Dodging the "Doom Loop": How Local Funding for Ohio's Public Schools Might Be Protected Against a Decline in Commercial Property Values

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Introduction

Changes to where people work since the pandemic have had important implications for the value of office real estate.[1] Estimates from some researchers suggest that nearly 40 percent of employees work outside of the office at least some of the time. And data tracking those accessing offices in 10 major US cities indicate that weekday occupancy remains about half of what it was prior to the pandemic. As a result, according to Moody's Analytics, office vacancy rates rose above 20 percent in the second quarter of 2024 for the first time on record, putting downward pressure on the value of US office real estate. According to one estimate, office real estate values have fallen by about a third since late 2021. This estimated fall in office real estate values has led to concerns about an urban "doom loop," whereby the fall in property values reduces local government spending (or raises local tax burdens), thus decreasing the desirability of the city as a place to live and work, in turn further reducing property values.

For Ohio and many other states, a decline in office property values could present a challenge to funding for some local public services. In particular, public school systems typically rely on a combination of local, state, and federal funds. In Ohio, school districts rely on local funding for just over 50 percent of total revenues, with the vast majority of those local revenues (roughly 80 percent) coming from property taxes. The funding challenges associated with a decrease in office property values could be most acute in Ohio's largest cities—Cleveland, Columbus, and Cincinnati—which have a higher density of office workers. How concerned should students, parents, teachers, and administrators be? Not as worried as some might suppose, because of Ohio's unique property tax reduction factors (TRFs).

[1] Other types of real estate, for example, those related to retail in downtown areas or hospitality, have also been affected.

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Background

To illustrate this, some background on Ohio's approach to property taxes is in order. For many, concerns about a sharp decline in public revenues are associated with the periodic reassessment of real estate values. In Ohio, these reassessments take place every six years, as required by state statute. An additional update to these values also occurs in the third year of this six-year period. Reappraisals and updates are staggered across Ohio's 88 counties. For example, Cuyahoga County, where Cleveland is located, had its properties reappraised in 2024, while Franklin County and Hamilton County, where Columbus and Cincinnati, respectively, are located, had theirs reappraised in 2023. These reviews are conducted by county auditors and their staffs but, if necessary, are overseen and harmonized by the state's tax commissioner.

Interestingly, while this reassessment process is designed to determine a property's new (or fair) market value, the taxable or assessed value of a property in Ohio is set by statute at only 35 percent of its market value. This so-called assessment ratio can vary from state to state. For example, assessment ratios in Indiana and Kentucky are set at 100 percent, with taxes applied to a property's full appraised value. But these ratios are set at 50 percent in Michigan and as low as 6 percent in South Carolina, depending on the type of property. Tax rates, which are quoted as mill rates, or the amount of tax per thousand dollars of value, are then applied to the assessed property value.

In Ohio, because of TRFs, these tax rates vary over time according to changes in collective property values in a jurisdiction. The state's legislature introduced TRFs in 1976, which voters later added to the state's constitution in 1980. With some exceptions, they are designed to keep tax revenues flat for the same "class" of existing properties in a jurisdiction. There are two classes: Class I is for residential and agricultural property, and Class II is for all other types including commercial, industrial, mineral, and public utility property.

How TRFs Work

Table 1 illustrates the way TRFs work for levies associated with a hypothetical school district, with the data loosely based on figures for the Cleveland Metropolitan School District. In this example, for levies subject to TRFs, the gross or originally voted tax rate is 75.2 mills, while the effective tax rates for the three associated levies (shown in the table) are notably lower. That's because as property values have risen over time, the effective tax rates have fallen to keep tax revenues (in a property class and associated jurisdiction) stable. To illustrate these dynamics, suppose the market value of Class II properties, which would include office properties, fell by 5 percent from Year 1 to Year 2. As shown in the Year 2 column, the effective tax rate for levies subject to the TRF rises for Class II properties to keep tax revenues for each levy stable. (As an aside, the impact on individual property owners can vary; the notion of revenue

stability relates to the property class and jurisdiction, rather than to individual properties. How tax bills change across owners will depend on relative differences in appreciation or depreciation among properties in a property class and jurisdiction.)

