



## A Framework for Considering Office Demand in a Post-pandemic World

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September 2022

24221

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# Some Recent Research on RTO/WFH

- Pew Research Center (2022)
- Emanuel and Harrington (2021)
- Bloom et al (2015)
- HBS (2021)
- CBRE (2022)
- Deloitte (2022)
- Hudson and Orlando (2022)
- Gupta et al (2022)

# Ways People Are Talking About the Pandemic's Impact on CRE

## 1. Counter-cyclical

The pandemic has created tailwinds for these properties -- e.g., Industrial

## 2. Accelerated Change

The pandemic sped up changes that were likely to take place in coming years -- e.g., Retail

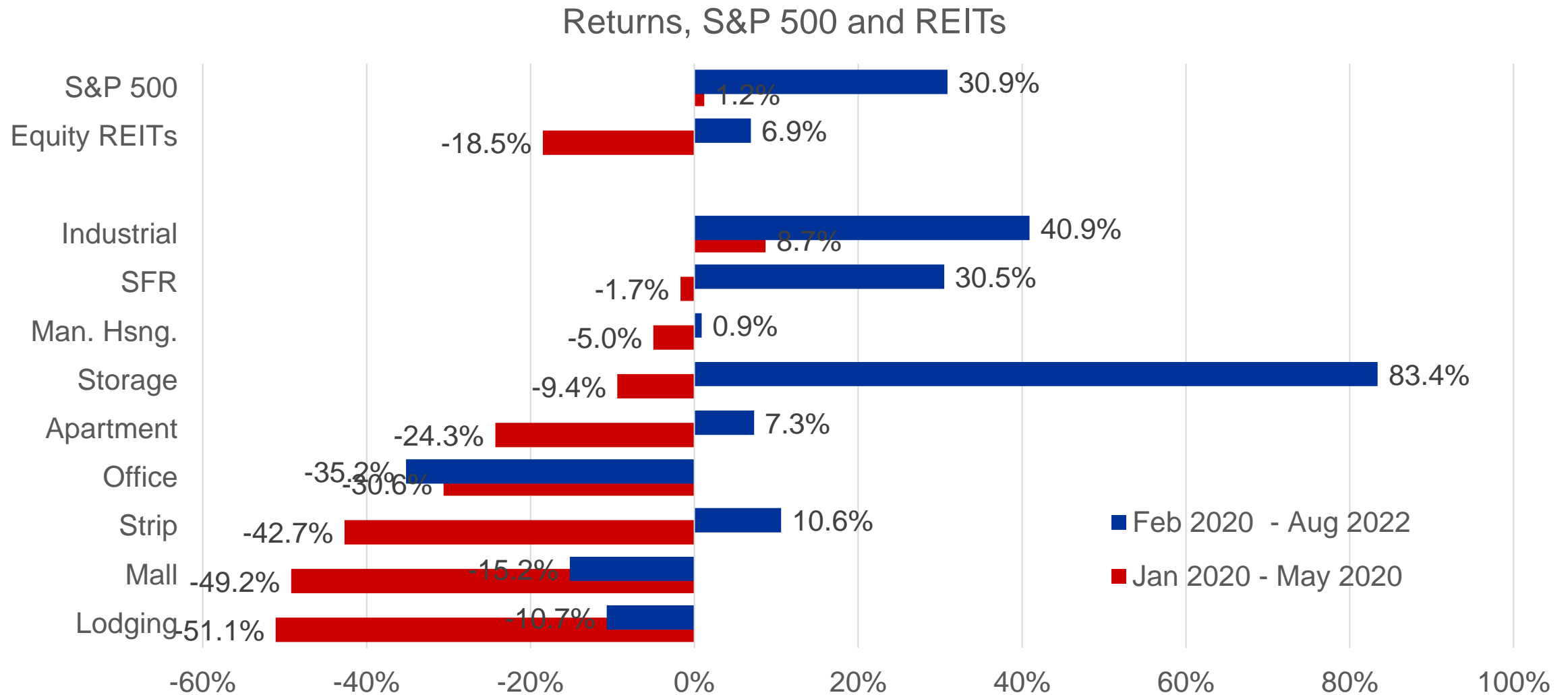
## 3. Changed Relationship Permanently

The pandemic fundamentally changed how we use these properties -- e.g., Office

## 4. Speedbump

The pandemic has created a temporary disruption that will dissipate once the pandemic passes -- e.g., Hotel, Multifamily

