Distressed Real Estate Symposium

Keynote Address
Sponsored by Keen-Summit Capital Partners LLC

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Navigating the Economic and Real Estate Market Inflexion

May 1, 2024 | American Bankruptcy Institute | Ojai, California

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†Fellow of the Royal Society of Medicine, Royal Society for Public Health, and Royal Institution of Chartered Surveyors; Contributing Member of the American Society for Microbiology. For more information, visit www.samchandan.com
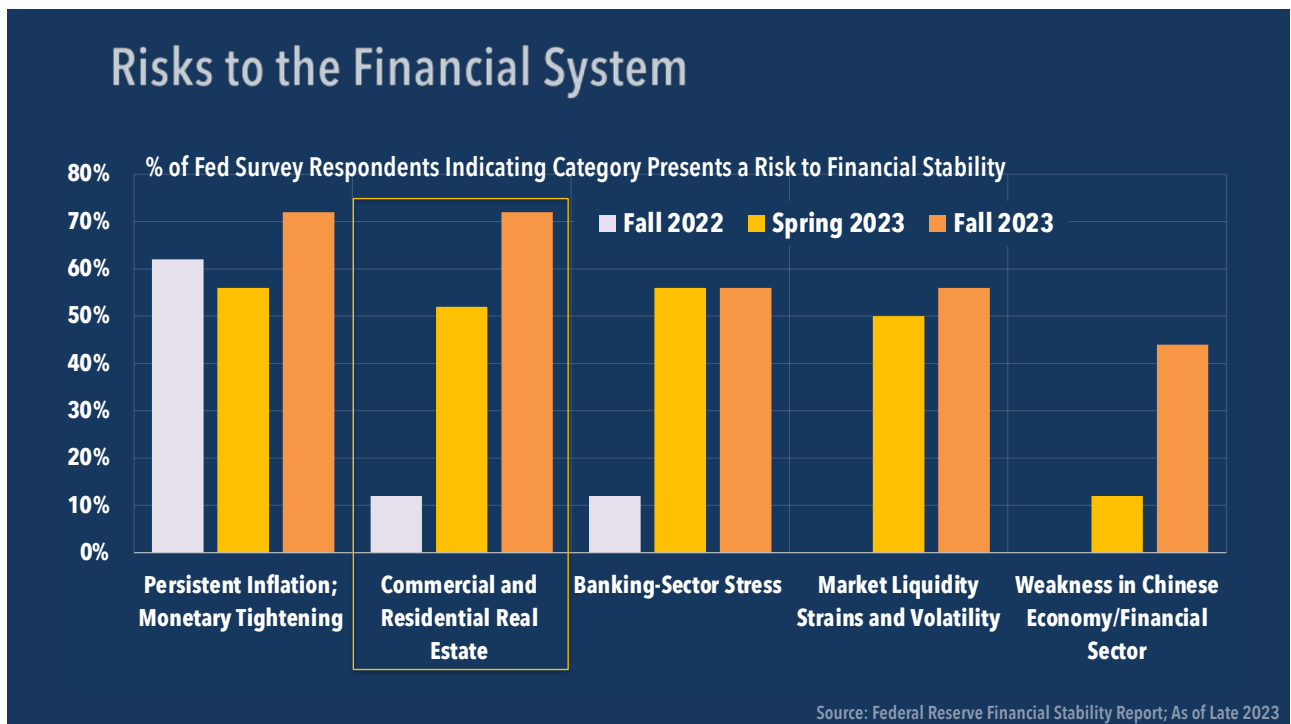
Our relationship to the built environment is always evolving, but never so quickly as today

Image: Getty

It coincides with a historically abrupt increase in the cost of capital

Image: Getty

Risks to the Financial System

% of Fed Survey Respondents Indicating Category Presents a Risk to Financial Stability

Fall 2022   **Spring 2023**   **Fall 2023**

Category	Fall 2022	Spring 2023	Fall 2023
Persistent Inflation; Monetary Tightening	62%	56%	72%
Commercial and Residential Real Estate	12%	52%	72%
Banking-Sector Stress	12%	56%	56%
Market Liquidity Strains and Volatility		50%	56%
Weakness in Chinese Economy/Financial Sector		12%	44%

Source: Federal Reserve Financial Stability Report; As of Late 2023

Baseline Economic Outlook

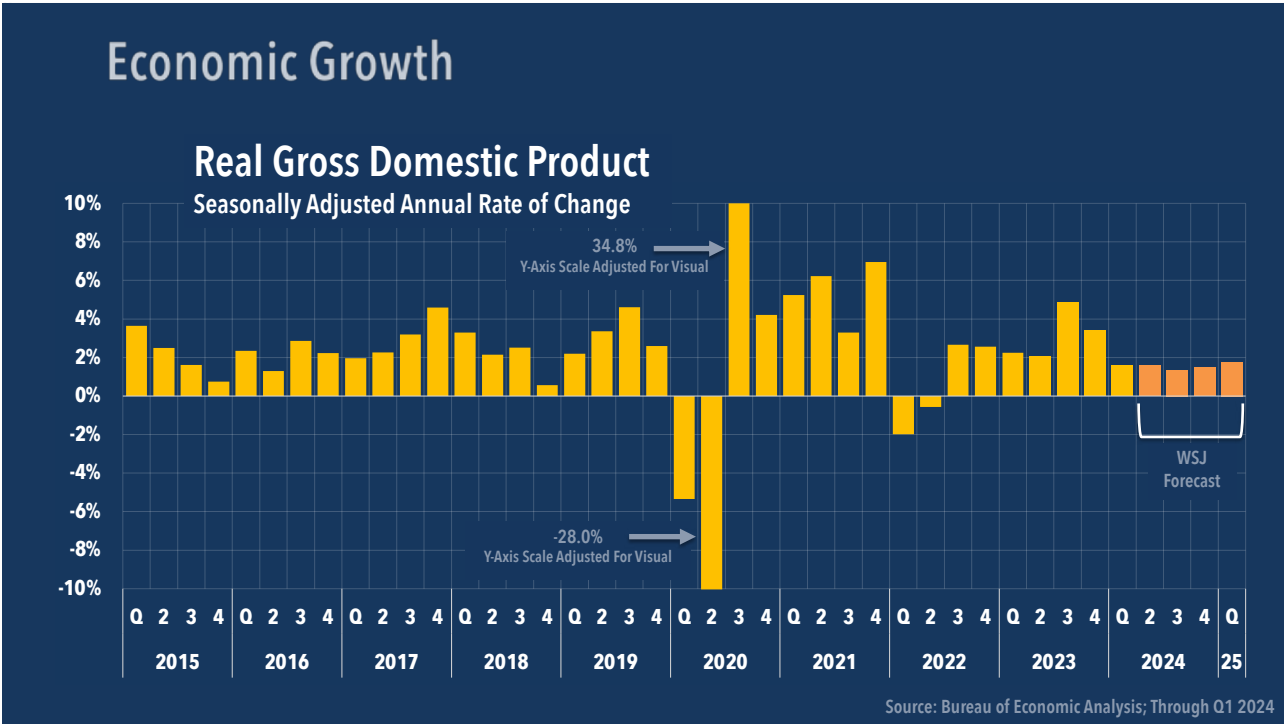|	
Macro Economy	Diminished risk of recession, reflecting peak in monetary policy cycle and labor market strength
Inflation and Interest Rates	Policy rates at their peak. More manageable but persistent inflation limiting pace and magnitude of policy rate cuts. Long-term rates could still rise
Labor Market	Remarkable but waning resilience in labor markets. Weakness concentrated in specific sectors, including technology, financial services, and real estate
Demographics	Long-term demographic and migration patterns favoring areas with more business and consumer friendly environments
Local Economies	Underassessed headwinds from local fiscal policy imbalances, challenges in meeting public service demands, and climate risk

