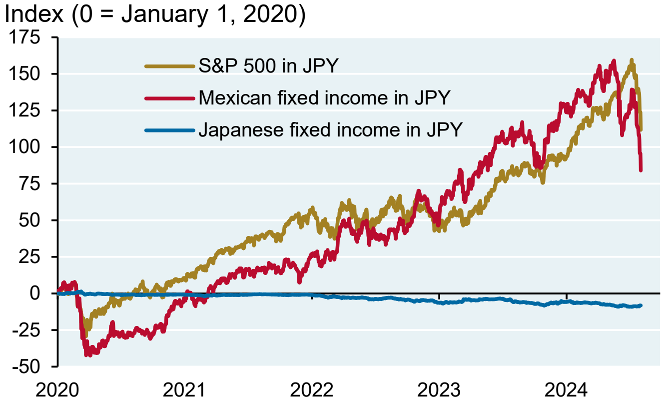
There's No Place Like Home: close-out and home repatriation of Yen-funded positions triggers global stock market correction; District Court rules that Google engages in home bias anti-competitive behavior; work from home trends and implications for distressed commercial office investing; Covid update

The world's largest carry trade hits the skids:

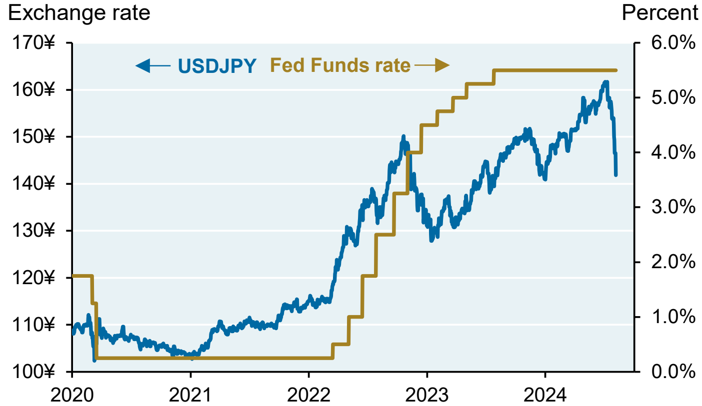
- Years of negative policy rates enticed Japanese households, pension plans, state-owned banks and the Bank of Japan itself to create what Deutsche Bank estimates as a $20 trillion carry trade[1] in which "Japan Inc" funds itself via low-cost bank deposits and invests in overseas assets and domestic assets of longer duration
- A lot of macro hedge funds piled on to do the same, funding in Yen. When the Fed began to hike in 2022, the Japanese carry trade accelerated, pushing the Yen to its weakest level since 1986
- Rising core inflation and wage negotiation outcomes finally prodded the Bank of Japan to raise rates just as the Fed is projected to begin easing, driving up the Yen sharply. Remarkably, the Bank of Japan spent $37 billion in July intervening to *prop up* the Yen due to its weakness at the time
- The recent Yen rally of 14% is among the largest seen over the last 40 years. Note how it only took a BoJ hike of 25 basis points (!!) to trigger this, which is indicative of how large the unmeasurable Yen carry trade might actually be
- Carry trade unwinds triggered a correction in global equity markets. So far, US, Europe, Japanese and Emerging Market equities are still up for the year. While the Yen is now closer to fair value based on interest rate differentials, JP Morgan FX traders believe that there could be more carry trade unwinds ahead

Examples of the Yen carry trade



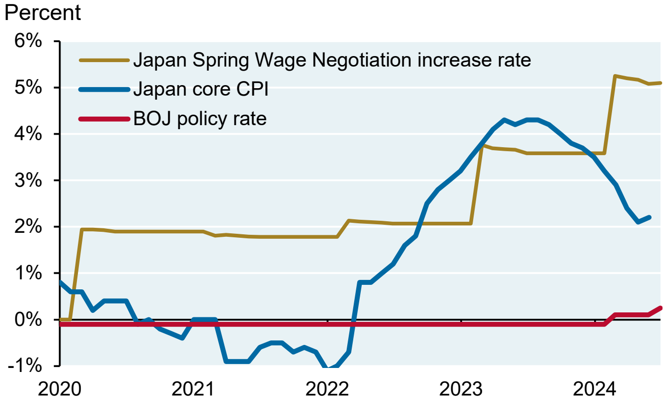
Source: Bloomberg, JPMAM, August 5, 2024

Yen collapses as Fed tightens in 2022-2023



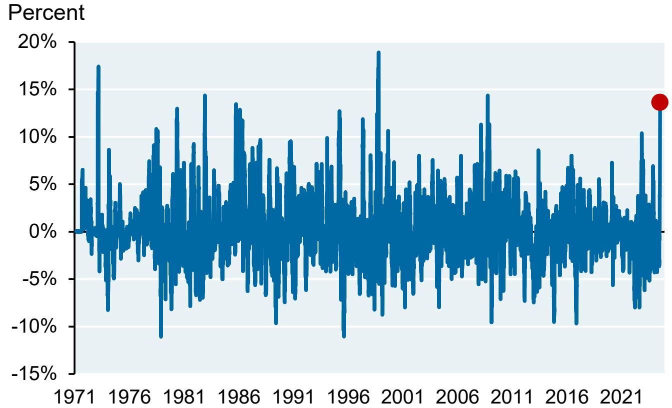
Source: Bloomberg, JPMAM, August 5, 2024

BOJ policy rate, wage growth and inflation



Source: Bloomberg, JPMAM, July 31, 2024

23-day changes in value of the Yen vs the USD since 1971



Source: Bloomberg, JPMAM, August 5, 2024

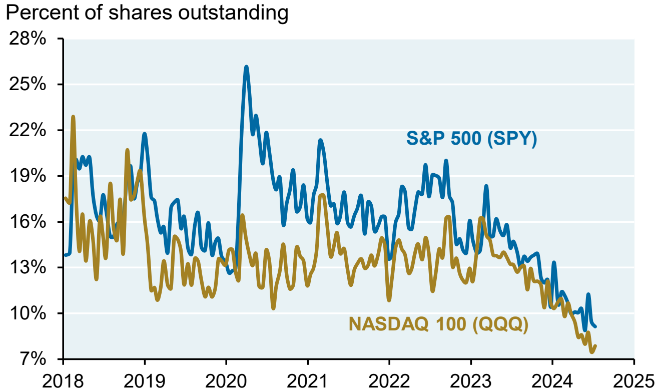
[1] "*The world's biggest carry trade*", George Saravelos, Deutsche Bank, November 2023

