



or decades, the office has offered an alternative to the manual labor that defined work for most of human history. But it came with its own set of headaches for workers.

Those headaches have provided fuel for movies like *Office Space* and *The Devil Wears Prada* and TV shows like *Severance* and *The Office*. The COVID-19 pandemic gave many Americans the chance to live out their dreams of escaping their commutes and the annoyances of the modern workplace. In the initial months of the pandemic in 2020, most offices shut down. More than 60 percent of all paid full days were worked from home.

Now, three years later, workers are reluctant to go back. The share of remote work has come down from its high in 2020, but it remains around 28 percent — nearly six times the pre-pandemic level. In surveys, workers place a high value on many aspects of being able to work from home, including escaping the daily commute. A 2023 National Bureau of Economic Research (NBER) working paper found that workers saved an average of 72 minutes each day they worked from home by skipping their commutes. In the tight labor market that followed the initial lockdown period, many employers offered remote work opportunities to attract a larger pool of job applicants.

The persistence of hybrid work has left many wondering about the future of offices. With workers coming in less often, some companies have decided that they need less space than they did before the pandemic. What this downsizing means for the commercial real estate (CRE) sector as well as the broader financial system has become the focus of market watchers attempting to predict where the next crisis could emerge.

GAUGING OFFICE DEMAND

Getting a clear picture of how the pandemic has affected demand for office space is tricky. Most buildings are privately held, making data hard to come by. But what indicators are available all point to a slowdown in demand.

Kastle, an office security firm, began publishing weekly office occupancy rates during the pandemic using data from the 2,600 buildings it oversees. In its top 10 metro areas, office occupancy averages around 50 percent – higher in the middle of the week, and lower on Mondays and Fridays. According to Phil Mobley, national director of office analytics for CoStar Group, 12.9 percent of office space is vacant a record high.

VTS, a CRE technology platform, produces a monthly index of office demand. The VTS Office Demand Index briefly surged in 2021 when the rollout of COVID-19 vaccines made a robust return to the office seem likely, but it fell again after the emergence of the delta variant quashed those hopes. Since mid-2022, it has remained stuck well below its pre-pandemic value.

Publicly traded office real estate investment trusts (REITs) provide another indicator of market demand for offices. The FTSE National Association of Real Estate Investment Trusts (NAREIT) U.S. Real Estate Index Series tracks the performance of U.S. REITs by property type. Its office index fell 37.6 percent in 2022 and was down another 15.9 percent at the end of March 2023. Offices owned by publicly traded REITs tend to be in higher demand, so they are often viewed as a leading indicator for the sector.

In a September 2022 working paper, Arpit Gupta of New York University and Vrinda Mittal and Stijn Van Nieuwerburgh of Columbia University used data from the NAREIT office index and CompStak, a data platform for CRE brokers, to estimate the effect of the pandemic on offices. They also looked at job postings on Ladders, a search

platform that focuses on jobs paving more than \$100,000 a year, to gauge supply and demand for remote work. They estimated that a 10-percentage point increase in a firm's share of remote job postings reduces its demand for office space by about 4 to 5 percentage points.

"In multiple large office buildings around the country, firms' leases are coming up, and many are renewing for half as much space or not renewing at all," says Van Nieuwerburgh. "So, in my mind, all the trends that we have been writing about since last September have been accelerating."

Not all office buildings are experiencing this sharp drop in demand, though. Digging deeper into the data, Gupta, Mittal, and Van Nieuwerburgh found that the highest-class buildings (A+ properties) performed better over the last three years. Similarly, a recent report from CRE firm Cushman & Wakefield paints a more complicated picture of office demand than aggregate numbers would suggest. According to the report "Obsolescence Equals Opportunity," office buildings that are more than half vacant account for just 7.5 percent of the market. Newly built, high-quality office buildings actually saw growing demand throughout the pandemic.

Still, the authors estimate that office supply will exceed demand over the next decade, resulting in 1.1 billion square feet of excess space. But they attribute only around 30 percent of that excess supply to the uptick in remote work. The rest is the result of natural shifts in supply and demand as some buildings age out of the market and as companies adjust their space needs according to changing business conditions.

"Remote work will continue to impact things, but it's not the key thing driving behavior right now," says Rebecca Rockey, global head of economic analysis and forecasting at Cushman & Wakefield. "We're now coming into what we think is more of a business-cycle driven downturn. Some of the recent weakening in the office market has been tied to the tech sector, which was very aggressive in leasing markets during the pandemic. Now they are scaling back. We are also seeing businesses attempting to cut costs in what is widely viewed as the most well-anticipated recession ever."