Emerging Issues for the Built Environment

|	
Repurposing	Long-term shifts in space use patterns driving investment in repurposing of legacy assets, with new uses overweighted to the residential sector
Distress and Capital	Broad retreat in the capital stack beginning to ease. But still early in the process of resolving distress
Urban Viability	Legacy cities grappling with challenges to fiscal stability and competitiveness in attracting and retaining jobs and skilled households
New Technologies	Quicker pace of adoption of new technologies, ranging from construction materials innovation to generative artificial intelligence
Resilience	Investment in urban infrastructure and institutional asset decarbonization, with limited new construction pipeline

The Economy

Economic Growth

Real Gross Domestic Product
Seasonally Adjusted Annual Rate of Change

34.8%
Y-Axis Scale Adjusted For Visual

-28.0%
Y-Axis Scale Adjusted For Visual

WSJ
Forecast

Source: Bureau of Economic Analysis; Through Q1 2024

Classical Recession Indicators Flashing Red

Recession Probability 12-Months Ahead
Measured by the New York Federal Reserve Bank

70.9%

41.7%

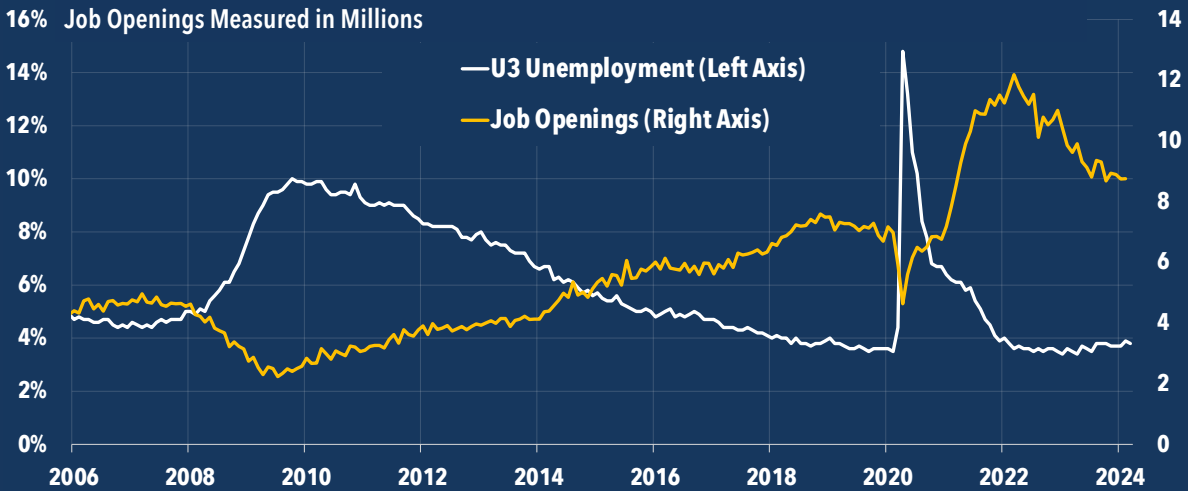38.0%
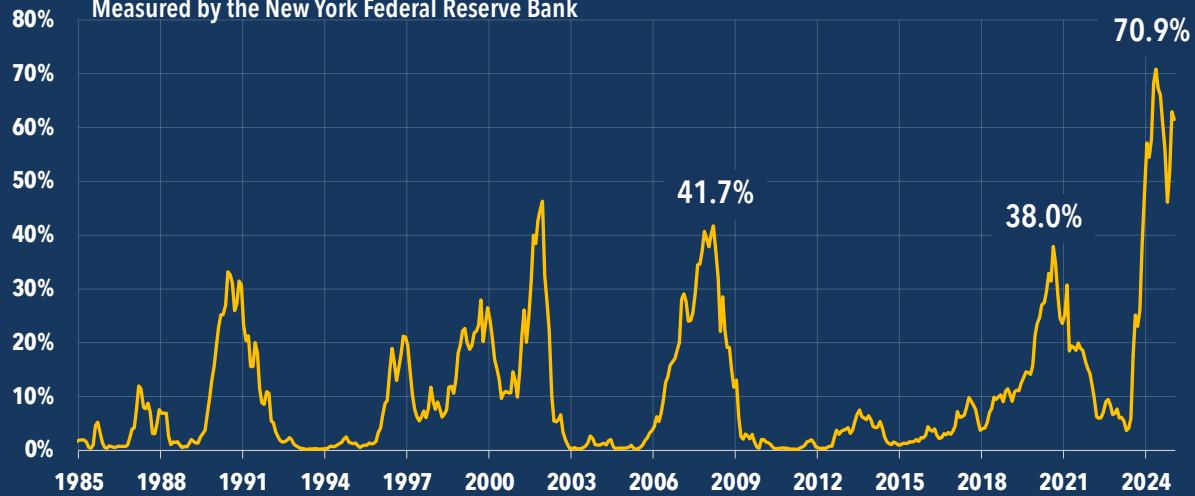
Source: NY Federal Reserve; Through February 2024

Consumer Outlook Improving

University of Michigan's Survey of Consumers Current Sentiment Index and Expected Change in Business Conditions

— Consumer Sentiment

— Expected Change in Business Conditions in a Year

79.4

50.0
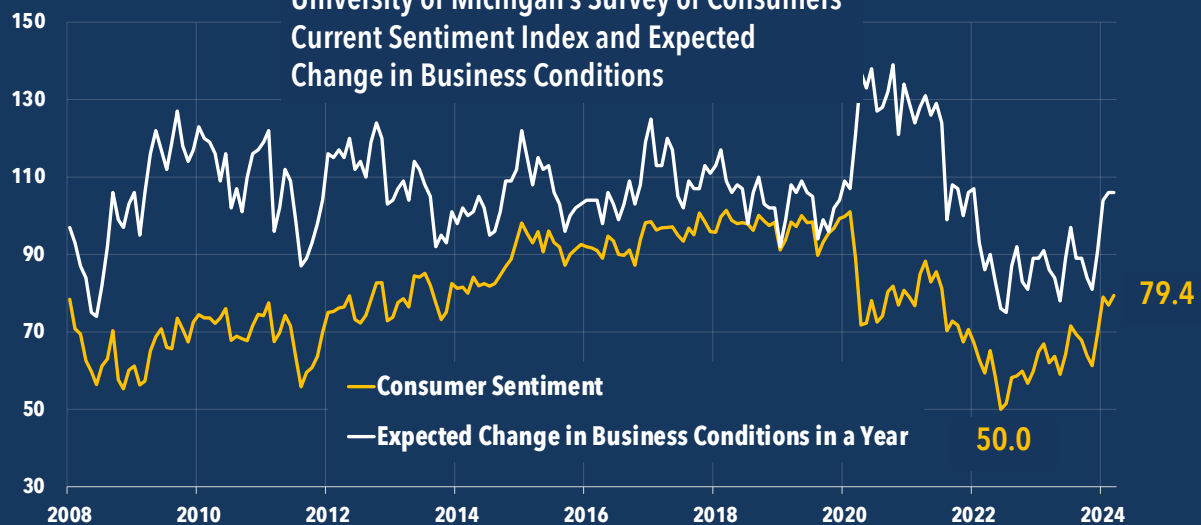
Source: University of Michigan; Through March 2024

Labor Market Remains Tight

Unemployment Rate and Job Openings
Job Openings Measured in Millions

— U3 Unemployment (Left Axis)
— Job Openings (Right Axis)