The equity market was poorly positioned for this kind of risk unwind; as shown below…

- Conviction in the AI-driven rally was so uniformly held that by mid-July, short interest on the S&P 500 and NASDAQ had practically disappeared
- Tech sector free cash flow yields reached the tightest levels since the early 2000's, while the global semiconductor index hit 11.5x price to book after trading at 2x-3x book for most of the prior decade
- Market breadth was terrible when measured by the % of stocks outperforming the S&P 500 or the % of stocks at 52-week highs and lows on the NASDAQ

Short interest on the S&P 500 and NASDAQ

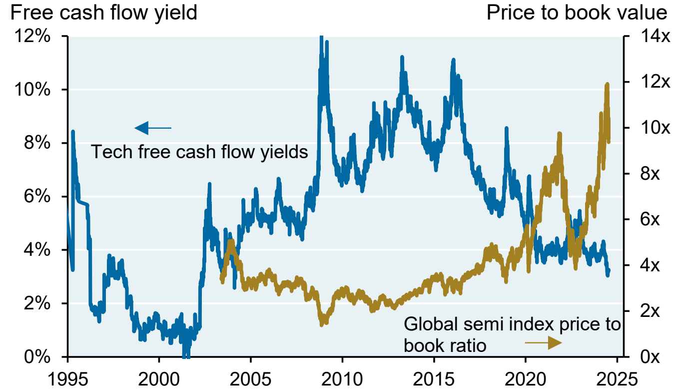
Percent of shares outstanding



Source: Bloomberg, JPMAM, July 15, 2024

Tech & semi valuations at extremes

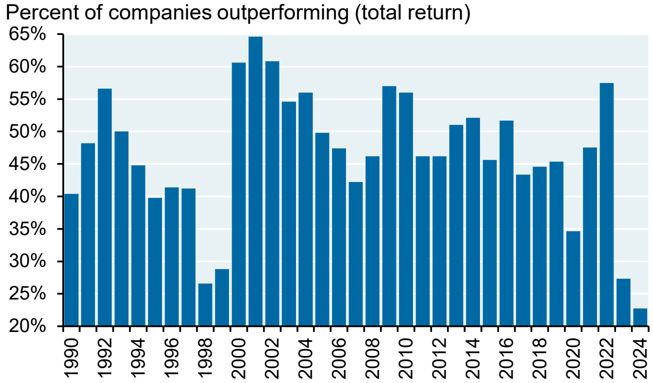
Free cash flow yield / Price to book value



Source: Bloomberg, JPMAM, August 5, 2024

Constituents outperforming the S&P 500

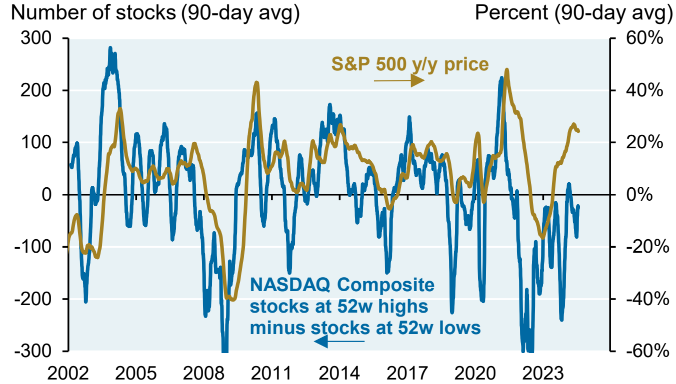
Percent of companies outperforming (total return)



Source: Bloomberg, JPMAM, July 5, 2024

Market breadth vs performance

Number of stocks (90-day avg) / Percent (90-day avg)



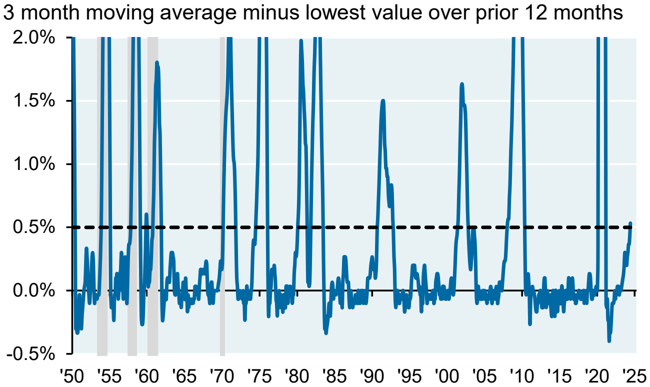
Source: Bloomberg, JPMAM, August 2, 2024

Intra-year stock market corrections are commonplace, even in years when markets rise. The big question remains whether the US has a recession or soft landing. The indicators are mixed; contemporaneous signals still show decent growth (business spending, consumer spending, corporate earnings), while some leading indicators and labor market indicators point to recession (see box).

I have Sahm questions. According to the Sahm rule, when the 3-month average of the unemployment rate rises by more than 0.5% vs the lowest level over the prior 12 months, you're in a recession or about to experience one. Note that the Sahm rule was *not* triggered during the soft landings of 1967, 1985 and 1995. Are things different this time? Claudia Sahm herself said in a recent interview that there could be structural changes in the workforce that make the rule less reliable (the increase in labor force entrants driving unemployment higher)[2]. That said, she believes that the Fed should already be easing due to clear labor market weakness. And according to JP Morgan Chief Economist Michael Feroli, declines in job finding rates normally account for about 3/4th of the increase in unemployment around recessions[3]; in other words, **there's nothing new about labor force participation driving up the unemployment rate during recessions**.

