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US Housing Outlook: Affordability weighing on demand. Supply still low.

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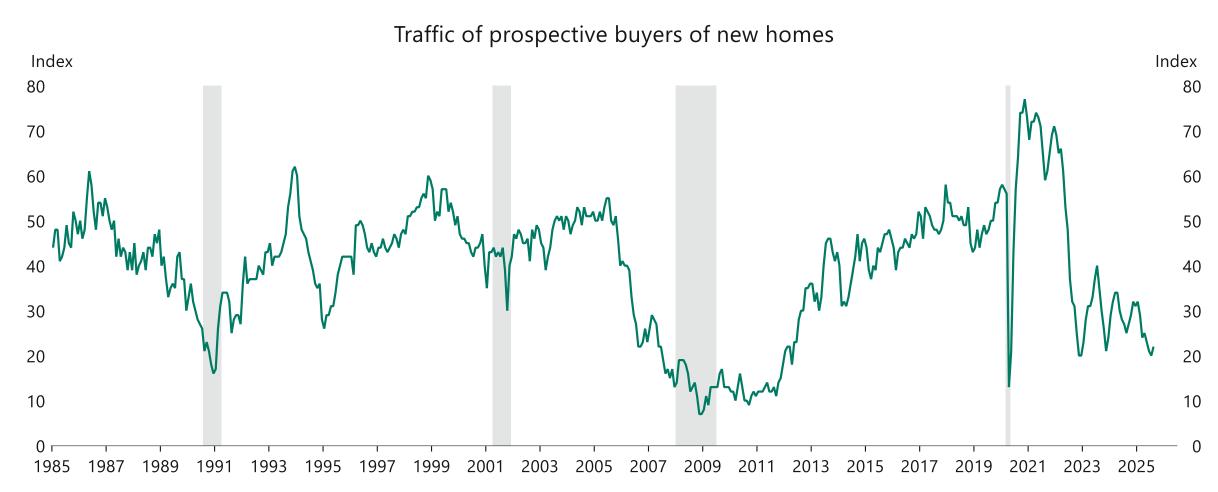
Outline