Source: Bureau of Labor Statistics; Through March 2024

Our Fiscal Outlook is Unsustainable

Federal Government Expenditures:
Interest Rate Payments vs. National Defense
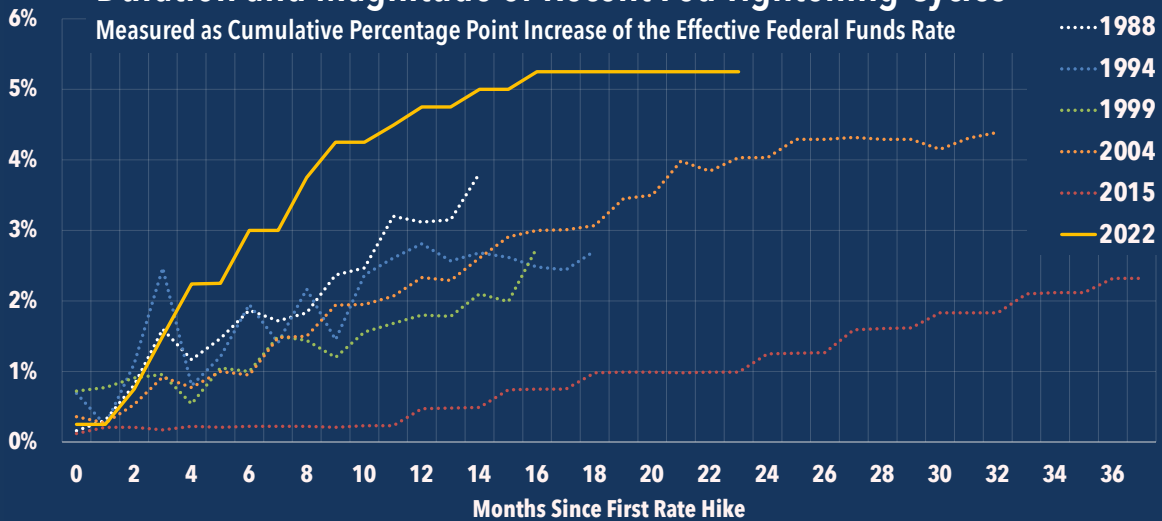Measured in Billions, Seasonally Adjusted Annual Rate

— Interest Rate Payments
— National Defense

Source: Federal Reserve, Board of Governors, Bureau of Economic Analysis; Through Q4 2023
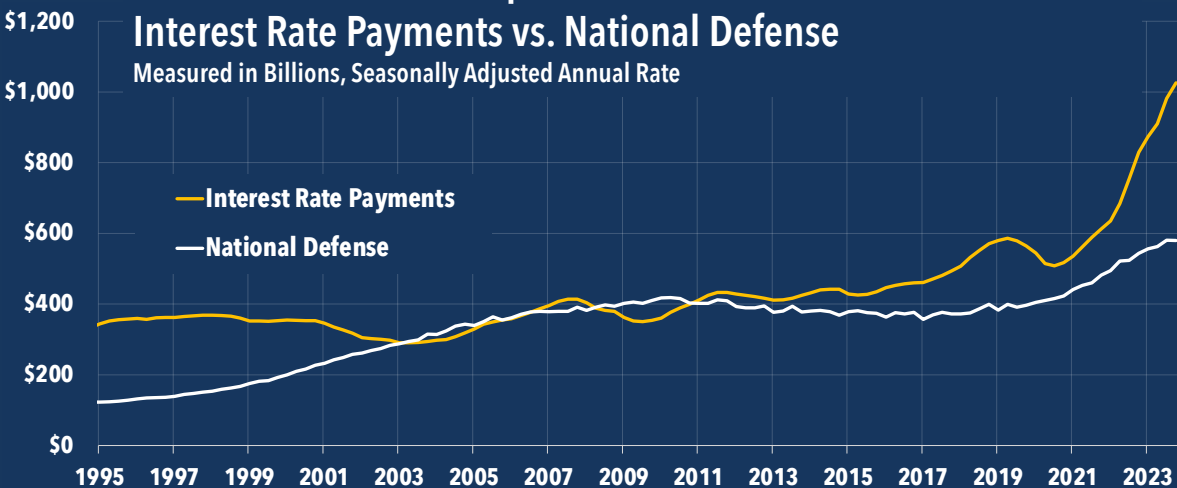
Inflation & Interest Rates

Timing the Fed's Shift in Monetary Policy

% Probability of At Least One Rate Cute by Meeting Date, Measured using CME Group FedWatch Tool

■ Year-End 2023   ■ March 1, 2024   ■ April 24, 2024

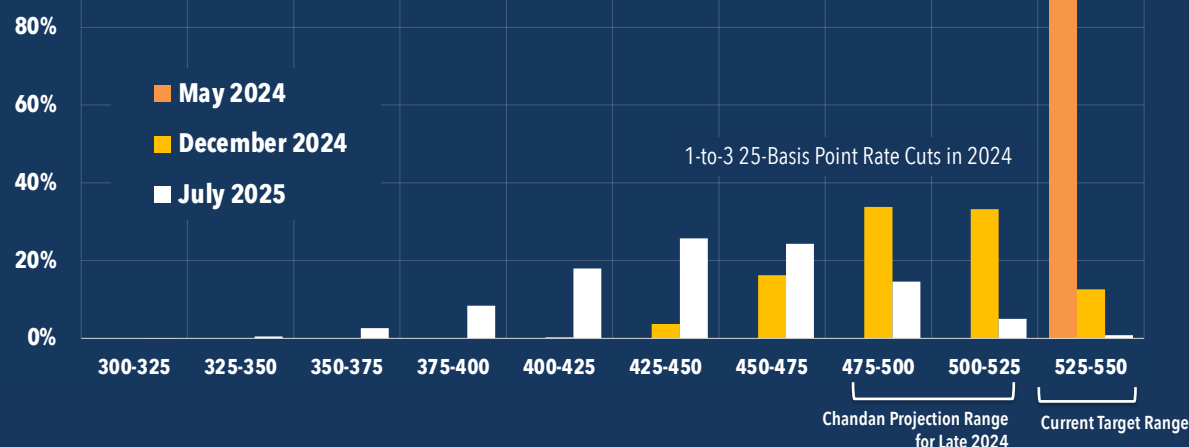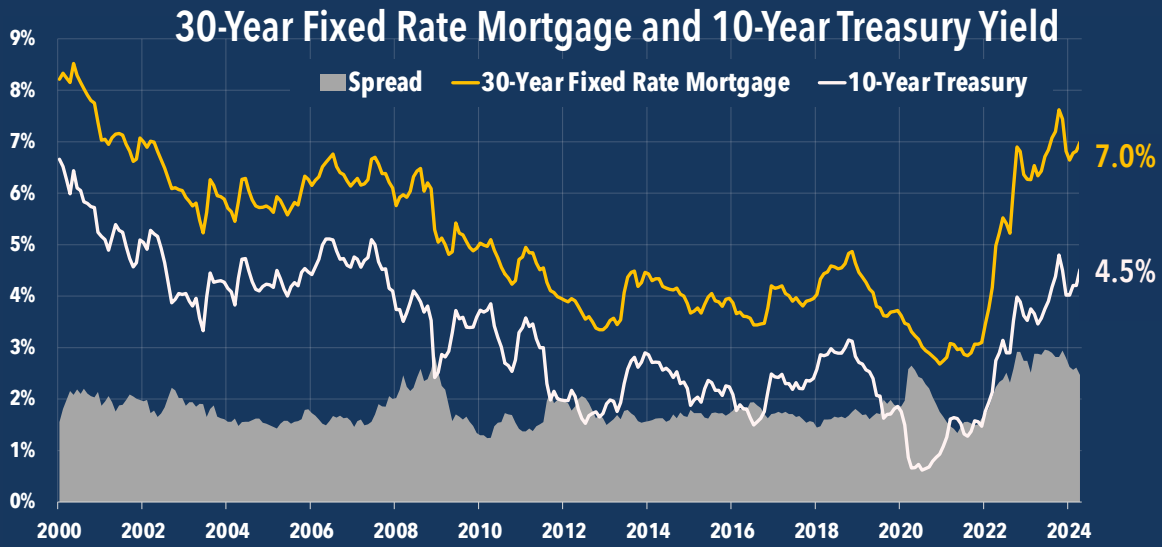| Month	Year-End 2023	March 1, 2024	April 24, 2024
January	18%		
March	88%	4%	
May	89%	2%	2%
June	100%	74%	19%
July	100%	92%	44%
September	100%	98%	69%
November	100%	99%	76%
December	100%	100%	87%
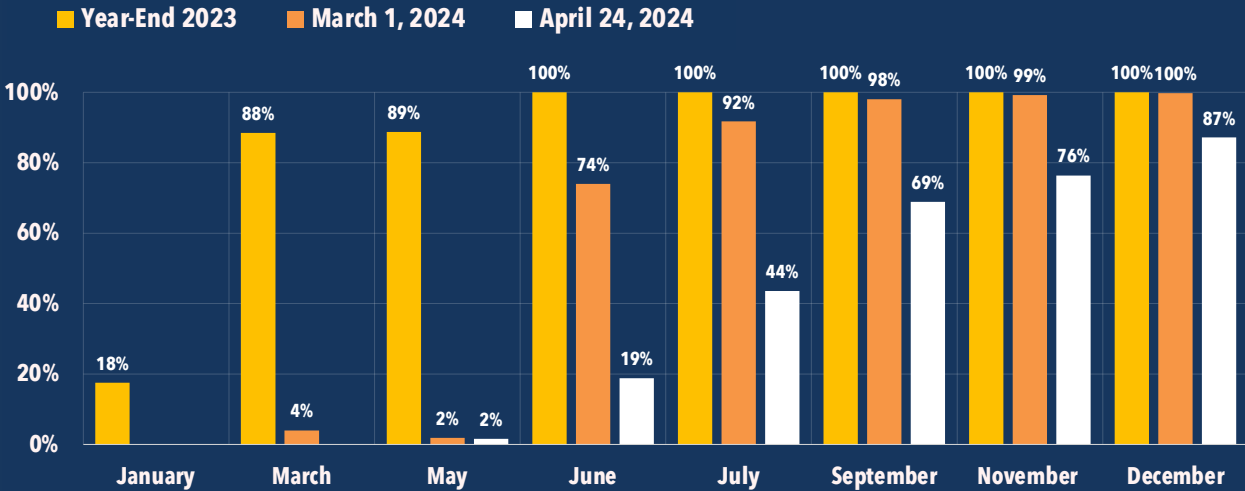
Source: CME Group; As of April 24, 2024