I thought we would have a soft landing this year, and there's plenty of data to still support that view. But recession risks have gone up, and I don't think such risks are fully priced in equity or credit markets yet. Megacap tech stock multiples have declined from 32x earnings to 28x, and the S&P 500 multiple has fallen from 24x to 20x; both are still elevated. If I were putting money to work this fall, I would wait for lower levels before adding.

Sahm rule: unemployment rate relative to recent low
3 month moving average minus lowest value over prior 12 months



Source: BLS, JPMAM, July 2024

Labor indicators

Very weak: Sahm rule on recessions, manufacturing and overtime hours, temporary help, PMI employment survey, job loss probabilities in Fed household survey

Weakening from strong conditions: payroll growth, wage growth, NFIB wage surveys, job switching premiums, JOLTS voluntary quit rates, job openings in leisure/retail, unemployment claims

For more details, see the inflation/labor market linked above in the header

[2] "*Sahm rule creator says this time could be different*", Fortune, August 2, 2024

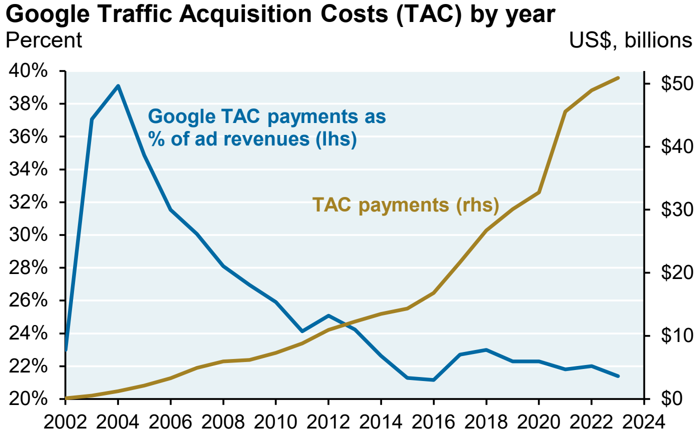
[3] "*Oh no Mr. Bill, the first Sahm rule was triggered*", Michael Feroli, JP Morgan Economics Research, July 18 2024. Mr Bill refers to both NY Fed President Bill Dudley and the old SNL claymation character

More pressures on the tech sector: the US District Court for the District of Columbia just ruled that Google has abused its monopoly over the search business. I had a long section in the 2024 Outlook on these kinds of antitrust risks. Google pays $50 billion+ a year in "traffic acquisition cost" payments[4] to device makers (Apple, Motorola, LG, Samsung), wireless carriers (AT&T, T-Mobile, Verizon) and browser developers (Mozilla, Opera, UC Web) to secure default status for its search engine. Google has also been alleged to disincentivize counterparties from dealing with competitors, requiring placement of Google Apps in prime device positions.

The lawsuit now moves to a remedies phase in September, after which appeals to the US Court of Appeals for the DC Circuit would take place. At the end of the process, Google's contracts with Apple and Samsung might have to be renegotiated in accordance with the court's definition of acceptable device placement agreements; and/or devices might have to prompt users to pick a search engine.

My sense is that most users would select Google even if they were prompted with multiple search engine choices, which is what happened in Europe. But Google apparently does not want to take any chances, particularly with Apple. As described in the judge's ruling, in 2020 **Google's internal modeling projected that it would lose between 60% - 80% of its iOS query volume if it were replaced as the default search engine on Apple devices, resulting in net revenue losses of $28-$32 billion per year**[5]. Another notable example: when Apple switched the default map app from Google to Apple, it took four years for Google to reach 40% market share, and Apple Maps is generally seen as an inferior product[6].

Google Traffic Acquisition Costs (TAC) by year



Source: Google 10-K filings, JPMAM, 2023

Google would not be the only casualty from an end to TAC payments. Apple earns an estimated $18-$20 billion per year from Google. In 2020, the DoJ claimed that 15%-20% of Apple's worldwide annual income was derived from Google payments; and in 2023, Sanford Bernstein estimated that this figure is still ~15%. In November 2023, Google's CEO confirmed under cross-examination during the Epic Games trial that Google shares 36% of its advertising payments originating on Safari with Apple in exchange for default status on Apple devices.

Now, on to distressed commercial office buildings. For ~30% of office workers, there's no place like home…

[4] Paying for "shelf space" is not a priori anticompetitive; it has to be proven that a company also has control over "the market", that shelf space behavior substantially impairs competition and that there are no countervailing pro-competitive justifications

[5] US vs Google, US District Court for District of Columbia, Section 75

[6] A MarketWatch study in March 2024 surveyed users and found that 70% of people use Google Maps, 27% use Waze and 25% use Apple Maps. That said, Apple Maps appears to be improving when compared to its woeful beginnings when public health officials described its navigation flaws as potentially "life-threatening".

Work from home and implications for commercial office investing

There are second and third derivative improvements in office markets if you look for them. But when we look at the catalyst for the office shock, we see only modest declines in work from home (WFH) trends which have plateaued at ~30%. This has implications for the final resting place for distressed office values; buildings differ, but discounts for buildings in distress typically need to be 60% or more vs 2019 values to attract capital from new investors. We're seeing some activity that may cause a bottom to form: a collapse in new office construction, rising conversions/demolitions of impaired properties and a faster rate of foreclosures. A lot will depend on how banks and securitized office loan trusts treat the pending wall of office loan maturities; so far, office delinquency, modification and foreclosure patterns look a lot like 2008. We conclude with a Covid update on page 9, since that's the genesis of the office shock in the first place.

