F. Merriman. "The Effects of Tax Increment Financing on Economic Development." *Journal of Urban Economics* 47 (2000): 306–328.

Dye, Richard F., and Jeffrey O. Sundberg. "A Model of Tax Increment Financing Adoption Incentives." *Growth and Change* 29 (1998): 90–110.

Epstein, Richard A. "How to Undermine Tax Increment Financing: The Lessons of *City of Chicago v. ProLogis.*" *University of Chicago Law Review* 77, no. I (2010): 121–141.

Farris, Sherri, and John Horbas. "Creation vs. Capture: Evaluating the True Costs of Tax Increment Financing." *Journal of Property Tax Assessment and Administration* 6, no. 4 (2008): 5–28.

Fernandez, Gonzalo E. "Tax Increment Financing: Interaction Between Two Overlapping Jurisdictions." *Journal of Urban Economics* 55 (2004): 151–164.

Geheb, Phillip J. F. "Tax Increment Financing Bonds as 'Debt' Under State Constitutional Debt Limitations." *The Urban Lawyer* 41, no. 4 (2009): 725–753.

Gibson, Diane. "Neighborhood Characteristics and the Targeting of Tax Increment Financing in Chicago." *Journal of Urban Economics* 54 (2003): 309–327.

Gordon, Colin. "Blighting the Way: Urban Renewal, Economic Development, and the Elusive Definition of Blight." *Fordham Urban Law Journal* 31 (2003–2004): 305–337.

Greuling, John E. "Tax Increment Financing." In *Main Street Renewal: A Handbook for Citizens and Public Officials*, edited by Roger L. Kemp. Jefferson, NC: McFarland, 2000.

Huddleston, Jack R. "Intrametropolitan Financial Flows Under Tax Increment Financing." *Policy Sciences* 19, no. 2 (1986): 143–161.

-------. "Local Financial Dimensions of Tax Increment Financing: A Cost-Revenue Analysis." *Public Budgeting and Finance* 2 (1982): 40–49.

. "Tax Increment Financing as a State Development Policy." *Growth and Change* 15 (1984): 11–17.

. "Variations in Development Subsidies under Tax Increment Financing." *Land Economics* 57, no. 3 (1981): 373–384.

Johnson, Craig L. "Tax Increment Debt Finance: An Analysis of the Mainstreaming of a Fringe Sector." *Public Budgeting & Finance* 19 (1999): 47–67.

Jolin, Marc, Sharon Legenza, and Matt McDermott. "Tax-Increment Financing: Urban Renewal of the 1990s." *Clearinghouse Review* 32 (1998): 81–99.

Joravsky, Ben. "Go On, Smash It." *Chicago Reader*, August 19, 2010. Accessed April 28, 2011. http://www.chicagoreader.com/chicago/mayor-daley-tif-surplus-chicago-budget-crisis/Content?oid=2272830.

Klemanski, John S. "Using Tax Increment Financing for Urban Redevelopment Projects." *Economic Development Quarterly* 4 (1990): 23–28.

Kriz, Kenneth A. "Tax Increment Financing: Its Effect on Local Government." University of Minnesota Center for Urban and Regional Affairs Reporter 33, no. 2 (2003): 1–7.

Lawrence, David B., and Susan C. Stephenson. "The Economics and Politics of Tax Increment Financing." *Growth and Change* 26 (1995): 105–137.

Lefcoe, George. "After *Kelo*, Curbing Opportunistic TIF-Driven Economic Development: Forgoing Ineffectual Blight Tests: Empowering Property Owners and School Districts." *Tulane Law Review* 83, no. 1 (2008).

————. "Competing for the Next Hundred Million Americans: The Uses and Abuses of Tax Increment Financing." USC Legal Studies Research paper, forthcoming in *Urban Lawyer* 43. Accessed April 28, 2011. http://law.bepress.com/ cgi/viewcontent.cgi?article=1175&context=usclwps.

-------. "Redevelopment Takings After *Kelo*: What's Blight Got To Do With It?" *Southern California Review of Law and Social Justice* 17, no. 3 (2008): 803–851.

Leroy, Greg. "TIF, Greenfields, and Sprawl: How an Incentive Created to Alleviate Slums Has Come to Subsidize Upscale Malls and New Urbanist Developments." *Planning & Environmental Law* 60, no. 2 (2008): 3–11.