San Francisco-based software company Salesforce announced plans at the beginning of the year to lay off 10 percent of its workforce and reduce its office space in some markets. Meta, the parent company of Facebook, has also made job cuts and announced that it would reduce its office footprint in San Francisco by 435,000 square feet. And in March. Amazon said it would pause construction on its second headquarters in Arlington, Va.

Historically, there has been a tight correlation between employment growth for office jobs and demand for office space. During the recovery from the pandemic, that relationship broke down, as the labor market rebounded rapidly while the return to the office has been more gradual. The researchers at Cushman & Wakefield anticipate that this relationship will stabilize once employers settle on a mix of remote and in-person work, but the amount of space needed for each employee going forward is likely to be lower than it was before the pandemic.

THE NEXT SHOE TO DROP?

Whether firms are scaling back their office space needs due to remote work or weakening economic conditions, there are indications of an oversupply of office space in the near term.

The law of supply and demand predicts that this will lead to a drop in value for office buildings. Simulating various scenarios for the persistence of remote work, Gupta, Mittal, and Van Nieuwerburgh estimated that the office building sector will lose 39 percent of its value relative to 2019 by the end of the decade. But weak demand is not the only headwind facing offices. Rising interest rates reduce the value of all long duration assets, including real estate. Taking this into consideration, Van Nieuwerburgh says that some offices could be facing a loss of more than 60 percent.

"I think people underestimate the impact of higher interest rates on office values," he says.

Rising interest rates also raise the cost of refinancing debt. Like residential homes, office buildings are typically financed through some combination of equity and debt. The typical office mortgage has a duration of 10 years, meaning that many loans coming due were originated when interest rates were much lower. At the same time, lower demand from office tenants could also hurt landlords' ability to service their debt by squeezing their rental revenue. This has sparked concerns that a wave of defaults could be on the horizon, with serious repercussions for the financial system.

CRE mortgages — including loans for retail, multifamily apartments, and other commercial property types, in addition to offices — come from a variety of sources. Banks and thrifts hold the largest share, around 45 percent, according to a report by Rich Hill, head of real estate strategy and research for asset management firm Cohen & Steers. The number declines to less than 40 percent when excluding construction loans. The 25 largest banks hold about

13 percent of all CRE loans (both construction loans and loans on income-producing properties), and their exposure as a share of their total assets is small (less than 4 percent). Regional and community banks outside of the top 25 hold about 32 percent of all CRE mortgages, and in general those loans account for a much greater share of their assets.

The banking system has come under scrutiny after the failures of Silicon Valley Bank and Signature Bank in March. While neither failure seems to be the result of CRE lending, such loans did play a role in past banking crises, including the financial crisis of 2007-2008 and the savings and loan crisis of the 1980s and 1990s. According to Richmond Fed research, banks with high concentrations of CRE loans from 2008 to 2012 were about three times more likely to fail than all banks

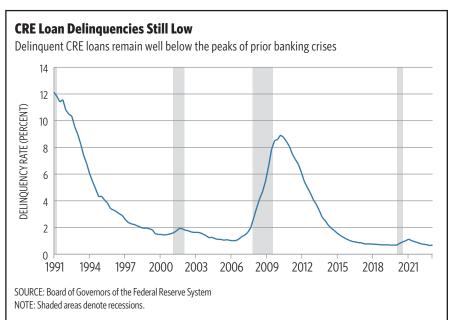
nationwide. And banks that made risky loans during the CRE construction boom of the 1980s were more likely to fail when property prices plummeted at the end of the decade.

The current risks to banks from office loans might not be as dire as in those past periods, however. The delinquency rate on CRE loans at banks is still less than 1 percent, far below the heights reached during the two previous crises. (See chart.) Many analysts expect that number to rise as more loans come due, but commercial lending standards are also more conservative than before the financial crisis of 2007-2008. The loan-to-value for office mortgages, which measures the ratio of debt financing to the value of the property, is typically between 50 percent and 60 percent — much lower than that of the average home mortgage. Additionally, offices are only one component of the CRE market. Cohen & Steers' Hill estimates that office loans make up less than 17 percent of the total CRE mortgage market and only 3 percent of regional and community banks' assets.

"Commercial real estate assets all have different fundamentals," says Hill. "While office is under pressure, other sectors are doing quite well right now."