[1] Triangulating work from home trends

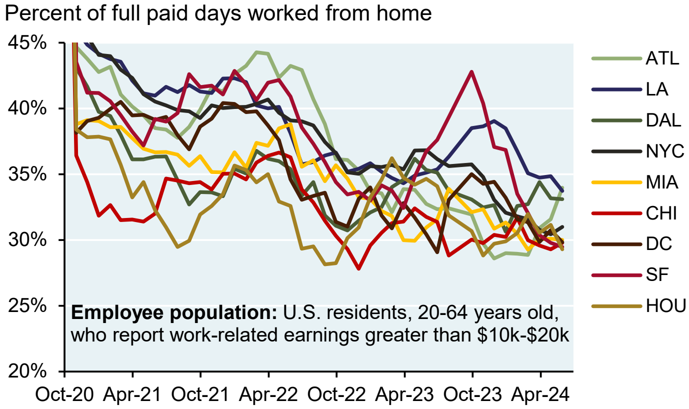
Vacancy rates are important but can obscure the presence of substantially underutilized office space which can become the vacancy of tomorrow. As a result, we look at three contemporaneous signals of true office demand and WFH: the recovery in mass transit ridership; WFH employment surveys of 10,000 people by Stanford's Nicholas Bloom; and employee key fob swipe data from Kastle. As shown below, all three sources send a consistent message: WFH has plateaued at ~30% and shows few signs of breaking towards 25% or 20% levels.

Post-Covid recovery in mass transit ridership (Q2 2019 = 100%); median recovery = 70%

#	City	Recovery from Q2 2019 to Q1 2024	Recovery from Q2 2019 to Q2 2023	Difference	Transit Authorities
1	Miami	111%	100%	11%	Miami-Dade Transit Agency
2	Houston	97%	82%	15%	Metro Tr Auth of Harris Co
3	Salt Lake City	93%	80%	13%	Utah Transit Authority
4	Austin	83%	78%	5%	Capital Metropolitan Trp Auth
5	Boise	82%	74%	8%	Valley Regional Transit
6	Los Angeles	77%	76%	1%	Access Services, Los Angeles County MTA, Southern California RRA
7	San Jose	76%	75%	1%	Santa Clara Valley Trp Auth
8	Washington DC	75%	68%	7%	District Dept of Transp, Washington Metro Area TA
9	San Antonio	73%	69%	4%	VIA Metropolitan Transit
10	NYC	73%	73%	0%	MTA Bus Company, MTA Long Island Rail Road, MTA Metro-North Railroad, MTA New York City Transit, MTA Staten Island Railway, New York City DOT
11	Dallas	72%	72%	0%	Dallas Area Rapid Transit, Trinity Railway Express
12	Philadelphia	68%	60%	7%	Southeastern Penn TA
13	Seattle	66%	67%	-1%	King County Dept of Trp, Sound Transit, Washington State Ferries
14	Phoenix	63%	57%	6%	City of Phoenix PTD, Valley Metro, Valley Metro Rail, Inc.
15	Boston	61%	65%	-4%	Massachusetts Bay Tr Auth
16	Charlotte	59%	48%	11%	Charlotte Area Transit
17	Chicago	58%	58%	0%	Chicago Transit Authority, Metra
18	Denver	58%	59%	-1%	Regional Trp District
19	San Francisco	57%	55%	1%	Golden Gate Bridge, Hwy & TD, San Francisco Bay Area RTD, San Francisco Muni Rwy
20	Atlanta	54%	58%	-4%	Atlanta-Region Transit Link Authorit, Metro Atlanta Rapid Tr
21	Detroit	50%	48%	2%	City of Detroit Dept of Trp, Detroit Transp Corp/DPM
22	Raleigh	30%	33%	-3%	GoRaleigh

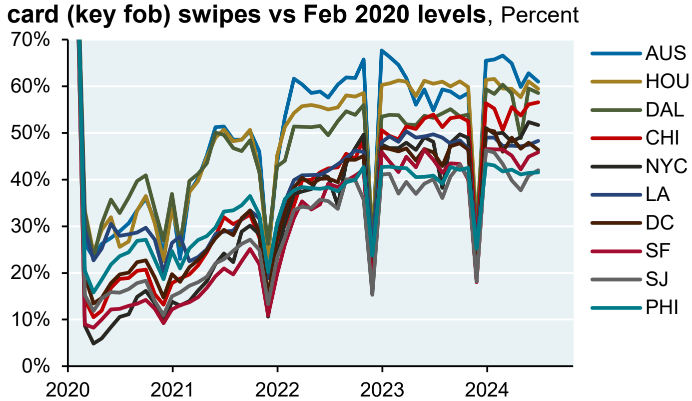
Source: APTA, individual transit reports, JPMAM, Q1 2024.

Work from home: large metropolitan cities
Percent of full paid days worked from home



Source: Bloom, Barrero and Davis, June 2024

Commercial property utilization rates based on security card (key fob) swipes vs Feb 2020 levels, Percent



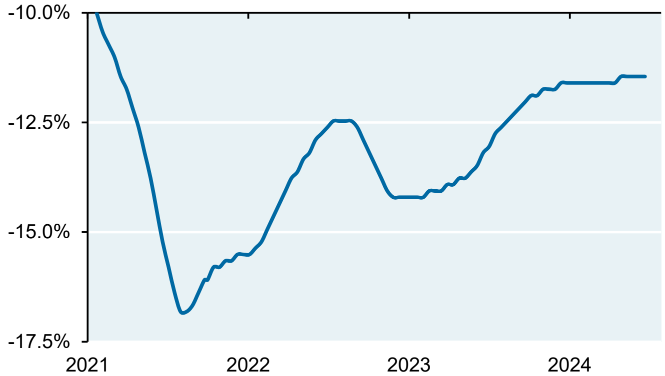
Source: Kastle, Bloomberg, JPMAM, July 31, 2024

[2] Second and third derivative improvements in commercial office

What's getting better, on the margin? As office leases mature, firms are now giving back 10-12% of the space they used to lease rather than 13%-15% in 2021-2022. Net absorption of office space was also not as bad in Q2 2024 compared to most quarters since 2020; JLL Research still shows a small negative value while CoStar's is a very small positive. Another positive development: last quarter, only 12.5% of buildings experienced an increase in vacancy, the lowest share since Q3 2017.