- 1) Housing demand
- 2) Housing supply
- 3) House prices
- 4) Housing outlook

Source: Apollo Chief Economist

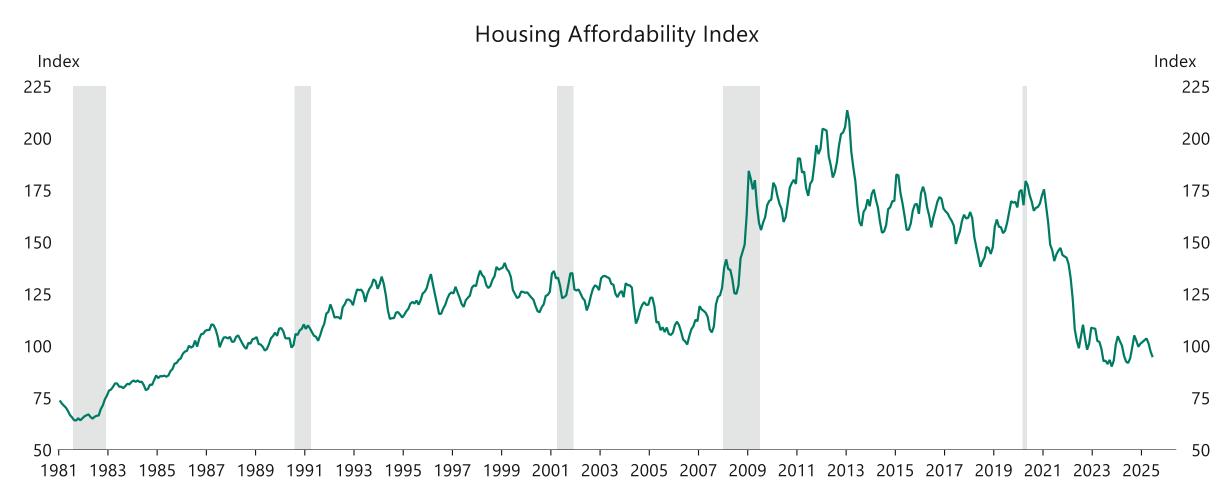
1) Housing demand

Traffic of prospective homebuyers



Source: National Association of Home Builders, Macrobond, Apollo Chief Economist

Housing affordability near record lows

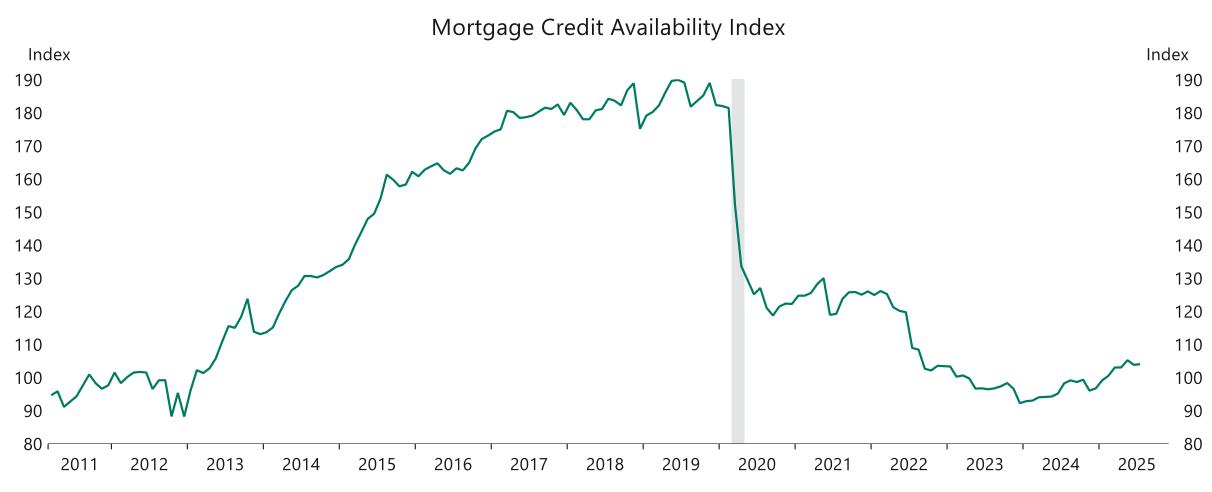


Source: National Association of Realtors (NAR), Macrobond, Apollo Chief Economist

Monthly mortgage payment on a new mortgage: \$2,813

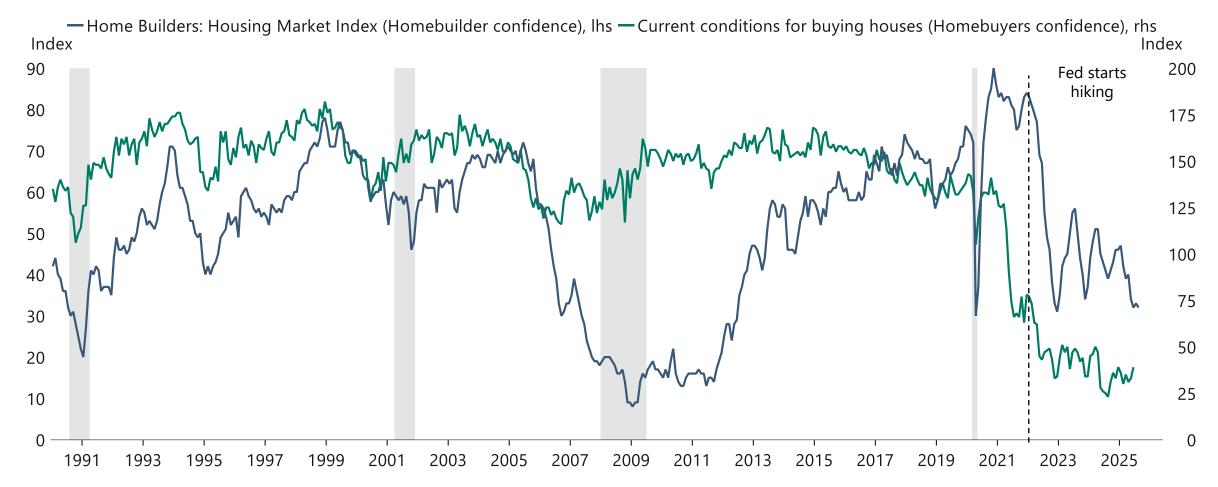


Availability of mortgage credit at tight levels



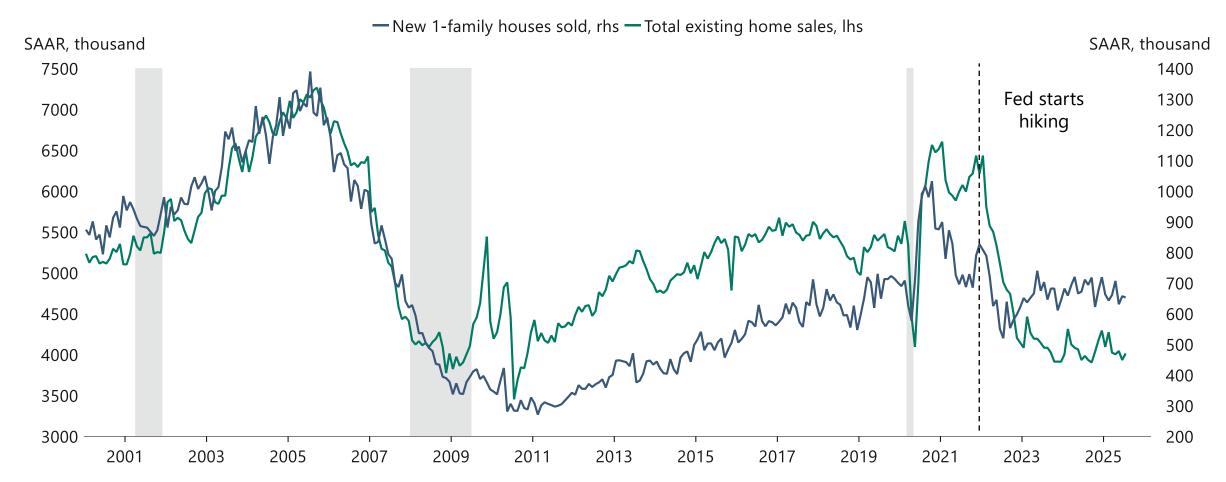
Source: MBA, Bloomberg, Macrobond, Apollo Chief Economist