Man, Joyce Y. "Fiscal Pressure, Tax Competition and the Adoption of Tax Increment Financing." *Urban Studies* 36, no. 7 (1999): 1151–1167.

Man, Joyce Y., and Mark S. Rosentraub. "Tax Increment Financing: Municipal Adoption and Effects On Property Value Growth." *Public Finance Review* 26, no. 6 (1998): 523–547.

Merriman, David F., Mark L. Skidmore, and Russ D. Kashian. "Do Tax Increment Finance Districts Stimulate Growth in Real Estate Values?" *Real Estate Economics* 39 (2011): 1–30.

Michel, Catherine. "Brother, Can You Spare a Dime: Tax Increment Financing in Indiana." *Indiana Law Journal* 71 (1996): 457–480.

Quigley, Mike. "A Tale of Two Cities: Reinventing Tax Increment Financing." Cook County Commissioner's Office, April 1, 2007. Accessed 28, 2011. http:// www.heartland.org/custom/semod_policybot/pdf/21830.pdf.

Reinert, Josh. "Tax Increment Financing in Missouri: Is it Time for Blight and But-For to Go?" *Saint Louis University Law Journal* 45 (2001): 1019–1053.

Schlossberg, Dina. "Tax Increment Financing." In *Building Healthy Communities:* A Guide to Community Development for Advocates, Lawyers, and Policymakers, edited by Roger A. Clay Jr. and Susan R. Jones. Chicago: American Bar Association, 2009.

Skidmore, Mark, and Russ Kashian. "On the Relationship Between Tax Increment Finance and Property Taxation." *Regional Science and Urban Economics* 40 (2010): 407–414.

Smith, Brent C. "If You Promise to Build It, Will They Come? The Interaction between Local Economic Development Policy and the Real Estate Market: Evidence from Tax Increment Financing Districts." *Real Estate Economics* 37, no. 2 (2009): 209–234.

Spielman, Fran. "Empty Pockets: City Has \$27 Million." *Chicago Sun-Times*, July 29, 2010.

Stinson, Thomas F. "Subsidizing Local Economic Development Through Tax Increment Financing: Costs in Nonmetro Communities in Southern Minnesota." *Policy Studies Journal* 20, no. 2 (1992): 241–248.

Talanker, Alyssa, Kate Davis, and Greg LeRoy. "Straying from Good Intentions: How States Are Weakening Enterprise Zone and Tax Increment Programs." Report by Good Jobs First (2003).

Tomme, Alyson. "Tax Increment Financing: Public Use or Private Abuse?" *Minnesota Law Review* 90 (2005): 213–246.

Weber, Rachel. "Equity and Entrepreneurialism: The Impact of Tax Increment Financing on School Finance." *Urban Affairs Review* 38, no. 5 (2003): 619–644.

Weber, Rachel, and Laura Goddeeris. "Tax Increment Financing: Process and Planning Issues." Working Paper for the Lincoln Institute of Land Policy (2007).

Weber, Rachel, Rebecca Hendrick, and Jeremy Thompson. "The Effect of Tax Increment Financing on School District Revenues: Regional Variation and Interjurisdictional Competition." *State & Local Government Review* 40, no. 1 (2008): 27–41.

Weber, Rachel, Saurav Dev Bhatta, and David Merriman. "Does Tax Increment Financing Raise Industrial Property Values?" *Urban Studies* 40 (2003): 2001– 2021. -------. "Spillovers from Tax Increment Financing Districts: Implications for Housing Price Appreciation." *Regional Science and Urban Economics* 37 (2007): 259–281.

Woolever, Alan. "Tax Increment Financing, Government Grants, and Developer Tax Consequences: An Analysis of Statutes, Regulations, Case Law and Related Policy Considerations." *Urban Lawyer* 40 (2008): 299–330.