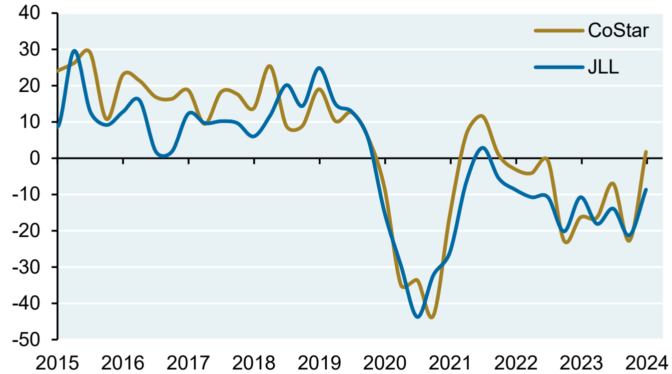
Another positive for fundamentals: **a collapse in the new buildings pipeline**. The past year has seen the lowest volume of office construction starts since the year 2000 (see Appendix I). The pipeline has fallen nearly 70% since 2019 to 46 million sf in Q2, with 65% of that space preleased. Of the remainder, the majority will be completed over the next four quarters leaving minimal new building completions scheduled for 2025 and 2026.

Downsizing rate for major tenants (25,000+ square feet)
Percent of space cut



Source: JLL Research, Q2 2024

Office net absorption
Square feet, mm

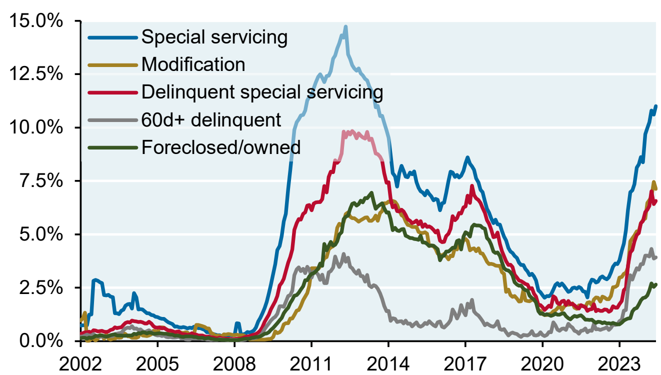


Source: CoStar, JLL Research, Q2 2024

CMBS data continues to deteriorate, with patterns similar to 2008-2009

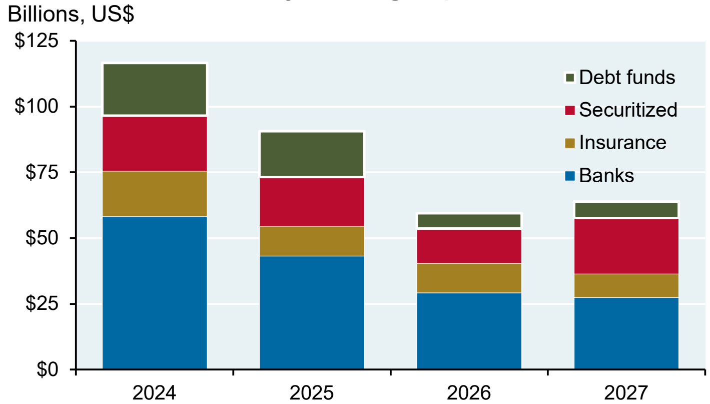
One potential source of supply for distressed office investors would be loans or foreclosed real estate sold by CMBS trusts (i.e., securitized pools of commercial mortgages that were originated and syndicated by commercial banks). Many of the trends look similar to 2008-2009; hard to find a lot of silver linings here. CMBS trusts, banks and insurers have plenty of loan modifications ahead of them if they want to avoid distressed sales: Trepp reports $320 billion in office loan maturities from 2024 to 2027.

Office CMBS distress tracker
Percent



Source: Trepp, JPMAM, June 2024

Office loan maturities by lender group
Billions, US$



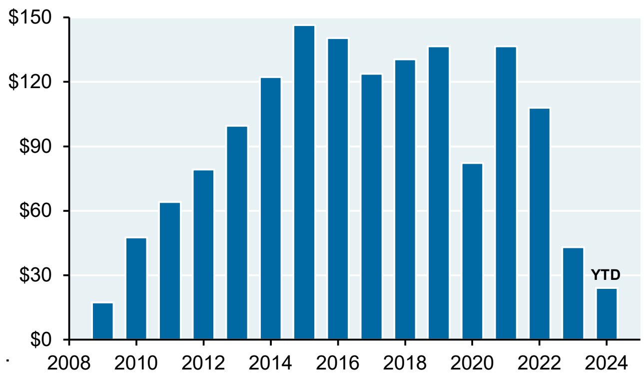
Source: Trepp, JPMAM, October 2023

[3] Other office market indicators of importance to investors

Sources vary regarding office valuation declines through Q2 2024, ranging from -39% (NCREIF ODCE) to -37% (Green Street CPPI) to -31% (NCREIF NPI). Office sales volumes have fallen 80%-90% vs peak, so I doubt that appraisals have caught up to actual value yet. A former analyst of mine has been working in commercial real estate capital markets for many years. Most deals he now works on in NYC involve sales prices of $200-$400 psf, which is more reminiscent of the late 1990's/early 2000's than the pre-Covid period when such buildings would have sold for $500-$1,000 psf. He also reports that many deals entail buildings sold for less than their debt value, with sellers having to provide attractive financing to new buyers (e.g., 65% LTV @ 5%).

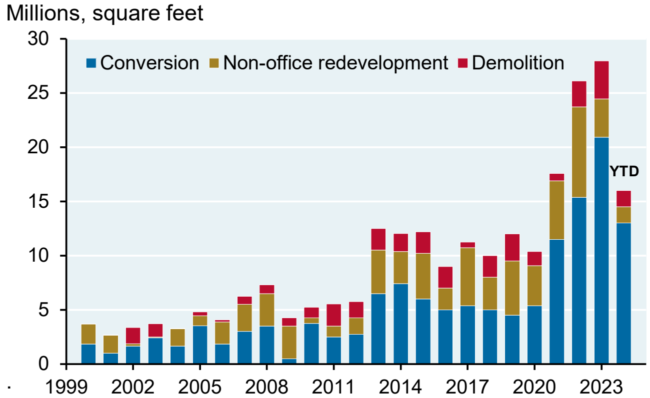
What will help a bottom form: rising office conversions[7] and demolitions, shown in the second chart. According to JLL, municipalities associated with the largest office markets have issued or proposed incentives to promote redevelopment of permanently impaired properties[8]. As shown in the third chart, many older buildings are essentially dead money with dwindling tenant demand at a time of stricter building emissions requirements. In a similar vein, the last chart shows that **72% of all vacant space is located in just 15% of office inventory**. In other words, distressed buildings are where office investors looking for large discounts may spend their time.