Monetary Policy Outlook

Fed Target Rate Probabilities by Meeting Date
Measured using CME Group FedWatch Tool, Probabilities as of April 24, 2024

■ May 2024   ■ December 2024   ■ July 2025

1-to-3 25-Basis Point Rate Cuts in 2024

Target Range	May 2024	December 2024	July 2025
300-325			
325-350			~0%
350-375			~2%
375-400			~8%
400-425		~0%	~18%
425-450		~3%	~25%
450-475		~16%	~24%
475-500		~34%	~14%
500-525		~33%	~4%
525-550	~98%	~13%	~0%

Chandan Projection Range for Late 2024

Current Target Range

Source: CME Group; As of April 24, 2024

Demographics Complicate the Inflation Roadmap

BLS Projected Labor Force Growth by Age Group
2022-2032

Age Group	Growth
16-24	-8%
25-34	-2%
35-44	10%
45-54	8%
55-64	-4%
65+	34%
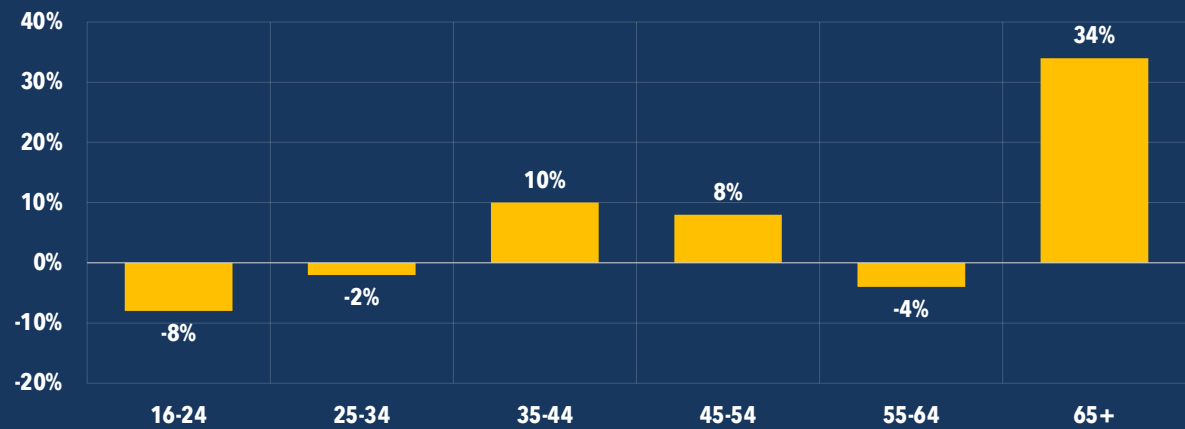
Source: Bureau of Labor Statistics; As of 2022

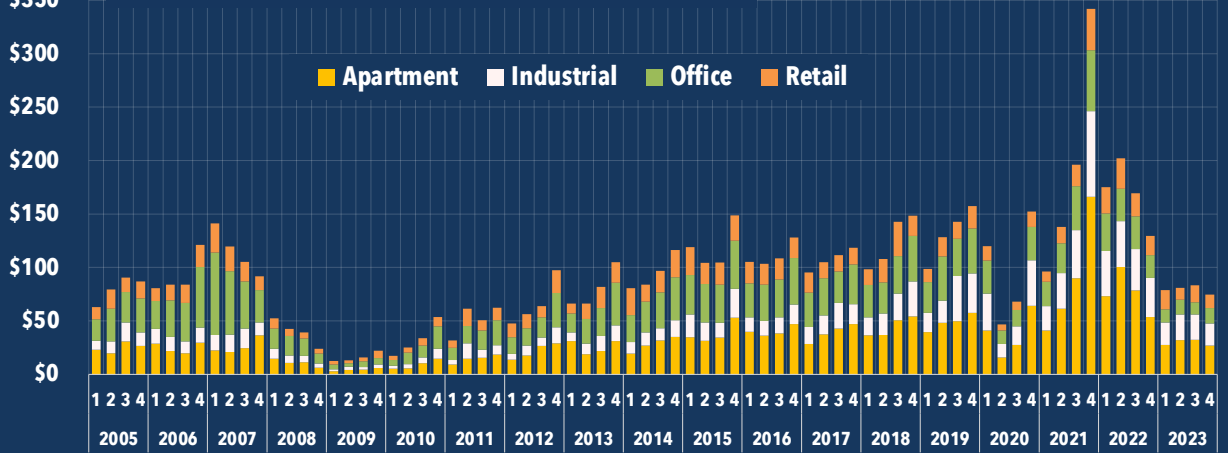## Commercial Real Estate

Interest Rates Sidelining Buyers and Sellers

Transaction Volume by Property Type
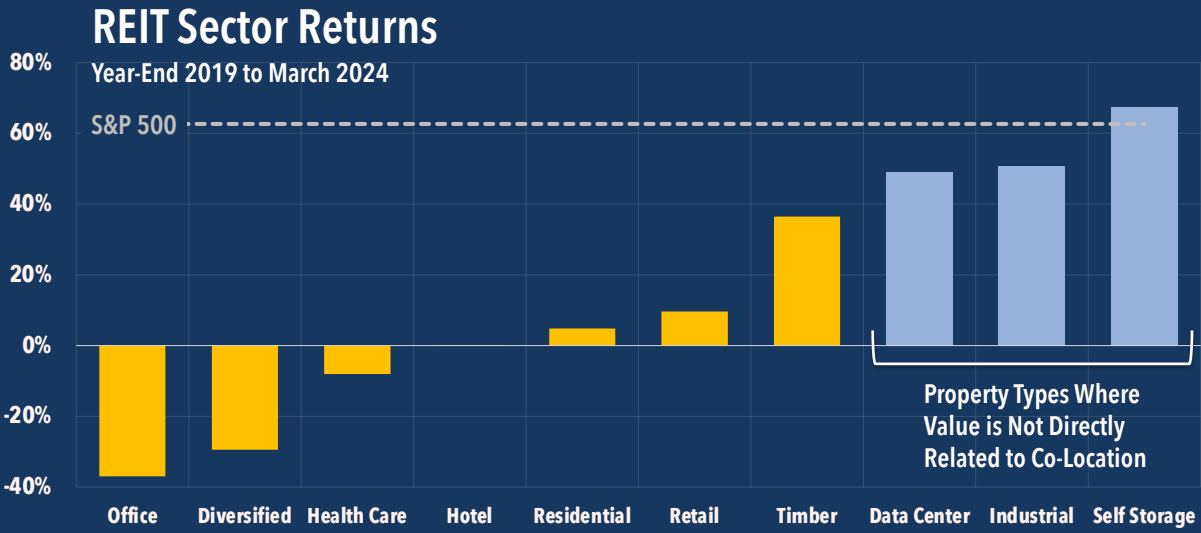Measured in Billions $