Hill adds that it is also important to remember that although office property values are falling now, the value of all CRE rose by about 40 percent over the last decade. Since office mortgages have a typical duration of 10 years, office buildings that were last financed in 2013 may well have appreciated in value even after accounting for the recent decline. This suggests that current losses would need to be quite large before they wiped out a borrower's equity.

"There are real headwinds, particularly for any property that was financed over the past couple of years at peak valuations," says Hill. "But we dealt with this 30 years ago during the S&L crisis, and I don't expect this to be as bad as that."



SILVER LININGS

The worst-case scenario for offices hinges on remote work arrangements continuing at elevated levels. Gupta, Mittal, and Van Nieuwerburgh's model includes scenarios where the economy shifts back to a state of more limited remote work, in which case office valuations recover. While even the most optimistic office champions don't necessarily expect in-person work to go all the way back to pre-pandemic levels, employers' tolerance of remote work is starting to show cracks.

As the labor market softens in some sectors, particularly tech, some employers are realizing that jobs that can be done fully remote by Americans could also be filled by remote workers in other countries for less. Others have started to increase the number of days that employees are expected to appear in person at the office. The Walt Disney Co. is asking its workers to come in four days a week, and JPMorgan Chase & Co. recently told its senior managers that they would need to be in the office all five days. And some employers, such as New York-based law firm Davis Polk & Wardwell LLP, have warned employees who fail to follow in-person requirements that they will see their bonuses cut.

In addition to having greater bargaining power, employers may be starting to reckon with the costs of allowing most of their employees to work from home. In the wake of Silicon Valley Bank's collapse, Tabby Kinder and Antoine Gara of the *Financial Times* reported that most of the bank's 8,500 employees were working from home. The lack of serendipitous "water cooler" conversations may have contributed to the bank's failure to spot its problems; Stanford University economist Nicholas Bloom, who has been researching remote work since prior to the pandemic, told Kinder and Gara, "Ideas like hedging interest rate risk often come up over lunch or in small meetings."

"I think we're definitely going to see more of a return to the office, but the way companies and employees want to use the office has changed," says Hill.

For office owners facing weaker demand, turning in the keys isn't the only option. Depending on the building's underlying characteristics, renovating the space with modern amenities and flexible workspaces designed for a hybrid workforce may be enough to woo tenants back.

"Commercial property owners in Rosslyn have been incredibly innovative in terms of reimagining their buildings, adding desired amenities and technology, and creating collaborative areas within the common spaces of the buildings," says Mary-Claire Burick, president of the Rosslyn Business Improvement District, a 17-block mixed-use area

in downtown Rosslyn, Va., just outside of Washington, D.C. "They are also taking advantage of several zoning amendments Arlington County recently approved to accommodate new or expanded uses."

In the early stages of the pandemic, some also raised the possibility that abandoned offices could be converted to residential use, helping to solve the long-standing shortage of affordable housing in many cities. (See "Has the Pandemic Changed Cities Forever?" *Econ Focus*, First Quarter 2021.) This turns out to be far from straightforward. The layout of the typical office building is very different from the typical apartment when it comes to things like plumbing and window placement. In many cases, zoning would also need to be changed to allow for residential construction in offices. And lastly, most commercial properties are significantly more valuable than multifamily apartments, so the price of an office building would need to fall precipitously before such a conversion looked financially attractive.

Still, such repurposing is possible, particularly with support from local policymakers. During the office market collapse of the early 1990s, New York City officials introduced a tax incentive program to encourage the conversion of obsolete Manhattan offices into residential properties. The program led to the conversion of almost 13 million square feet of office space, or about 13 percent of the market in lower Manhattan, between 1995 and 2006. This resulted in the creation of nearly 13,000 new housing units, accounting for more than 40 percent of the growth in lower Manhattan housing between 1990 and 2020. The program was particularly effective at encouraging the conversion of older office stock built before 1945.

While offices face plenty of challenges over the coming year, the risks to the sector and to bank lenders in general don't appear widespread at this stage. Nevertheless, bank regulators seem to be keeping a close eye on these developments, mindful of past crises where real estate was at the center. In a March 6 speech to the Institute of International Bankers, FDIC Chairman Martin Gruenberg noted that the effect of office headwinds on bank balance sheets was "an area of ongoing supervisory attention."

"When it comes to managing the fallout, we want to make sure that banks are as well-capitalized as possible," says Van Nieuwerburgh. "One thing we learned from the subprime crisis is that you don't want to force all your banks to foreclose on nonperforming loans too quickly. But you also don't want to make the opposite mistake of extending loans that will never be performing. You want to thread a middle ground." **EF**

READINGS

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