Office transaction volume
Billions, US$



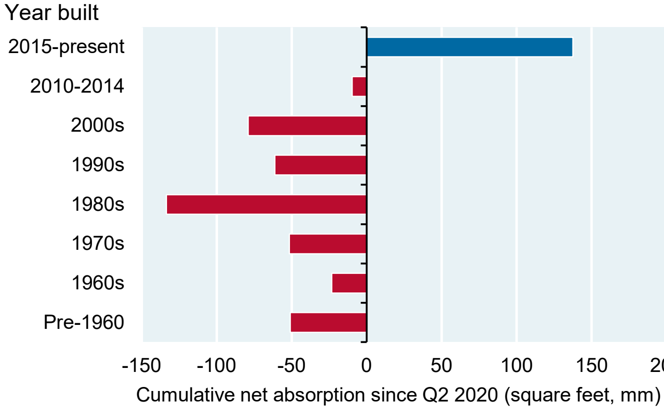
Source: JLL Research, Q2 2024

Office building inventory removals
Millions, square feet



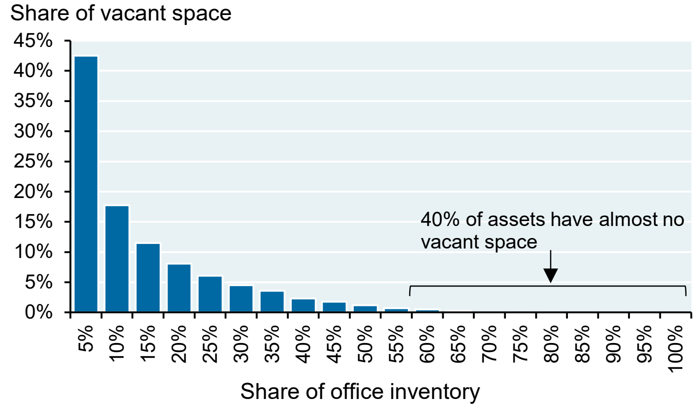
Source: JLL Research, Q2 2024

Net absorption by building vintage
Year built



Source: JLL Research, Q2 2024

Office vacancy concentration
Share of vacant space



Source: JLL, JPMAM, August 2024

[7] A *conversion* refers to situations in which the existing structure is retained but the use changes. A *non-office redevelopment* is when the existing structure is demolished and a brand-new structure with a new purpose is built (i.e., excluding situations where an office building is demolished and replaced by a newer office building).

[8] In 2024 so far, 55k housing units were created from former offices, 4x the amount from 2021. An example of incentives, NYC Mayor Adams announced $100 mm in tax subsidies for two office building upgrades (850 3rd avenue and 175 Water St, both of which are financially ailing and largely empty).

[4] Will commercial banks be large sellers of office loans and foreclosed property?

As shown in the Appendix, banks hold the largest share of outstanding commercial real estate loans and of office loans as well. As per JP Morgan Research, bank loan loss reserves are typically 8%-12% of office loans, with some banks as high as 14%. These levels imply roughly 20% default rates and 50% recovery rates. While these seem optimistic to me given deteriorating office market fundamentals, during the recent office loan cycle (a) bank-owned office LTVs at origination were 50%-60%; (b) the bulk of the CMBS exposures were underwritten at 50%-70% LTVs, down substantially from 2007 levels; and (c) Life and P&C Insurer LTVs averaged just 39% for office loans based on NAIC statutory filings. If that's the case, commercial bank default and recovery assumptions might not be that far off.

A less sanguine view: some distressed office investment firms estimate that more than 90% of loans maturing by 2025 will have re-underwritten LTVs over 80%, implying a much higher potential default rate and the potential for a higher flow of distressed sales.

[5] Tracking distressed office sales: 60%+ discounts to pre-COVID levels

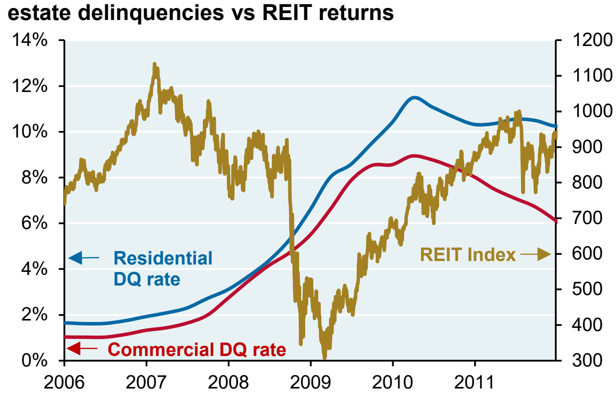
Most buildings below required substantial capital investment for the building and for tenant improvements, which explains their low sales prices. Two projects (222 Broadway and 1740 Broadway) were residential conversions which require considerable additional expenditures. **As distressed investors know, the time to buy is typically well before the peak in delinquency rates**. An indicative REIT index bottomed during the financial crisis well before peak residential and commercial real estate delinquency rates. By the time that delinquencies peaked, 70% of the gains in the REIT index had already occurred.