# REIT Total Returns, Jan - May 2020 and Feb 2020 - Aug 2022



# RETURN TO NORMAL. BUT NOT TO THE OFFICE.

IN-PERSON ACTIVITIES AS A % OF ACTIVITIES IN 2019

FEBRUARY 2020 TO JUNE 2022

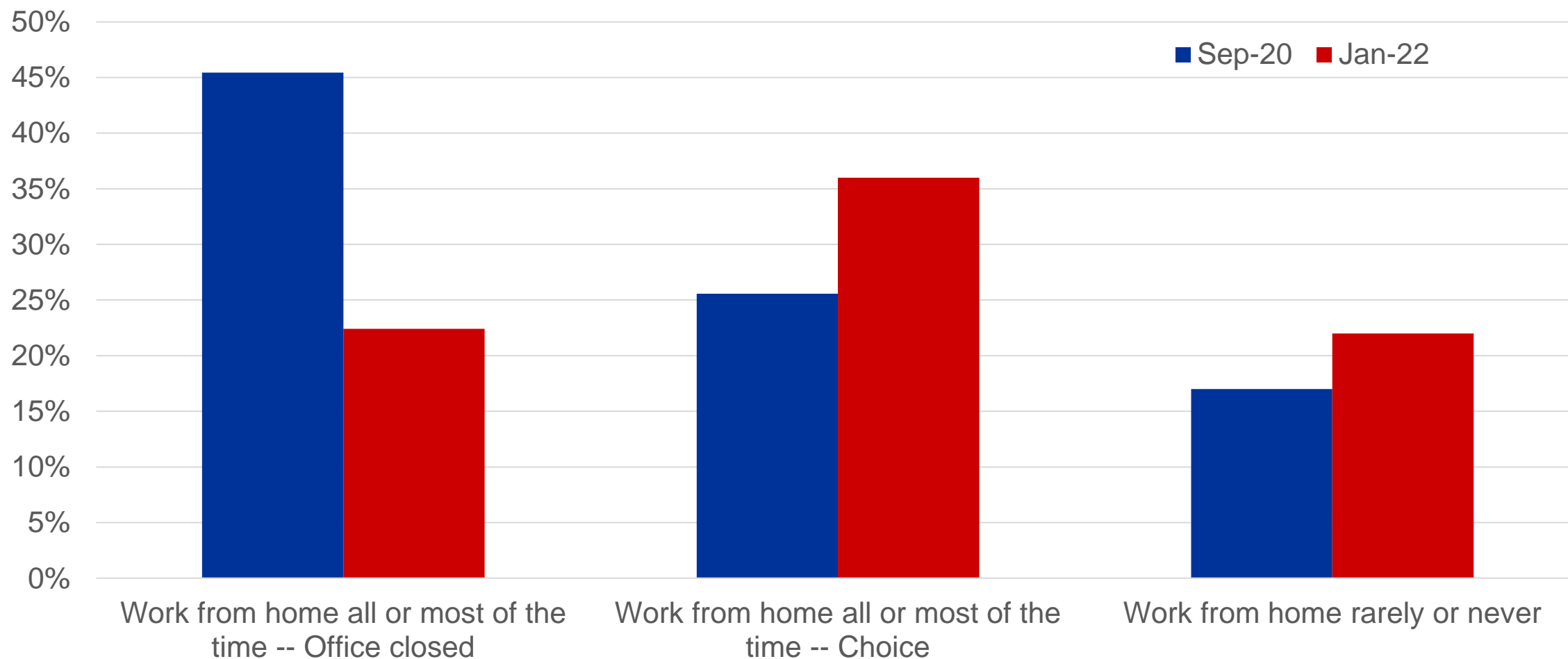


Kastle Back to Work Barometer: Kastle customers are in more than 2,600 buildings in 138 cities. The Barometer reflects swipes of Kastle access controls from the top 10 cities, averaged weekly. It summarizes recent weekday building access activity among our business partners, not a national statistical sample.

Sources: Restaurant Seated Diners Database Sourced by Open Table; TSA Checkpoint travel numbers sourced by U.S. Transportation Security Administration; National Basketball Association Stadium Attendance data sourced by ESPN; Movie Theater Attendance data sourced by Box Office Mojo by IMDbPro.



# Employed Adults Whose Responsibilities of Job Could be Done from Home



# Technology Infrastructure

## Technological Availability

iPhone:

- Introduced in 2007
- More than 2 billion have now been sold.