Appendix A

TIF District	Year Created	Base EAV	2009 EAV	2009 Incremental EAV
105th/Vincennes	2001	1,268,074	7,813,517	6,545,443
111th/Kedzie	1999	14,456,141	30,141,826	15,685,685
119th/Halsted	2002	18,853,913	36,781,079	17,927,166
119th/I-57	2002	16,097,672	52,168,128	36,070,456
126th/Torrence	1994	1,224,731	19,294,130	18,069,399
24th/Michigan	2002	15,874,286	48,079,777	32,205,491
35th/Halsted	1997	81,196,855	186,971,615	105,774,760
35th/State	2004	3,978,955	32,782,273	28,803,318
35th/Wallace	1999	9,047,402	25,957,850	16,910,448
41st/King	1994	129,892	4,603,996	4,474,104
43rd/Cottage Grove	1998	13,728,931	76,734,310	63,005,379
45th/Western	2002	1,984,412	3,522,649	1,538,237
47th/Ashland	2002	53,605,185	112,119,947	58,514,762
47th/Halsted	2002	39,164,012	116,894,415	77,730,403
47th/King	2002	61,269,066	252,106,684	190,837,618
47th/State	2004	19,279,360	61,287,589	42,008,229
49th/St. Lawrence	1996	683,377	11,621,099	10,937,722
51st/Archer	2000	29,522,751	47,763,819	18,241,068
53rd	2001	23,168,822	45,080,607	21,911,785
60th/Western	1996	2,464,026	8,718,137	6,254,111
63rd/Pulaski	2000	56,171,856	110,535,172	54,363,316
67th/Cicero	2002	0	7,756,313	7,756,313
69th/Ashland	2004	813,600	12,342,482	11,528,882
71st/Stony Island	1998	53,506,755	138,619,389	85,112,634
72nd/Cicero	1993	6,531,993	12,767,991	6,235,998
73rd/Kedzie	1993	14,587,780	9,537,588	0
79th	1998	21,576,305	44,123,789	22,547,484

2009 Property Taxes	2009 Adjusted Base	2009 Adjusted Incremental EAV	2009 Adjusted Property Taxes
175,776	1,536,131	6,277,386	168,577
629,854	18,615,709	11,526,117	462,828
624,946	22,483,946	14,297,133	498,402
1,114,477	19,197,033	32,971,095	1,018,715
926,071	1,772,943	17,521,187	897,975
1,109,711	18,930,638	29,149,139	1,004,398
4,364,671	108,534,141	78,437,474	3,236,630
712,701	4,518,968	28,263,305	699,339
564,873	11,650,675	14,307,175	477,914
205,432	188,034	4,415,962	202,762
2,899,227	18,069,716	58,664,594	2,699,483
162,939	2,366,480	1,156,169	122,468
3,133,417	63,926,045	48,193,902	2,580,743
3,207,383	46,704,445	70,189,970	2,896,243
8,146,598	73,065,490	179,041,194	7,643,025
1,754,378	21,895,903	39,391,686	1,645,104
486,468	934,415	10,686,684	475,303
823,055	36,781,199	10,982,620	495,547
834,373	28,066,457	17,014,150	647,877
312,757	3,369,183	5,348,954	267,492
2,212,427	69,982,239	40,552,933	1,650,385
295,057	0	7,756,313	295,057
522,995	924,020	11,418,462	517,986
3,591,832	70,424,409	68,194,980	2,877,891
366,329	9,697,953	3,070,038	180,347
0	21,658,260	0	0
922,723	28,398,256	15,725,533	643,545

TIF District	Year Created	Base EAV	2009 EAV	2009 Incremental EAV
79th/Southwest	2001	36,347,823	77,427,496	41,079,673
87th/Cottage Grove	2002	53,959,824	108,624,352	54,664,528
89th/State	1998	3,827,328	12,368,610	8,541,282
95th/Stony Island	1990	2,622,436	23,188,944	20,566,508
95th/Western	1995	16,035,773	36,760,440	20,724,667
Addison North	1997	14,400,224	49,590,219	35,189,995
Archer/Central	2000	37,646,911	59,170,104	21,523,193
Archer Courts	1999	55,326	6,442,903	6,387,577
Belmont/Central	2000	74,974,946	155,968,244	80,993,298
Belmont/Cicero	2000	33,673,880	71,313,651	37,639,771
Bronzeville	1998	46,166,304	146,754,364	100,588,060
Bryn Mawr/Broadway	1996	17,682,409	62,835,439	45,153,030
Calumet/Cermak	1998	3,219,685	177,991,372	174,771,687
Canal/Congress	1998	36,872,487	436,099,862	399,227,375
Central West	2000	89,481,284	407,483,208	318,001,924
Chatham-Ridge	1986	2,623,722	38,315,922	35,692,200
Chicago/Central Park	2002	84,789,947	234,982,976	150,193,029
Chicago/Kingsbury	2000	38,520,706	376,582,348	338,061,642
Chinatown Basin	1986	131,657	68,073,215	67,941,558
Cicero/Archer	2000	19,829,324	38,477,603	18,648,279
Clark/Montrose	1999	23,433,096	78,154,365	54,721,269
Clark/Ridge	1999	39,619,368	94,123,284	54,503,916
Commercial	2002	40,748,652	77,822,084	37,073,432
Devon/Sheridan	2004	46,265,220	60,730,285	14,465,065
Devon/Western	1999	71,430,503	144,291,279	72,860,776
Diversey/Narragansett	2003	34,746,231	84,427,123	49,680,892
Division/Homan	2001	24,663,716	59,231,008	34,567,292