Discounted office building sales, computed vs original purchase year

Address	City	Current discount	Current price psf	Original price psf	Original purch year
300 W Adams	Chicago	92%	$16	$202	2012
995 Market	SF	90%	$72	$685	2016
8350 E Crescent	Denver	87%	$28	$210	2014
989 Market	San Fran	78%	$122	$551	2012
Market Sq Tower	San Jose	76%	$105	$435	2019
410 Townsend	San Fran	74%	$282	$1,103	2019
1101 Vermont Ave	DC	73%	$93	$343	2006
222 Broadway	NYC	70%	$198	$661	2014
303 Almaden Blvd	San Jose	70%	$151	$509	2017
1750 H Street NW	DC	73%	$156	$575	2010
1740 Broadway	NYC	69%	$298	$968	2014
321 W 44th	NYC	67%	$227	$695	2018
350-380 Ellis	San Fran	66%	$271	$802	2021
399 Market	Phila	65%	$103	$294	2020
1760 Market	Phila	63%	$91	$249	2018
230 West Monroe	Chicago	63%	$64	$173	2014
19219 Katy Freeway	Houston	63%	$87	$231	2016
8390 E Crescent	Denver	61%	$88	$222	2015
213 W Institute Pl	Chicago	60%	$109	$277	2017
150 North Michigan	Chicago	50%	$92	$185	2017
5847 San Felipe	Houston	50%	$87	$172	2005
Miramar Project	Miami	45%	$121	$220	2015
1899 L Street NW	DC	39%	$176	$288	2004
100 SE 2nd St	Miami	26%	$257	$346	2016

Source: Various news articles, JPMAM, August 2024

Bottom fishing during the global financial crisis: real estate delinquencies vs REIT returns



Source: Bloomberg, JPMAM, August 1, 2024

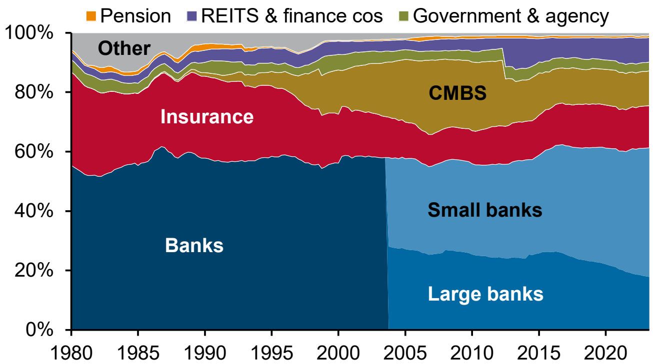
It was a pleasure seeing some of you in Tallahassee, Columbia SC, Charlotte, Atlanta, Baltimore, DC, Sonoma and Dallas over the last couple of weeks. I'm taking five clients to fish for tarpon in late August in Trinidad at the world's best tarpon fishery. Enjoy the rest of the summer; the fall may be a real mess.

Michael Cembalest, JP Morgan Asset Management

See Appendixes I and II for more commercial real estate data and a COVID update

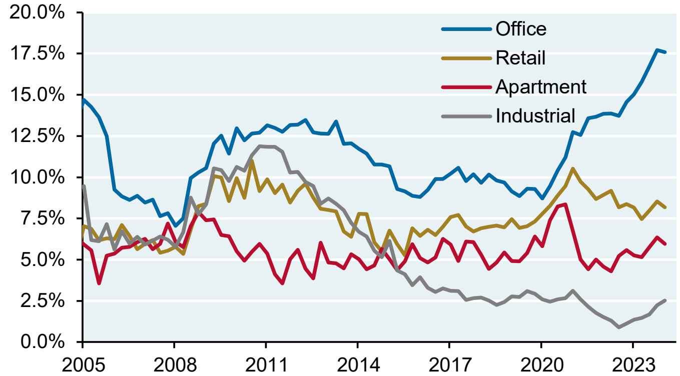
Appendix I: Commercial real estate / office charts

Banks hold over half of the overall stock of CRE loans
% ownership of commercial mortgages



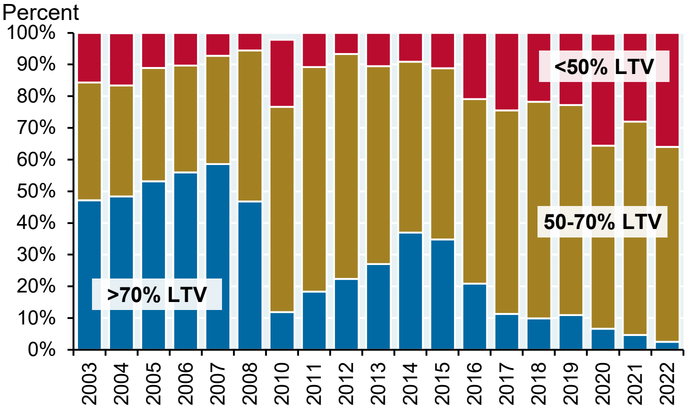
Source: Federal Reserve Board, Bloomberg, JPMAM, Q1 2024

Vacancies by property type
Percent



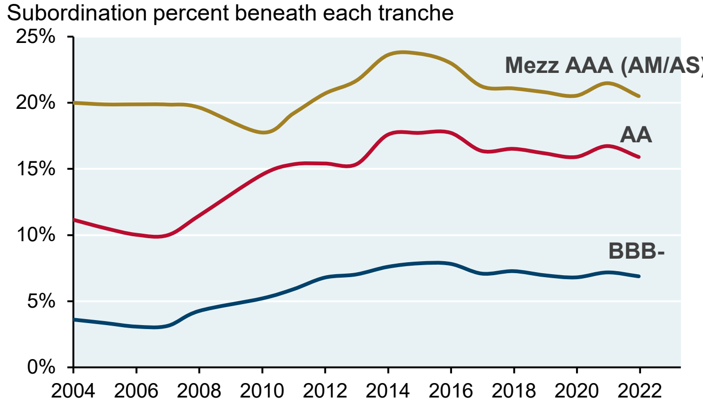
Source: NCREIF, JPMAM, Q1 2024

CMBS loan-to-value ratios by vintage year
Percent



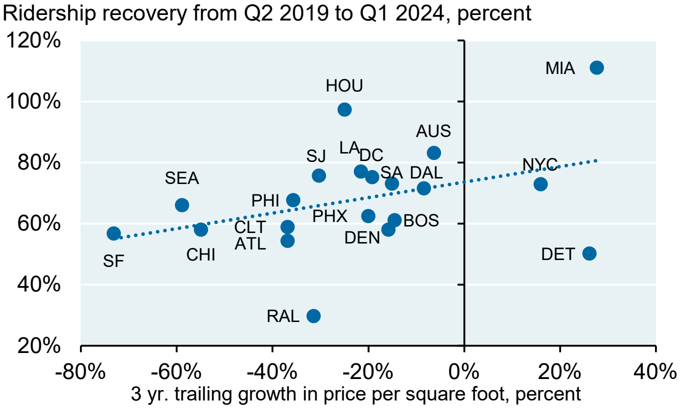
Source: JPMAM. 2023.