Table 1. Hypothetical Example of TRFs for Class II Properties

	Tax type	Year 1	Year 2	
Assessed value	*Total*	*$1,750,242,420*	*$1,662,730,299*	
Millage	Subject to TRFs	49.7	52.3	
	Levy 1 (1996)	25.8	27.2	
	Levy 2 (2012)	17.5	18.4	
	Levy 3 (2020)	6.4	6.7	
	Not subject to TRFs	10	10	
	Total	*59.7*	*62.3*	
Revenue	Subject to TRFs	$86,987,048	$86,987,048	–0.0%
	Not subject to TRFs	$17,502,424	$16,627,303	–5.0%
	Total	*$104,489,472*	*$103,614,351*	*–0.8%*

Note: In this example, we assume that of the levies subject to TRFs, Levy 1 was a 47.9 mill levy when passed in 1996; Levy 2 was a 20.5 mill levy when passed in 2012; and Levy 3 was a 6.8 mill levy when passed in 2020.

As the table suggests, some taxes are not subject to TRFs. The Ohio Constitution and associated implementing legislation restrict the taxes levied on properties without voter approval to the first 10 mills in each taxing district. These levies are known as *inside mills* because they are inside the constitutional limit, and they are not subject to TRFs. *Outside mills*, on the other hand, are those that exceed the first 10 mills and require voter approval. In general, these levies are subject to TRFs, though there are some exclusions. Specifically, among outside millage levies, bond and emergency levies are not subject to TRFs because both types are so-called *fixed-sum* levies and thus their rates already adjust annually to ensure that the same amount of revenue is collected. For simplicity, we assume in this example that there are no fixed-sum levies and that the first 10 inside mills have all been allocated to the school system. In the table above, we see the effect of these provisions: the *millage* of taxes not subject to TRFs remains the same from year to year, and the total revenue collected from these taxes varies proportionally with changes in assessed property values. In other words, because the assessed value of Class II property falls by 5 percent in Year 2, revenue from taxes not subject to TRFs also falls by 5 percent in Year 2.

Impact of Caps and Floors

Apart from these caveats, changes to effective tax rates are also bounded by caps and floors. For example, levies associated with the current expenses or general operations of a school district are subject to a tax rate floor. If the total of outside and inside levies already exceeds 20 mills for a class of properties, these tax rates cannot be adjusted below 20 mills after the application of TRFs. When this 20-mill floor is

reached, any subsequent appreciation in assessed value for that property class leads to an increase in tax revenue.[2]

At the other end of the spectrum, tax rates are capped such that they cannot rise above those initially approved by voters. When tax rates are at their cap, any subsequent depreciation in assessed value for that property class leads to a reduction in tax revenue.

How Can TRFs Help Prevent the Doom Loop?

The doom loop is a situation in which one negative factor (the fall in property values) causes a second negative factor (reduction in the desirability of working and living in a city), which in turn reinforces the first negative factor (the fall in property values). In Ohio, there is concern among some that a plunge in values of Class II properties (including offices) could result in a doom loop for the state's schools. But what do the numbers say?

Using the previous scenario (shown in Table 1), if we assume that the value of Class II properties fell by 40 percent instead of a more modest 5 percent (see Table 2), the effective tax rate on outside mills for these properties would need to rise to a combined 82.8 mills to keep tax revenues stable.[3] This would mean raising Levy 2 to 29.2 mills and Levy 3 to 10.7 mills, but these would then exceed the rates originally approved by voters, which is not allowed. Instead, those levies would remain at their maximums (20.5 and 6.8 mills, respectively), and any further change in Class II property values would directly impact revenue. Note that because Levy 1 was passed first, more "rate erosion" has occurred for this levy than for the other two outside levies. Consequently, even after a 40 percent reduction in Class II property values, Levy 1 can fully adjust upward without reaching its originally voted rate (47.9 mills).

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[2] As of the time of writing, there is ongoing debate about reforming the 20-mill floor (and other provisions of property tax law) to ease the tax burden on homeowners when their homes are reassessed. For example, see Staver, Anna. 2025. "Ohio's Property Tax Crisis: How We Got Here and How Some Lawmakers Propose to Fix It." Cleveland.com, March 9, 2025, sec. News. https://www.cleveland.com/news/2025/03/ohios-property-tax-crisis-how-we-got-here-and-how-some-lawmakers-propose-to-fix-it.html.

[3] Some analysts have projected declines of this magnitude. For example, see Shalett, Lisa. 2023. "Why US Stocks Remain Vulnerable." Morgan Stanley. April 4, 2023. https://www.morganstanley.com/ideas/alternative-assets-economic-headwinds-q2-2023.