2009 Property Taxes	2009 Adjusted Base	2009 Adjusted Incremental EAV	2009 Adjusted Property Taxes
1,349,629	44,031,355	33,396,141	1,097,195
1,917,166	64,348,965	44,275,387	1,552,803
350,367	5,037,445	7,331,165	300,728
795,183	4,304,587	18,884,357	730,144
870,570	22,573,928	14,186,512	595,925
1,636,880	19,248,479	30,341,740	1,411,361
908,401	46,902,760	12,267,344	517,752
293,183	71,245	6,371,658	292,452
3,410,246	93,408,246	62,559,998	2,634,107
1,380,889	41,952,922	29,360,729	1,077,156
4,251,688	60,763,070	85,991,294	3,634,707
1,805,422	24,178,018	38,657,421	1,545,698
7,255,879	4,237,678	173,753,694	7,213,616
19,659,528	48,530,753	387,569,109	19,085,429
14,329,301	111,481,105	296,002,103	13,337,980
1,668,711	5,135,816	33,180,106	1,551,264
6,385,328	101,114,958	133,868,018	5,691,284
11,673,687	47,991,386	328,590,962	11,346,653
2,662,171	257,713	67,815,502	2,657,232
869,079	24,704,551	13,773,052	641,875
2,467,641	30,175,667	47,978,698	2,163,587
2,093,049	51,019,330	43,103,954	1,655,270
1,738,875	48,594,183	29,227,901	1,370,892
492,560	52,544,211	8,186,074	278,750
2,998,749	91,983,708	52,307,571	2,152,836
2,378,649	40,512,783	43,914,340	2,102,555
1,369,544	29,877,355	29,353,653	1,162,981

TIF District	Year Created	Base EAV	2009 EAV	2009 Incremental EAV
Division/Hooker	1996	380,624	4,047,089	3,666,465
Division/North Branch	1991	482,150	5,702,452	5,220,302
Drexel	2002	127,408	7,626,347	7,498,939
Eastman/North Branch	1993	2,222,210	6,601,092	4,378,882
Edgewater	1986	479,172	6,213,508	5,734,336
Edgewater/Ashland	2003	1,875,282	14,129,783	12,254,501
Englewood Mall	1989	3,868,736	14,052,334	10,183,598
Englewood Neighborhood	2001	56,079,946	194,740,730	138,660,784
Fullerton/Milwaukee	2000	85,157,390	248,633,393	163,476,003
Galewood/Armitage	1999	48,056,697	110,570,153	62,513,456
Goose Island	1996	13,676,187	102,344,763	88,668,576
Greater Southwest West	2000	115,603,413	138,457,522	22,854,109
Homan/Arthington	1998	2,658,362	14,771,531	12,113,169
Homan/Grand Trunk	1993	35,753	5,439,254	5,403,501
Howard/Paulina	1988	10,081,104	37,233,212	27,152,108
Humboldt Park	2001	32,161,252	102,517,754	70,356,502
Irving/Cicero	1996	8,150,631	20,867,867	12,717,236
Jefferson/Roosevelt	2000	52,292,650	158,219,352	105,926,702
Jefferson Park	1998	23,970,085	49,275,118	25,305,033
Kinzie	1998	144,961,719	558,796,769	413,835,050
Lake Calumet	2000	176,186,639	267,067,423	90,880,784
Lakefront	2002	0	6,008,507	6,008,507
Lakeside/Clarendon	2004	3,091,585	9,508,300	6,416,715
Lawrence/Broadway	2001	38,603,811	120,064,852	81,461,041
Lawrence/Kedzie	2000	110,395,843	288,022,301	177,626,458
Lawrence/Pulaski	2002	43,705,743	85,621,247	41,915,504
Lincoln	1999	83,741,191	125,792,379	42,051,188