Apartment · Industrial · Office · Retail

Source: MSCI Real Capital Analytics; Through Q4 2023

Cap Rates Rising Across All Property Types

Cap Rates by Property Type

Apartment · Office · Retail · Industrial

Source: MSCI Real Capital Analytics; Through Q4 2023
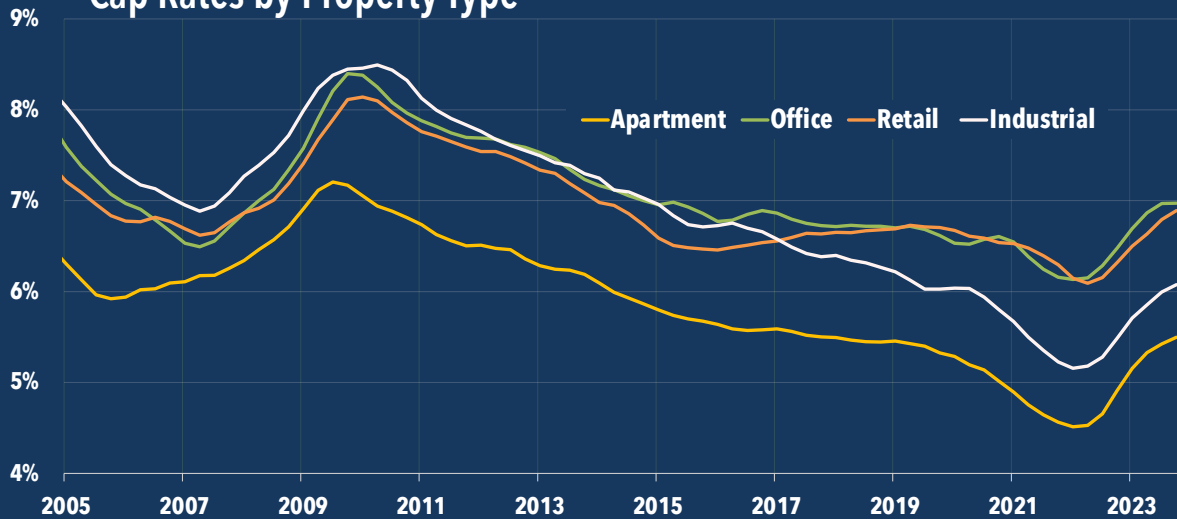
Dependency on Co-Location Impacting Valuations

REIT Sector Returns

Year-End 2019 to March 2024

Property Types Where Value is Not Directly Related to Co-Location

Office | *Diversified* | *Health Care* | *Hotel* | *Residential* | *Retail* | *Timber* | *Data Center* | *Industrial* | *Self Storage*

Source: NAREIT, Chandan; March 2024

Commercial Real Estate Exposure

Commercial Loans Outstanding

Measured in Billions $

+48%

1987 — 1991 — 1995 — 1999 — 2003 — 2007 — 2011 — 2015 — 2019 — 2023
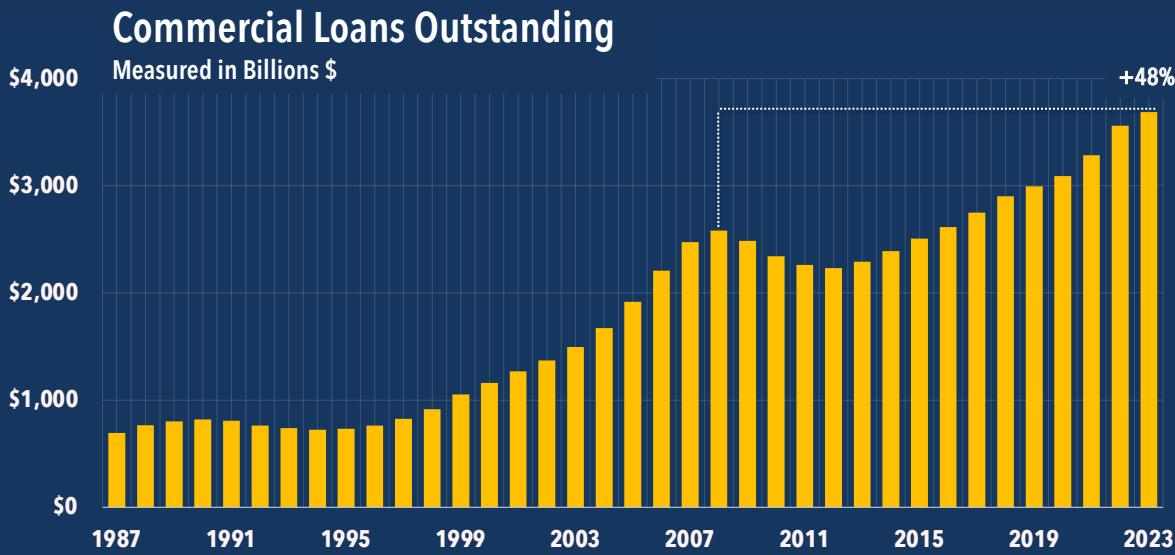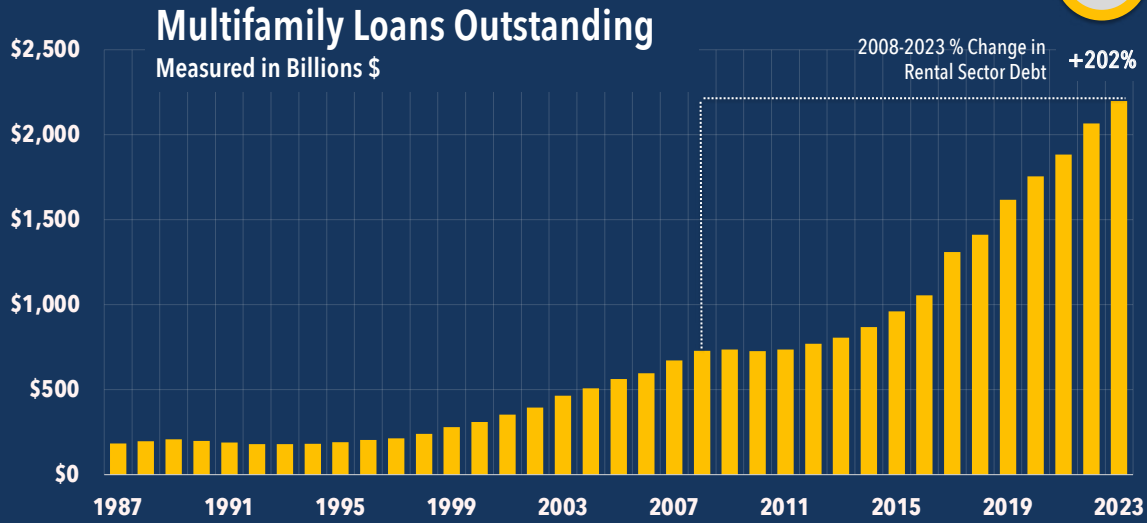
Source: Federal Reserve; Through Q4 2023
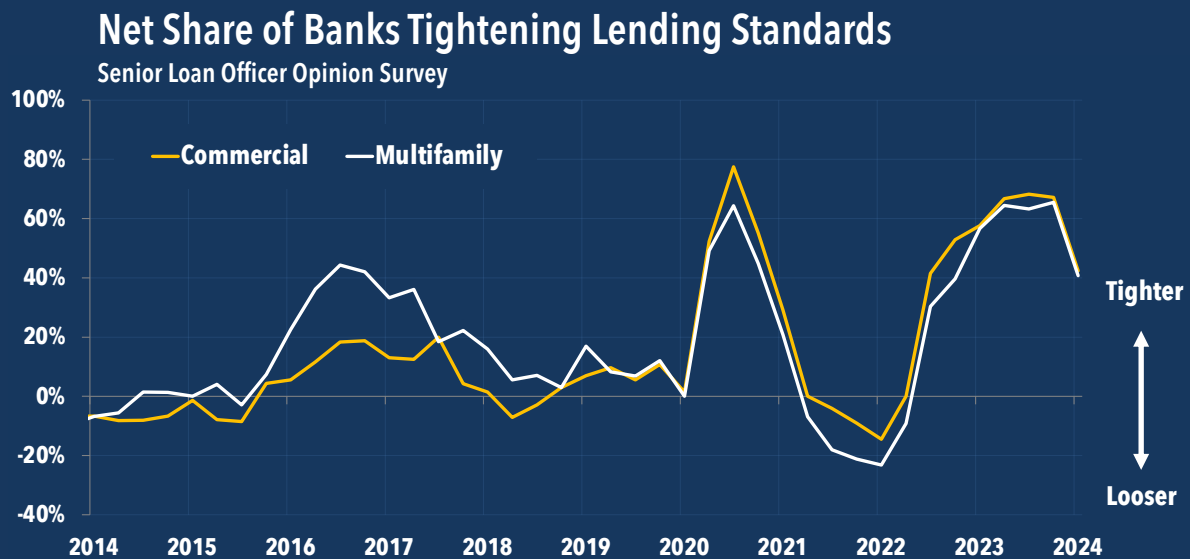
CMBS Market Presses Pause