Table 2. Hypothetical Example of TRFs for Class II Properties When Cap Reached

	Tax type	Year 1	Year 2	
Assessed value	*Total*	*$1,750,242,420*	*$1,050,145,452*	
Millage	Subject to TRFs	49.7	70.3	
	Levy 1 (1996)	25.8	43.0	
	Levy 2 (2012)	17.5	20.5	
	Levy 3 (2020)	6.4	6.8	
	Not subject to TRFs	10	10	
	Total	*59.7*	*80.3*	
Revenue	Subject to TRFs	$86,987,048	$73,825,225	–15%
	Not subject to TRFs	$17,502,424	$10,501,455	–40%
	Total	*$104,489,472*	*$84,326,680*	*–19%*

Note: In this example, we assume that of the levies subject to TRFs, Levy 1 was a 47.9 mill levy when passed in 1996; Levy 2 was a 20.5 mill levy when passed in 2012; and Levy 3 was a 6.8 mill levy when passed in 2020.

To complete the picture, we assume that the value of Class I properties (residential and agricultural properties) appreciated by 4 percent between Year 1 and Year 2 (shown in Table 3).[4] The effective millage rate for Class I properties is usually lower than that for Class II properties, and the assessed value of residential property is usually greater than the assessed value of commercial property in a taxing district.

[4] From 1975 to 2024, the average annual growth rate in home prices in Cleveland was 4.0 percent. See US Federal Housing Finance Agency. 2025. "All-Transactions House Price Index for Cleveland-Elyria, OH (MSA)." Federal Reserve Economic Data, Federal Reserve Bank of St. Louis. February 25, 2025. https://fred.stlouisfed.org/series/ATNHPIUS17460Q.

Table 3. Hypothetical Example of TRFs for Class I Properties

	Tax type	Year 1	Year 2	
Assessed value	*Total*	*$5,250,727,260*	*$5,460,756,350*	
Millage	Subject to TRFs	35.8	34.4	
	Not subject to TRFs	10	10	
	Total	*45.8*	*44.4*	
Revenue	Subject to TRFs	$187,976,036	$187,976,036	+0.0%
	Not subject to TRFs	$52,507,273	$54,607,564	+4.0%
	Total	*$240,483,309*	*$242,583,599*	*+0.9%*

In Table 3, we see that when Class I property values rise, tax revenue rises as well, albeit by a smaller percentage because of the TRFs. The increase in revenue is driven by the so-called *inside mills*, which are unadjusted, and thus the percentage increase in revenue from inside millage equals the percentage increase in property values (4.0%), bringing the overall increase in revenue to 0.9 percent.

When we combine the tax revenues from Class I and Class II properties using the pessimistic scenario from Table 2, total property tax revenue for our hypothetical school district decreases by about 5 percent between Year 1 and Year 2. This example illustrates how TRFs moderate the effects of property value changes on property tax revenues. Absent TRFs, any change in assessed values would be fully passed through to changes in property tax revenues. Despite a 40 percent decrease in the value of Class II properties (including offices), total property tax revenue falls by only 5 percent—a 19 percent decrease in Class II property tax revenue partially offset by a 0.9 percent increase in Class I property tax revenue—compared with the 9 percent decline in total tax revenue that would occur without TRFs.[5] While TRFs do not guarantee that tax revenues will not fall, they may limit the extent to which a potentially large decline in office property values leads to decreased funding for some local public services, including public schools. In doing so, they soften the cycle of the would-be doom loop caused by changes in office working patterns.

Conclusion

Despite concerns, Ohio's property tax system is designed to keep tax revenues relatively stable over time. When property values are rising, Ohio's unique TRFs (put in place in the mid-1970s) typically keep schools (and other taxing entities) from capturing tax revenues that are proportional to those increases. The Ohio Education Policy Institute has argued that this creates difficulties for school districts that are facing rising costs. Namely, in order for tax revenues to keep pace with rising operating costs, districts need to continually pass new property tax levies. However, Ohio's school districts should also be less exposed to sharp declines in commercial real estate values as a result of TRFs. Nonetheless, severe declines in commercial property values, particularly in places with a large share of commercial properties,

[5] Without TRFs, total revenue from Class II property falls by 40 percent and total revenue from Class I property rises by 4 percent, for a net decrease of 9 percent.

could result in meaningfully lower tax revenues for some school districts, albeit less severe than in the absence of TRFs.

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