2009 Property Taxes	2009 Adjusted Base	2009 Adjusted Incremental EAV	2009 Adjusted Property Taxes
221,178	520,446	3,526,643	212,743
263,859	759,464	4,942,988	249,842
445,352	151,938	7,474,409	443,895
266,949	3,299,282	3,301,810	201,288
279,400	937,957	5,275,551	257,046
0	2,186,507	11,943,276	0
524,321	6,693,444	7,358,890	378,886
4,881,547	67,934,632	126,806,098	4,464,203
6,436,495	106,094,140	142,539,253	5,612,158
2,738,239	61,884,391	48,685,762	2,132,553
3,451,633	18,700,116	83,644,647	3,256,065
2,180,592	144,025,606	0	0
516,911	3,498,877	11,272,654	481,043
124,075	53,082	5,386,172	123,677
1,945,645	18,282,078	18,951,134	1,357,986
2,813,315	38,959,788	63,557,966	2,541,465
745,498	11,144,754	9,723,113	569,979
5,012,587	65,149,293	93,070,059	4,404,194
998,254	31,548,896	17,726,222	699,279
17,493,350	190,795,413	368,001,356	15,555,900
4,128,858	219,503,792	47,563,631	2,160,891
116,996	0	6,008,507	116,996
82,403	3,511,167	5,997,133	77,015
3,281,784	46,764,234	73,300,618	2,953,029
6,932,372	137,537,706	150,484,595	5,873,084
1,568,049	52,120,617	33,500,630	1,253,251
2,991,817	107,836,638	17,955,741	1,277,498

TIF District	Year Created	Base EAV	2009 EAV	2009 Incremental EAV
Lincoln/Belmont/Ashland	1994	2,457,347	24,894,744	22,437,397
Madden/Wells	2002	1,333,562	25,379,546	24,045,984
Madison/Austin	1999	48,748,259	104,798,790	56,050,531
Michigan/Cermak	1989	5,858,634	25,097,500	19,238,866
Midway	2000	48,652,950	79,173,467	30,520,517
Midwest	2000	98,090,835	455,504,752	357,413,917
Montclare	2000	792,770	9,631,870	8,839,100
Near North	1997	41,671,541	422,963,437	381,291,896
Near South	1990	128,549,547	1,472,854,091	1,344,304,544
Near West	1989	36,805,658	330,725,429	293,919,771
North/Cicero	1997	5,658,542	31,244,841	25,586,299
North Branch North	1997	29,574,537	119,870,273	90,295,736
Northwest	1998	146,115,991	304,090,893	157,974,902
Ohio/Wabash	2000	1,278,143	27,517,180	26,239,037
Peterson/Pulaski	2000	40,112,395	62,623,594	22,511,199
Pilsen	1998	111,394,217	329,782,475	218,388,258
Portage Park	1998	85,084,582	134,159,104	49,074,522
Pulaski	1999	82,778,075	162,081,904	79,303,829
Ravenswood	2005	44,169,275	69,280,741	25,111,466
Read/Dunning	1991	6,382,072	67,209,727	60,827,655
River South	1997	65,930,580	330,763,311	264,832,731
River West	2001	50,463,240	312,239,392	261,776,152
Roosevelt/Canal	1997	1,276,969	22,432,960	21,155,991
Roosevelt/Cicero	1998	45,179,428	101,937,135	\$6,757,707
Roosevelt/Homan	1990	3,539,018	31,153,034	27,614,016
Roosevelt/Racine	1998	6,992,428	51,405,401	44,412,973
Roosevelt/Union	1999	4,369,258	101,544,310	97,175,052

