THE UNIVERSITY OF CHICAGO
HARRIS SCHOOL OF PUBLIC POLICY
CENTER FOR MUNICIPAL FINANCE

Mansueto Institute for Urban Innovation
University of Chicago

Research brief

Simulating property tax effects from declines in downtown commercial real estate valuations in Chicago

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Introduction

With the shift toward remote work beginning to look like it will linger well beyond the pandemic, some observers have begun to worry about a coming "commercial real estate apocalypse," in which downtown skyscrapers experience growing vacancy rates as companies reduce office space. In one scenario, an "urban doom loop" is set off as companies reduce their leases and building owners have a hard time making their mortgage payments or selling their properties. As more office workers stay home, central business districts dry up, attracting fewer tourists and nightlife, and downtown property values further crater. Local property tax revenue begins to shrivel, requiring cities to cut services or raise taxes, making the city even less attractive, leading to out-migration. And so on. Such a transformation would call into question the basic economic model of many downtown-oriented cities.[1]

While a commercial real estate apocalypse is by no means guaranteed, some erosion of downtown office values appears all but certain in many cities. In this research brief, we consider the property tax implications of declining commercial real estate values in the City of Chicago. We simulate several different scenarios of commercial real estate decline and estimate their implications for residential property taxes.

Methodology

To understand the potential implications of a commercial real estate decline in downtown Chicago, we consider four potential scenarios ranging from 10% to 40% reductions in value. In

[1] For more on the potential commercial real estate apocalypse and urban doom loop, see Siegel (2023) and Van Nieuwerburgh (2022).

each case, we ask by how much taxes on other property would have to increase in order to hold revenue constant for the overlying jurisdictions.

To estimate the effect of reductions in downtown Commercial Real Estate values on tax bills in Chicago, we utilize *PTAXSIM*, an R package and database developed by the data team in the Cook County Assessor's Office, the property tax assessment office for Chicago's county government.[2] To derive hypothetical 2024 valuation estimates, we apply 10%, 20%, 30%, and 40% decreases from the 2021 valuation level to all "multi-story office/retail" or "commercial / industrial" properties in the Chicago Downtown area. Valuations of residential properties and property outside downtown are held constant in this analysis. For our definition of "Downtown Chicago" we utilize the Central Business District delineation available in the Chicago Data Portal.

To account for increases in levies, we incorporated budget projections from the City of Chicago and Chicago Public Schools (CPS), the two largest sources of property taxes in Chicago. Levies for other agencies such as the Cook County, Park District, Library, or Water Reclamation District are held constant. For ease of analysis, we grouped property class codes into the following categories: residential, multi-story office/retail, and commercial / industrial. All code and data sources, as well as more detailed results, are available on our GitHub.[3]

Results

The Cook County property tax system is a zero sum game: if the market value of downtown offices, retail sites, or commercial establishments goes down, then residents and homeowners must cover the resulting tax shortfall. To understand how this might affect property tax bills in 2024, we ran simulations based on four scenarios. We looked at what would happen to residential tax bills if downtown Commercial Real Estate (CRE) valuations were reduced by 10%, 20%, 30%, or 40% compared to their 2021 assessments.

In 2021, 52.7% of Chicago's total assessed property value was residential, while 25.1% was represented by downtown commercial or industrial properties. Average property tax bills for a typical resident are about $5,244 each year, compared to downtown multi-story office / retail sites, which were around $815,244 in 2021. Despite the steep tax bills paid by downtown office

[2] The software allows users to query parcel-level data on assessments, exemptions, TIFs, and levies from tax districts in order to generate historic, line-item tax bills up to 2021. Users can then modify the underlying tax data to run counterfactuals or hypothetical scenarios, such as the effect of future reductions in downtown Commercial Real Estate values on residential tax bills.
[3] See https://github.com/mansueto-institute/cre-tax-effects

and retail sites, there are only 1,654 properties in that group, compared to 732,952 residential properties in Chicago.

The relatively large residential tax base means that the effect of booms or busts in downtown CRE are spread over many households, dampening the effect of swings. For instance, under the 10% downtown CRE decline scenario, average residential tax bills would only increase about $43 annually to offset the loss of $210 million in property tax revenue, holding all else constant. However, under the 40% decline scenario, the effect is much more substantial, with residential tax bills increasing by $479, on average, to offset the loss of $718 million in tax revenue from declines in downtown CRE.

Beyond residential taxpayers, hypothetical declines in downtown CRE present differing tax burdens for the various property classes across the city. Assuming that the declines are restricted to downtown, the average commercial or industrial property in other parts of the city could see tax increases around $3K to $8K. The average property tax bill estimates resulting from different scenarios are shown in the table below.