Zoom:

- Founded in 2011
- Launched its software in 2013

Computer access:

- In 2007, 70 percent of US homes had a computer
- By 2019 that number had risen to 93 percent.

## Pandemic Influence

Zoom:

- In February 2019, annualized 60 billion meeting minutes
- By their 2021 fiscal year Q3 that number was 3.3 trillion.

Microsoft Teams:

- The number of users increasing from 20 million in 2019 to 270 million in 2022.

## Networking:

- Downloading speeds in California have grown from:
  - 880 kilobytes per second in 2002 to
  - 9.8 megabytes per second in 2012 to
  - 106 megabytes per second in 2020.

# Costs/Benefits of Remote vs In-Person Work

	Employee	Employer
Short-Term/ Tangible		
Long-term/ Intangible		



# Costs/Benefits of Remote and In-Person Work

	Employee	Employer
Short-Term/ Tangible	<ul style="list-style-type: none"> <li>- 75 percent of Gen Z respondents and 76 percent of Millennials would prefer a hybrid or remote working pattern. A full 12% of Gen Z and 14% and Millennials want to work fully remotely compared to 19% and 20% (respectively) who would prefer full-time in-office work</li> <li>- Helps me save money</li> <li>- Frees me up to do other things I care about</li> <li>- Allows me to see family more often</li> <li>- Positively impacts my mental health</li> <li>- Makes getting work done easier</li> </ul>	<ul style="list-style-type: none"> <li>- Home working led to a 13% performance increase, of which 9% was from working more minutes per shift (fewer breaks and sick days) and 4% from more calls per minute (attributed to a quieter and more convenient working environment).</li> <li>- A cumulative wage-growth moderation of 2.0 percentage points over two years</li> <li>- Security? Office costs? Fraud?</li> </ul>
Long-term/ Intangible	<ul style="list-style-type: none"> <li>- When male employees who smoke transition to male managers who smoke, they take breaks with their managers more often and are subsequently promoted at higher rates. The smoker-to-smoker advantage is not accompanied by any differences in effort or performance.</li> </ul>	<ul style="list-style-type: none"> <li>- [M]eetings increased firm revenue by 8.1%, and also significantly increased profit, factors, inputs, the number of partners, borrowing, and a management score.</li> </ul>

# Costs/Benefits of Remote vs In-Person Work

## Employee

## Employer

Getting it  
Done  
~~Short-Term/~~  
Tangible

- 75 percent of Gen Z respondents and 76 percent of Millennials would prefer a hybrid or remote working pattern. A full 12% of Gen Z and 14% and Millennials want to work fully remotely compared to 19% and 20% (respectively) who would prefer full-time in-office work
- Helps me save money
- Frees me up to do other things I care about
- Allows me to see family more often
- Positively impacts my mental health
- Makes getting work done easier

- Home working led to a 13% performance increase, of which 9% was from working more minutes per shift (fewer breaks and sick days) and 4% from more calls per minute (attributed to a quieter and more convenient working environment).
- A cumulative wage-growth moderation of 2.0 percentage points over two years
- Security? Office costs? Fraud?

Workplace  
Capital  
~~Long-term/~~  
Intangible

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- [M]eetings increased firm revenue by 8.1%, and also significantly increased profit, factors, inputs, the number of partners, borrowing, and a management score.

# During the early years of the COVID-Pandemic, Employees held power

	Employee	Employer
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# What could shift if labor markets loosen and/or workplace capital matters again