Annual CMBS Issuance

Measured in Billions $

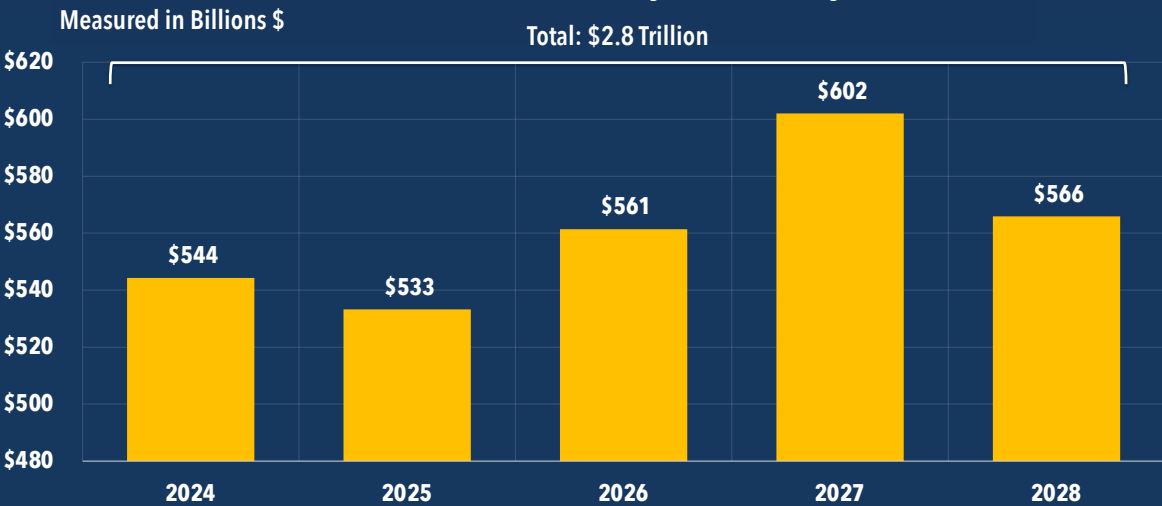| Year	Issuance
2010	$8.9
2011	$46.2
2012	$64.1
2013	$113.5
2014	$120.1
2015	$137.4
2016	$120.9
2017	$150.6
2018	$137.7
2019	$178.0
2020	$129.3
2021	$213.2
2022	$156.6
2023	$84.5
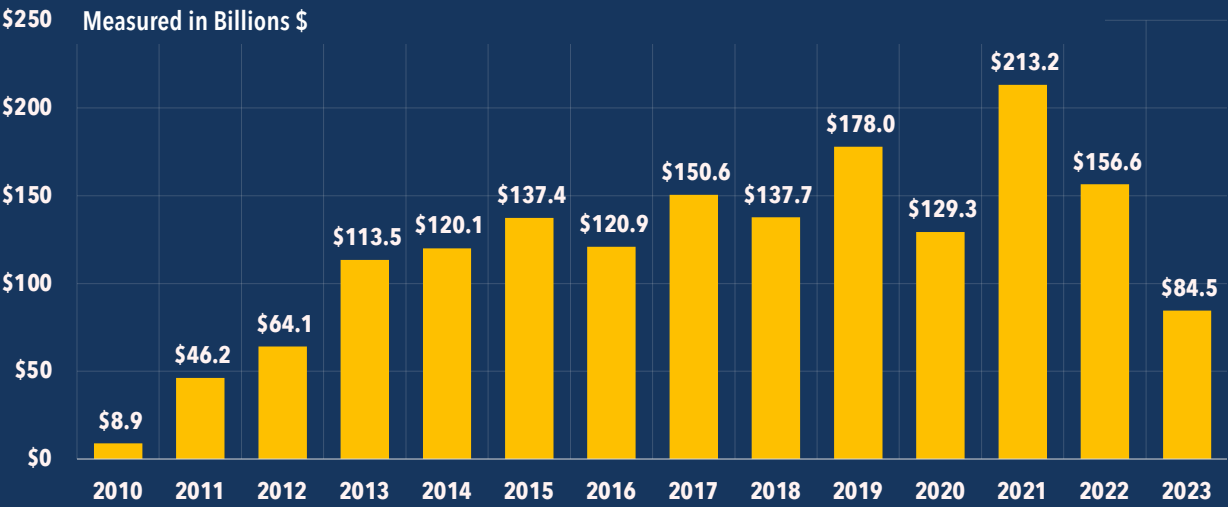
Source: Finsight; Through 2023