2009 Property Taxes	2009 Adjusted Base	2009 Adjusted Incremental EAV	2009 Adjusted Property Taxes
1,128,982	3,557,300	21,337,444	1,073,636
734,981	1,590,319	23,789,227	727,133
2,011,507	62,774,941	42,023,849	1,508,126
661,037	10,136,240	14,961,260	514,061
1,801,602	60,614,738	18,558,729	1,095,507
14,438,560	122,207,395	333,297,357	13,464,316
382,895	987,680	8,644,190	374,452
15,881,045	55,701,479	367,261,958	15,296,689
55,324,164	211,007,147	1,261,846,944	51,930,664
11,552,733	63,678,834	267,046,595	10,496,463
1,136,170	7,563,655	23,681,186	1,051,573
4,408,414	39,531,666	80,338,607	3,922,288
7,252,088	192,314,640	111,776,253	5,131,266
1,527,719	1,592,387	25,924,793	1,509,423
1,228,588	49,974,407	12,649,187	690,351
12,273,425	146,614,608	183,167,867	10,294,038
3,263,305	111,986,448	22,172,656	1,474,414
3,387,282	106,596,398	55,485,506	2,369,937
867,091	48,519,937	20,760,804	716,864
2,834,233	10,052,794	57,156,933	2,663,198
10,664,963	88,128,030	242,635,281	9,771,059
11,113,970	61,130,616	251,108,776	10,661,076
1,555,331	1,706,898	20,726,062	1,523,724
2,592,384	59,464,165	42,472,970	1,939,935
962,627	5,809,107	25,343,927	883,491
1,729,425	9,203,279	42,202,122	1,643,335
4,701,999	5,626,456	95,917,854	4,641,167

TIF District	Year Created	Base EAV	2009 EAV	2009 Incremental EAV
Roseland/Michigan	2002	29,627,768	49,972,806	20,345,038
Sanitary and Ship Canal	1991	10,722,329	30,921,134	20,198,805
South Chicago	2000	14,775,992	41,456,810	26,680,818
Southworks	1999	3,823,633	5,977,785	2,154,152
Stockyards	1989	11,178,459	47,097,135	35,918,676
Stockyards Annex	1996	38,650,831	73,264,416	34,613,585
Stockyards Southeast	1992	21,327,824	54,705,756	33,377,932
Stony Island/Burnside	1998	46,058,038	109,185,711	63,127,673
West Grand	1996	465,129	1,983,631	1,518,502
West Irving Park	2000	36,446,831	64,726,087	28,279,256
West Pullman	1998	7,050,845	7,014,162	0
West Ridge/Peterson	1986	1,617,926	11,299,347	9,681,421
Western/North	2000	71,260,546	206,937,137	135,676,591
Western/Ogden	1998	41,536,306	211,250,443	169,714,137
Western Ave. South	2000	69,504,372	215,749,253	146,244,881
Wilson Yard	2001	56,194,225	208,053,066	151,858,841
Woodlawn	1999	28,865,833	101,753,066	72,887,233
Totals	-	4,144,367,257	14,057,389,549	9,918,109,167
Median	-	23,168,822	62,623,594	35,189,995
Standard Deviation		35,600,698	166,264,958	144,735,936

2009 Property Taxes	2009 Adjusted Base	2009 Adjusted Incremental EAV	2009 Adjusted Property Taxes
751,140	35,332,143	14,640,663	540,534
916,137	16,889,400	14,031,734	636,423
984,931	18,408,809	23,048,001	850,824
185,145	4,923,834	1,053,951	90,585
2,228,680	19,340,267	27,756,868	1,722,257
2,041,771	52,849,161	20,415,255	1,204,246
2,074,001	32,613,025	22,092,731	1,372,774
2,456,956	60,620,572	48,565,139	1,890,176
92,731	635,994	1,347,637	82,297
1,176,593	45,407,629	19,318,458	803,768
38,103	9,280,166	0	0
530,979	3,167,016	8,132,331	446,019
4,785,633	88,780,626	118,156,511	4,167,659
7,471,271	54,669,169	156,581,274	6,893,127
6,387,660	86,592,680	129,156,573	5,641,280
6,290,712	68,073,069	139,979,997	5,798,634
3,151,470	37,171,604	64,581,462	2,792,348
424,534,757	5,331,395,894	8,745,948,416	371,063,367
1,668,711	29,877,355	28,263,305	1,277,498
6,037,128	46,356,594	136,178,473	5,679,051