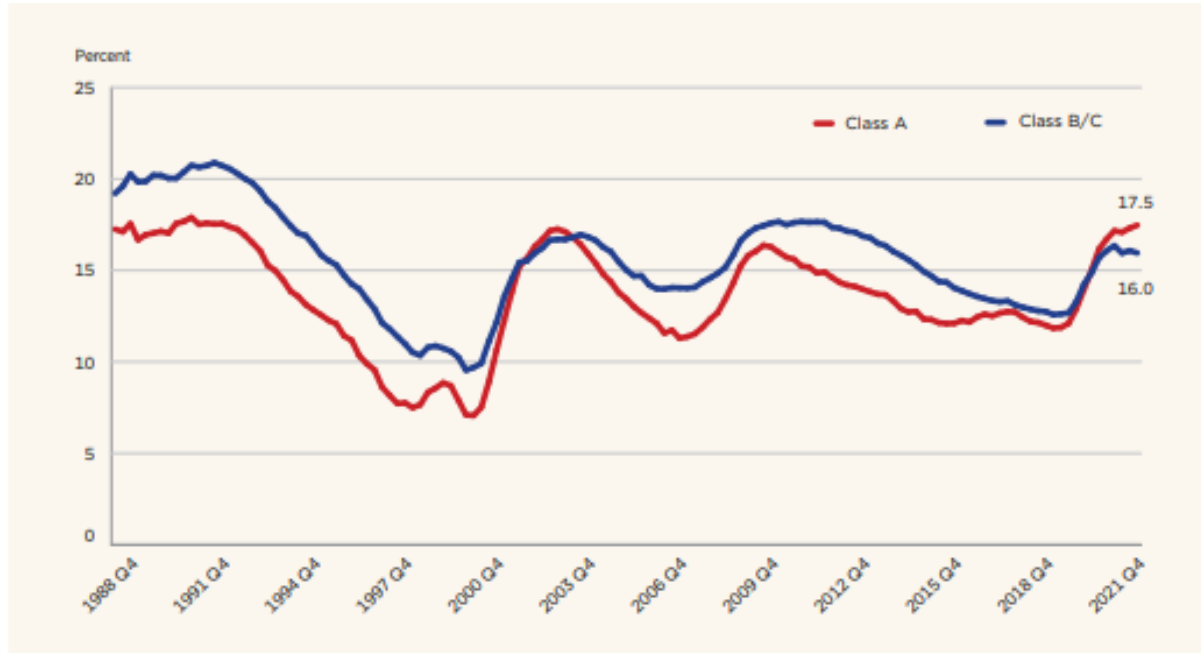
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# Implications for Office

	BASE CASE	ALTERNATIVE
Case	Remote/Hybrid, 2-3 days in-office per week	3+ days per week of universal in-office
Configuration	Tables and couches	Desk and meeting places
Amount of Space	80ish percent of previous	Close to previous, after period of volatility
Incomes & Values	Down 10-20 percent, Heavily dependent on location and property	Close to previous, after period of volatility
Elasticity	Elastic demand — Companies pay for collaboration value	Inelastic demand — More similar to pre-pandemic
Quality Differential	High quality receives significant premium; Low quality receives significant discount	Quality prices similar to pre-pandemic