Wall of Maturities on the Horizon

Commercial Real Estate Debt Maturity Volume by Year

Measured in Billions $

Total: $2.8 Trillion

Year	Volume
2024	$544
2025	$533
2026	$561
2027	$602
2028	$566

Source: Trepp; Analysis as of December 2023

Early Days for Mortgage Performance Strains

Default Rate for Bank Commercial and Multifamily Mortgages

■ **Multifamily** ■ **Commercial**

Emerging weaknesses in multifamily concentrated in the stabilized sector

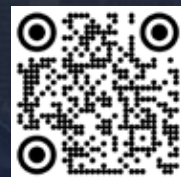Source: FDIC; Through Q4 2023

Navigating the Economic and Real Estate Market Inflexion

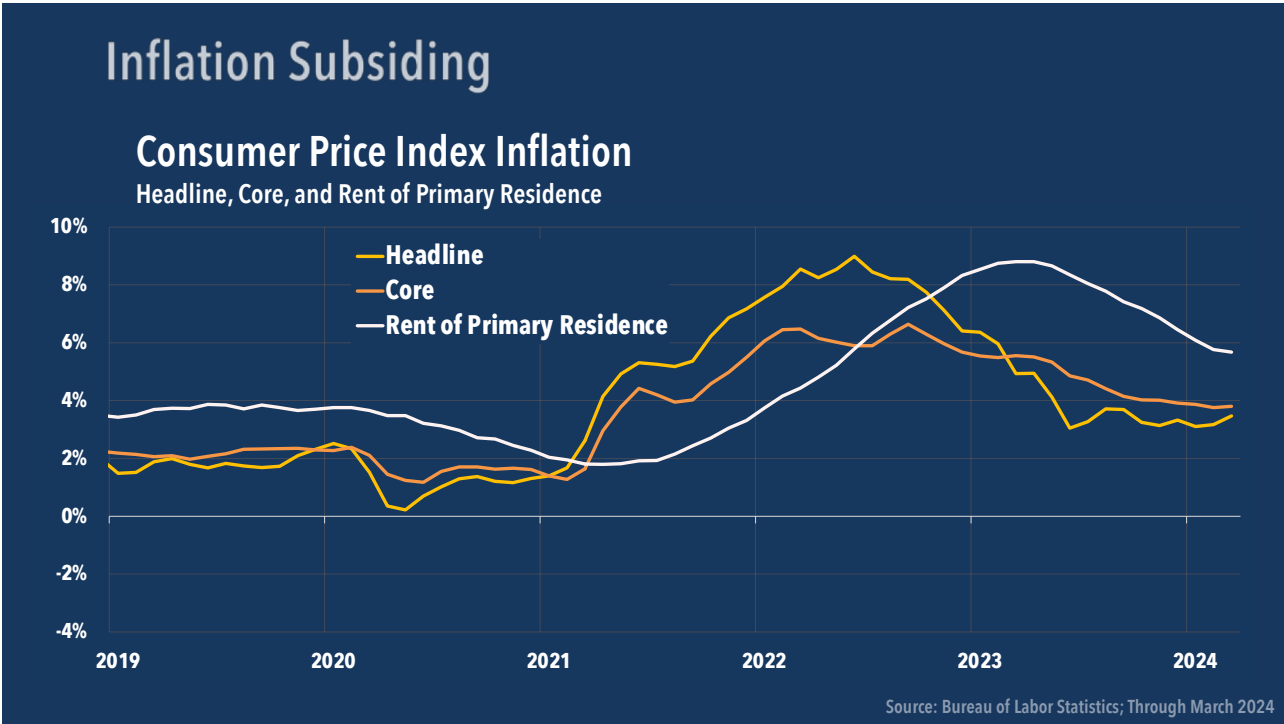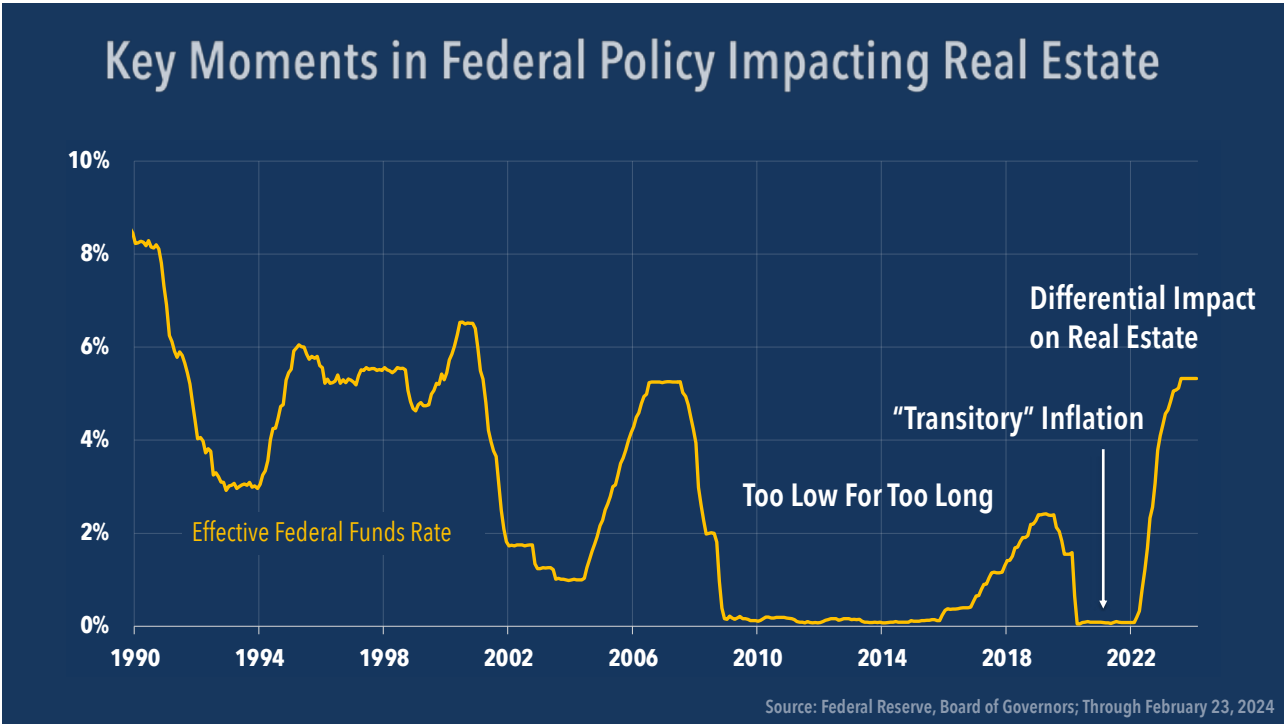May 1, 2024 | American Bankruptcy Institute | Ojai, California

Sam Chandan, PhD MPH MSc FRSPH FRICS†
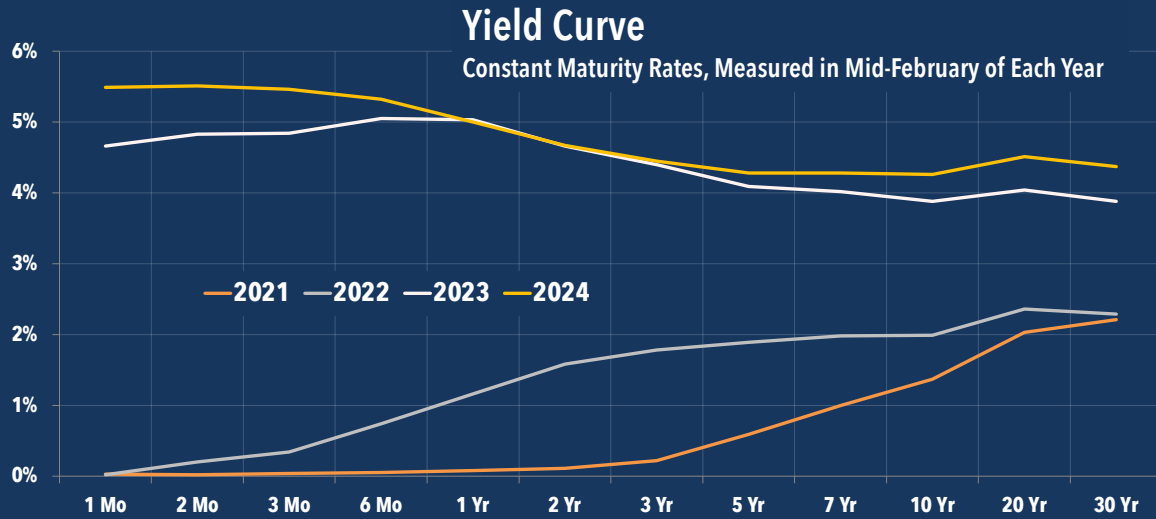Founding Director, Chen Institute for Global Real Estate Finance

†Fellow of the Royal Society of Medicine, Royal Society for Public Health, and Royal Institution of Chartered Surveyors; Contributing Member of the American Society for Microbiology. For more information, visit www.samchandan.com