There are several uncertainties that could influence the accuracy of the tax forecast. First, we assume residential property valuations and commercial / industrial real estate outside of downtown will stay constant relative to 2021 levels. Second, we do not factor in changes to the tax base resulting from new construction or the demolition of properties. Third, losses in value for properties within tax increment financing (TIF) districts may not necessarily shift to residential taxpayers if declines fall below the initial tax base when the TIF was initiated. For this reason, some tax losses in downtown TIF districts could be confined to that area, only reducing revenue available to the TIF fund. *PTAXSIM* accounts for the dynamic effect of changes in assessments relative to TIFs levels, however, if reductions in CRE values are not uniform across downtown, the actual tax effects could differ from our results in unexpected ways.

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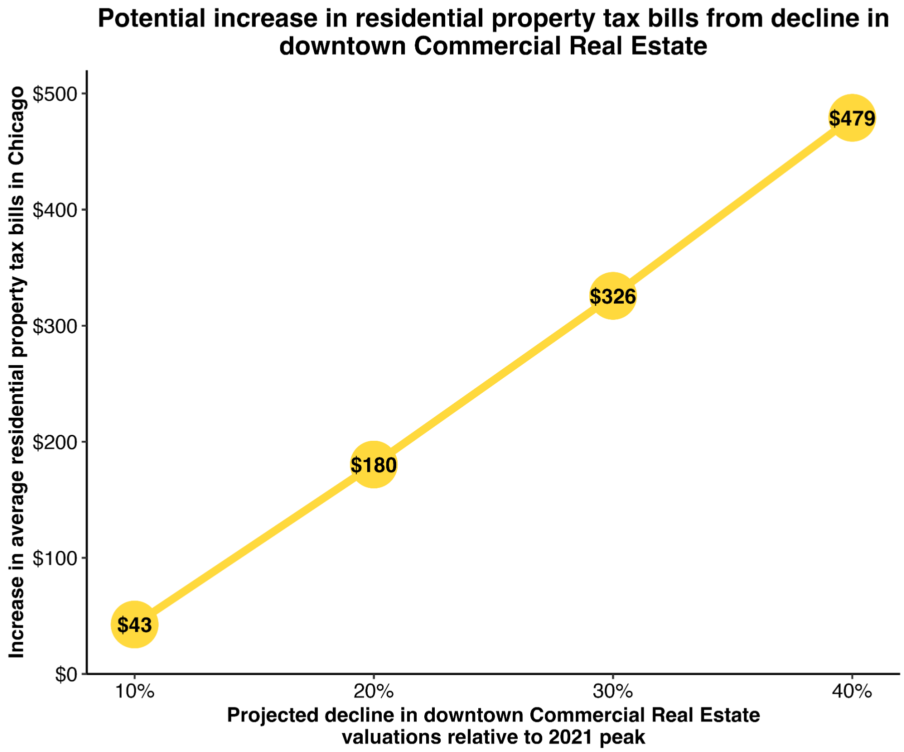

Property class type	Forecasted reduction in downtown CRE valuations	Average property tax bill, 2021	Average property tax bill, 2024	Change in average property tax bill, 2021-24
All Chicago residential	40%	$5,244	$5,723	$479
Chicago commercial/industrial		$17,568	$20,481	$2,913
Chicago multistory office/retail		$108,875	$117,145	$8,269
Downtown commercial/industrial		$158,420	$102,951	-$55,469
Downtown multistory office/retail		$815,244	$529,202	-$286,043
All Chicago residential	30%	$5,244	$5,570	$326
Chicago commercial/industrial		$17,568	$19,975	$2,406
Chicago multistory office/retail		$108,875	$113,990	$5,114
Downtown commercial/industrial		$158,420	$116,789	-$41,631
Downtown multistory office/retail		$815,244	$600,530	-$214,715
All Chicago residential	20%	$5,244	$5,424	$180
Chicago commercial/industrial		$17,568	$19,495	$1,927
Chicago multistory office/retail		$108,875	$111,002	$2,127
Downtown commercial/industrial		$158,420	$129,895	-$28,525
Downtown multistory office/retail		$815,244	$668,092	-$147,153
All Chicago residential	10%	$5,244	$5,287	$43
Chicago commercial/industrial		$17,568	$19,040	$1,472
Chicago multistory office/retail		$108,875	$108,169	-$707
Downtown commercial/industrial		$158,420	$142,326	-$16,094
Downtown multistory office/retail		$815,244	$732,179	-$83,066

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