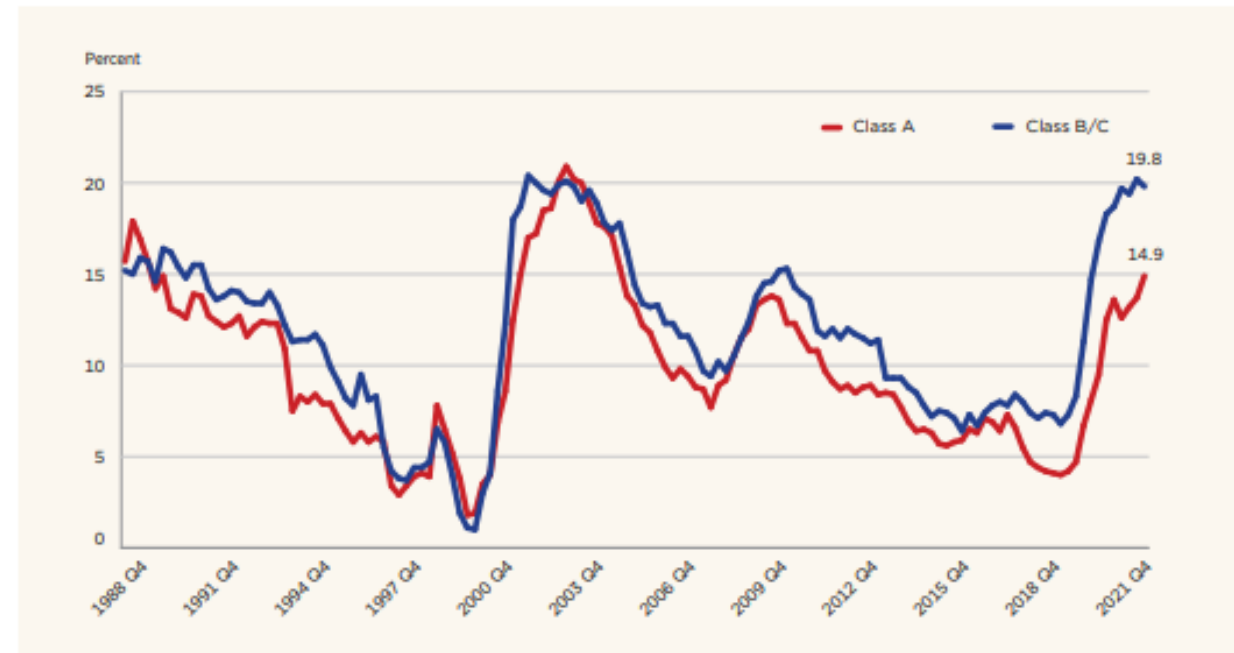
# Office Vacancy Rates

FIGURE 1. U.S. OFFICE TOTAL VACANCY RATES, BY YEAR



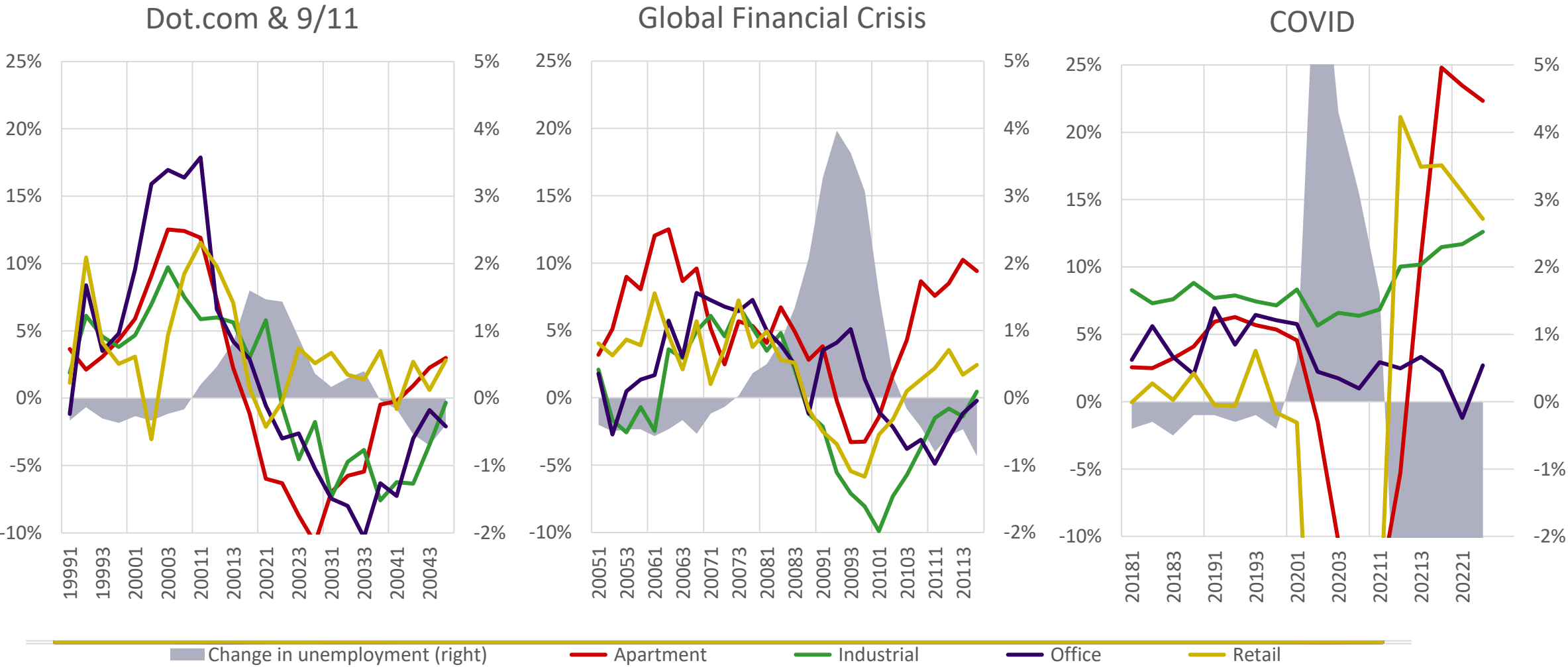
Source: Morgan Stanley.