Key Moments in Federal Policy Impacting Real Estate

Differential Impact on Real Estate

"Transitory" Inflation

Too Low For Too Long

Effective Federal Funds Rate

Source: Federal Reserve, Board of Governors; Through February 23, 2024

Inflation Subsiding

Consumer Price Index Inflation
Headline, Core, and Rent of Primary Residence

- Headline
- Core
- Rent of Primary Residence

Source: Bureau of Labor Statistics; Through March 2024

Yield Curve Remains Inverted

Yield Curve
Constant Maturity Rates, Measured in Mid-February of Each Year

Legend: 2021 2022 2023 2024

Source: Federal Reserve Board of Governors; Through February 23, 2024

Historic Unaffordability in Housing

Median Sales Price of Homes Sold & Monthly Supply of New Houses

—Median Home Sale Price (Left Axis)
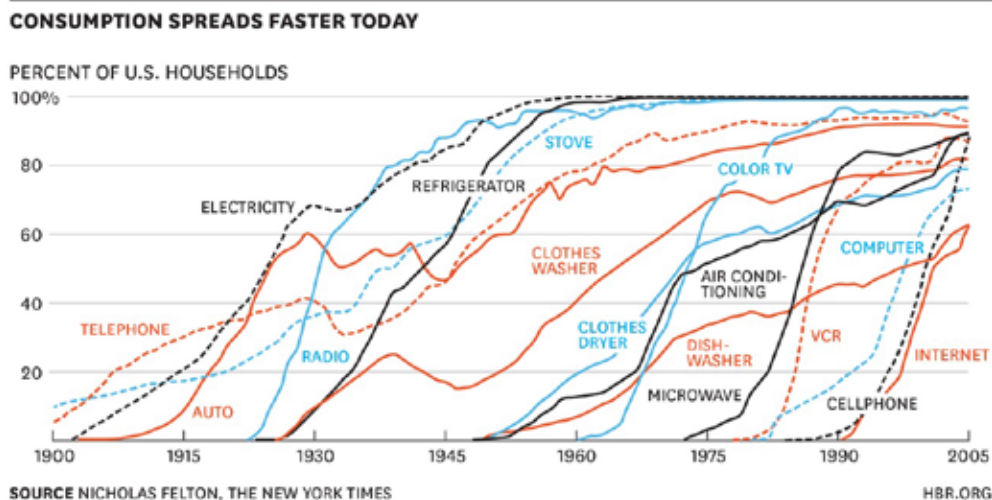—Months' Supply of New Houses (Right Axis)
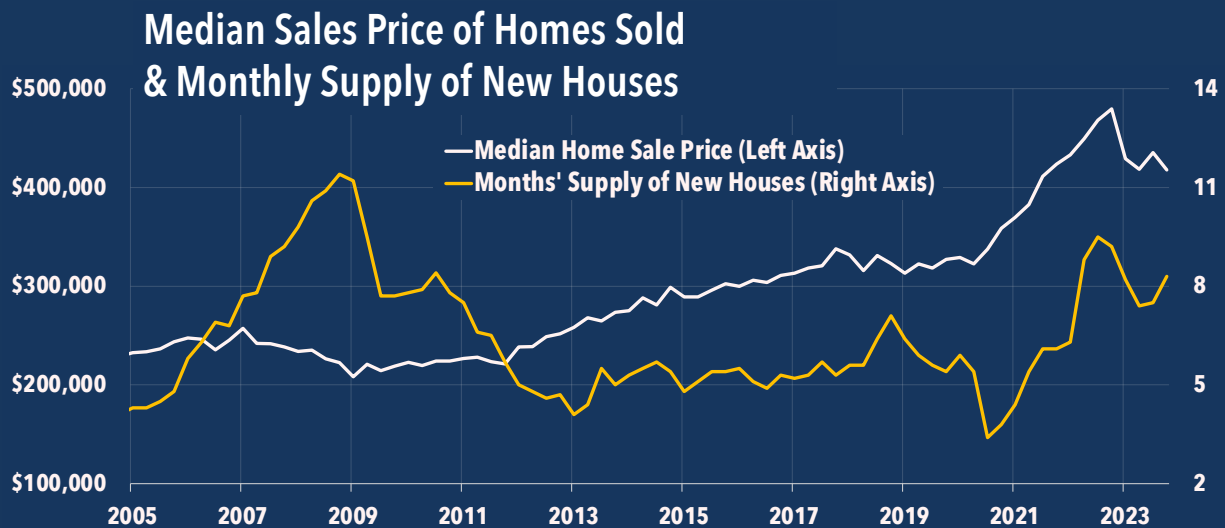
Source: Census Bureau; Through Q4 2023

Criteria for a World-Changing Innovation

- Will AI be a General Purpose Technology with the potential to reshape the economy, real estate, and the human condition
- Does it meet three conditions:
  - Broadly deployed across the economy
  - Steadily improving over time
  - Enhancing to labor productivity

Faster Adoption Than You Might Want

CONSUMPTION SPREADS FASTER TODAY

PERCENT OF U.S. HOUSEHOLDS

SOURCE NICHOLAS FELTON, THE NEW YORK TIMES   HBR.ORG

Faculty

Dr. Sam Chandan is the founding director of the C. H. Chen Institute for Global Real Estate Finance at the NYU Stern School of Business in New York, where he leads the Institute's industry and policy engagement activities, research initiatives, and MBA and undergraduate real estate programs, ranked #2 and #3 respectively among business schools by *US News and World Report*. The Chen Institute was established in September 2022 and is supported by the largest-ever gift for an institute or center at Stern. In addition to the NYU Center for Real Estate Finance, it houses the school's centers and initiatives in climate change, public health and the built environment; property technology; real estate data science and artificial intelligence; and real estate in emerging economies. Prior to joining the faculty of Stern's Finance Department in January 2022, Dr. Chandan was the Silverstein Chair and academic dean of the Schack Institute of Real Estate at the NYU School of Professional Studies, one of the world's largest centers of real estate continuing education. He is also founder and non-executive chairman of Chandan Economics, an economic advisory and data science firm serving the institutional real estate industry; independent advisor to TruAmerica, one of the nation's leading multifamily developers, owners and operators with over $16.0 billion in assets under management; and a contributor to *Forbes*. Among his diversity and inclusion initiatives, Dr. Chandan is global chair of the Real Estate Pride Council, an association of lesbian, gay, bisexual and transgender leaders in the professions of the built environment, and a member of the Real Estate Executive Council (REEC). In 2017, he founded the National Symposium of Women in Real Estate (WIRE), which has since grown into one of the industry's largest annual mentorship forums connecting senior executives and early-career women in real estate. A Fellow of the Royal Society of Medicine, Royal Society for Public Health (FRSPH), Royal Institution of Chartered Surveyors (FRICS) and Real Estate Research Institute (RERI), and a contributing member of the American Society for Microbiology (ASM), Dr. Chandan's multifaceted research interests address real estate capital markets, housing finance and affordability, innovation in financial technology and its application to real estate, urban epidemiology, and the preparedness of global cities and other systemically important urban areas in managing and mitigating novel public health threats. His commentary on commercial and residential real estate markets and the broader economy has been featured regularly in national and global press, including the *Wall Street Journal*, the *Financial Times*, CNBC and Bloomberg. Among his recent publications, he was the lead investigator for Regulatory Design and Real Outcomes, a study on the regulation of commercial real estate lending commissioned by the Commercial Real Estate Finance Council (CREFC). He holds an honorary appointment as the Economist Laureate of the Real Estate Lenders Association and has served on the real estate advisory council of the Federal Reserve Bank of Atlanta. Dr. Chandan received his B.Sc. in economics from The Wharton School of the University of Pennsylvania, his Master's degrees in epidemiology from Yale University and in economics and engineering from the University of Pennsylvania, and his Ph.D. in applied economics from the Wharton School. A Doctoral Scholar in the Economics Department at Princeton University, he previoulsy served on the faculties of the Wharton School and the Economics Department at Dartmouth College.