CMBS credit enhancement by vintage year and rating
Subordination percent beneath each tranche



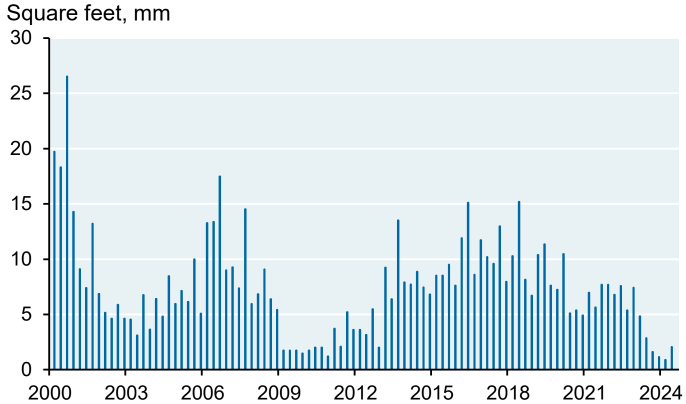
Source: JPMAM. 2023.

Recovery in transit ridership vs office price growth
Ridership recovery from Q2 2019 to Q1 2024, percent



Source: APTA, individual transit reports, Bloomberg, RCA, JPMAM, Q1 2024

Office groundbreakings fall to all time low
Square feet, mm



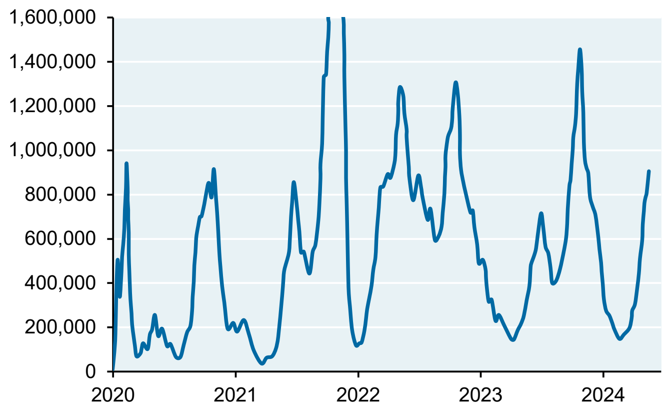
Source: JLL Research, Q2 2024

Appendix II: Covid update

Since Covid is the root cause of the current office shock, I thought it would be a good time for an update. While there's another Covid infection wave taking place, hospitalization rates are low and remain concentrated in the age 65+ category. If you or people you care for are in this age cohort, here are some things to know:

- The KP.3 and KP.3.1.1 variants are now the dominant strains. The virus itself continues to evolve, and when distance is measured antigenically, the latest strains are further away from BA.1 than BA.1 was from the original Wuhan-ancestral strains of the virus
- Vaccine boosters only last 4-6 months with respect to protection against severe Covid and hospitalization; the same is true regarding acquired immunity from prior infection
- While the KP.3 variant was circulating in March 2024, when the FDA Advisory Committee met in June it opted to recommend that the next booster be based on KP.2 instead. The KP.2 booster shots are likely to be available starting in September. Until then, the XBB 1.5 booster is available, although sub-optimal
- In addition to predicting that Biden would drop out of the Presidential race for health reasons in the 2024 Outlook last January, I also predicted that a nasal Covid vaccine would be approved. Nasal vaccines have much greater potential to block the spread of the virus than mRNA vaccines, and have been shown to reduce infectious titers by 100x and 100,000x in upper and lower respiratory tracts in animal testing. This follows some groundbreaking research from Shane Crotty at the La Jolla Institute of Immunology[9]; Shane has been helpful to me on Covid related issues discussed in the Eye on the Market since 2020. A nasal Covid vaccine has been approved for use in India, but not in the US yet
- Eric Topol at Scripps believes that US Project NextGen should focus more on developing such inhalable vaccines, and on developing pan-coronavirus vaccines so that the FDA does not have to constantly be chasing after the latest variant when approving boosters[10]

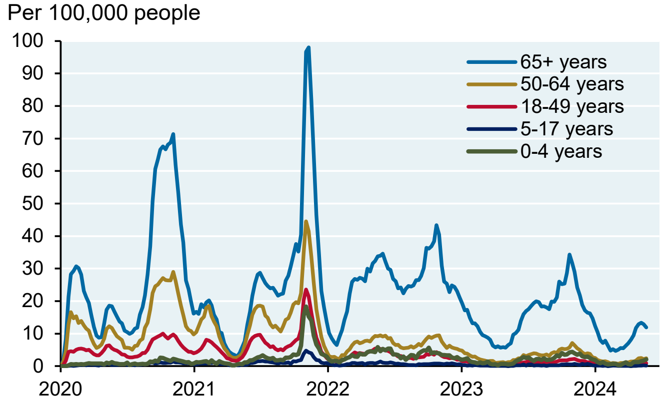
Estimated daily Covid infections based on wastewater data



Source: Eric Topol (Scripps), July 2024

Weekly rates of Covid hospitalizations by age group

Per 100,000 people



Source: CDC, JPMAM, July 27, 2024

[9] "*Immunological memory diversity in the human upper airway*", Crotty et al, Nature, July 2024

[10] "*The indomitable Covid virus*", Eric Topol (Scripps), August 2024

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