FIGURE 2. SAN FRANCISCO OFFICE VACANCY RATES, BY YEAR

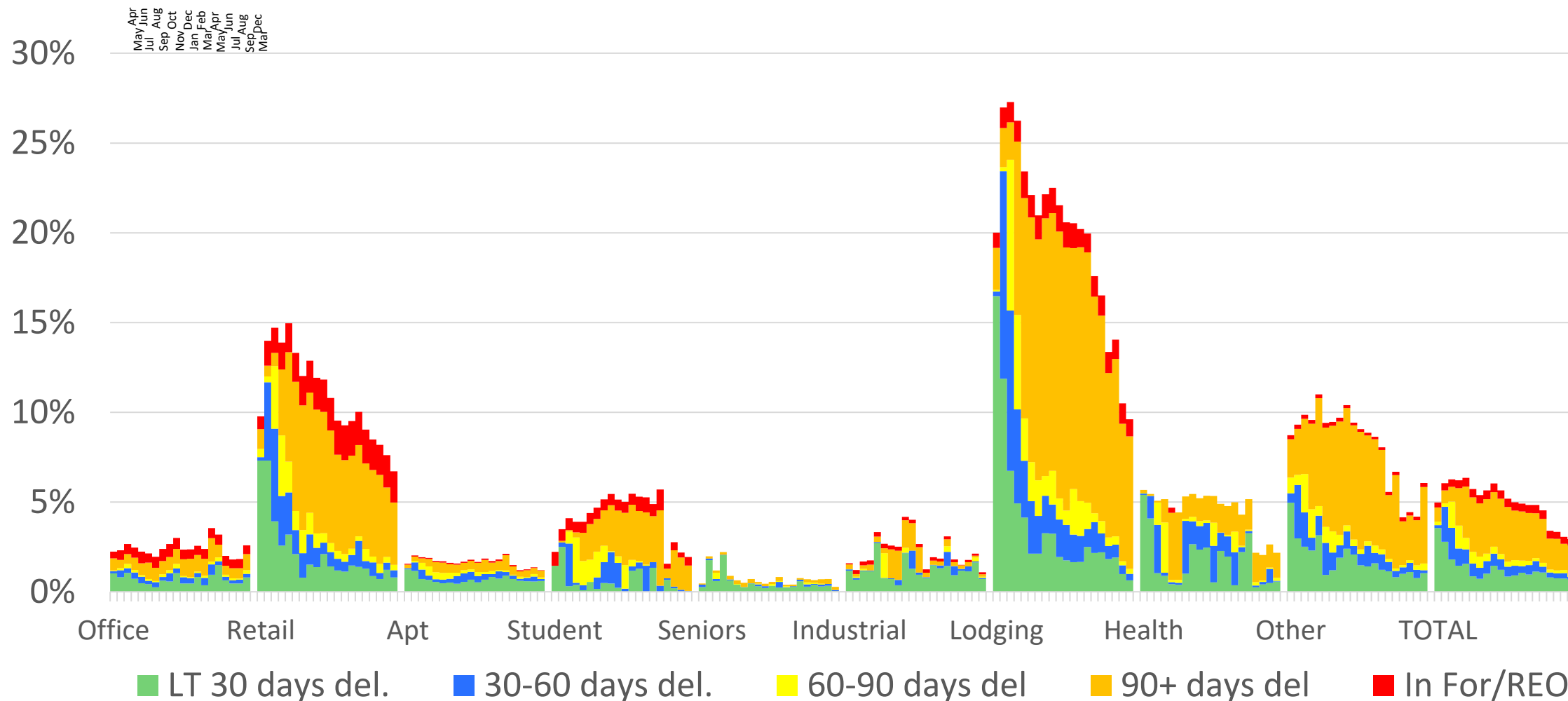


Source: Morgan Stanley.

# Year-over-year Changes in Property Incomes (NOIs) and Unemployment Rate



# Delinquency Status, by Property Type, Share of Total Unpaid Principal Balance April 2020 – March 2022





# Conclusions

In reality, different employers will pursue different paths. Some will be fully remote, some fully in the office and some on the spectrum between. Demand for office will be determined by the mix and how many – and what types and sizes of firms – pursue which. There will likely be concentrations in approaches by industry, geography, firm size and more.

One's outlook for office should therefore depend on the degree to which one feels, on the one hand, that the pandemic harnessed the waiting technology and unleashed a change that was coiled up, ready to go and likely to stick around or on the other hand, that the tight labor market has given employees a temporary window to experience the short-term benefits of remote work but that the longer-term need to develop workplace capital will bring people back to the office.

Like most interesting questions, it's not really one or the other. But if one case is more dominant than the other, it will have significant implications for where the office market goes from here.