Homebuyer and homebuilder confidence lower because of affordability



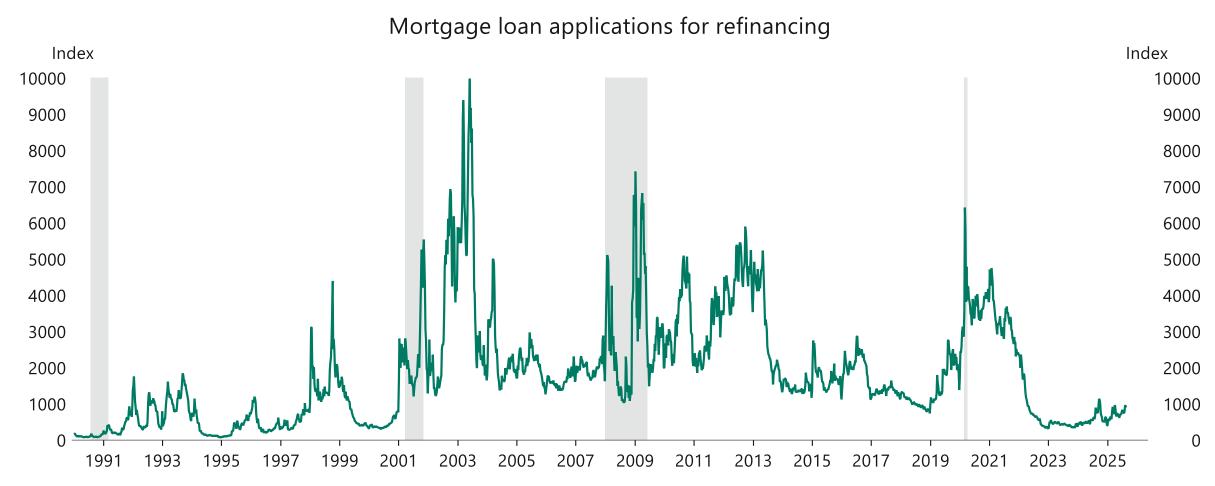
Source: University of Michigan, National Association of Home Builders, Macrobond, Apollo Chief Economist

New and existing home sales lower than normal because of affordability and low inventory



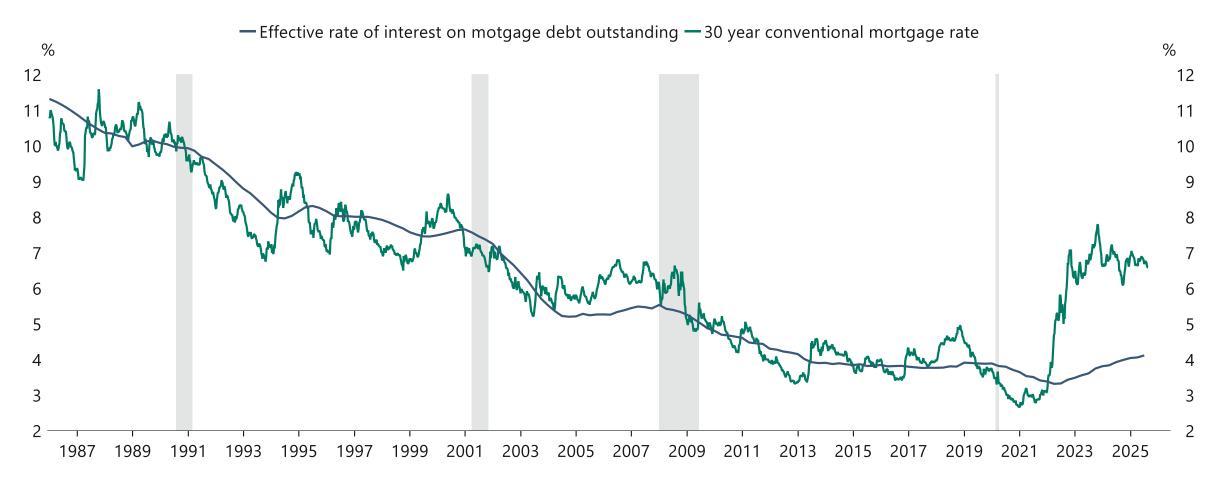
Source: National Association of Realtors (NAR), U.S. Census Bureau, Macrobond, Apollo Chief Economist

Number of homeowners who are refinancing their mortgage



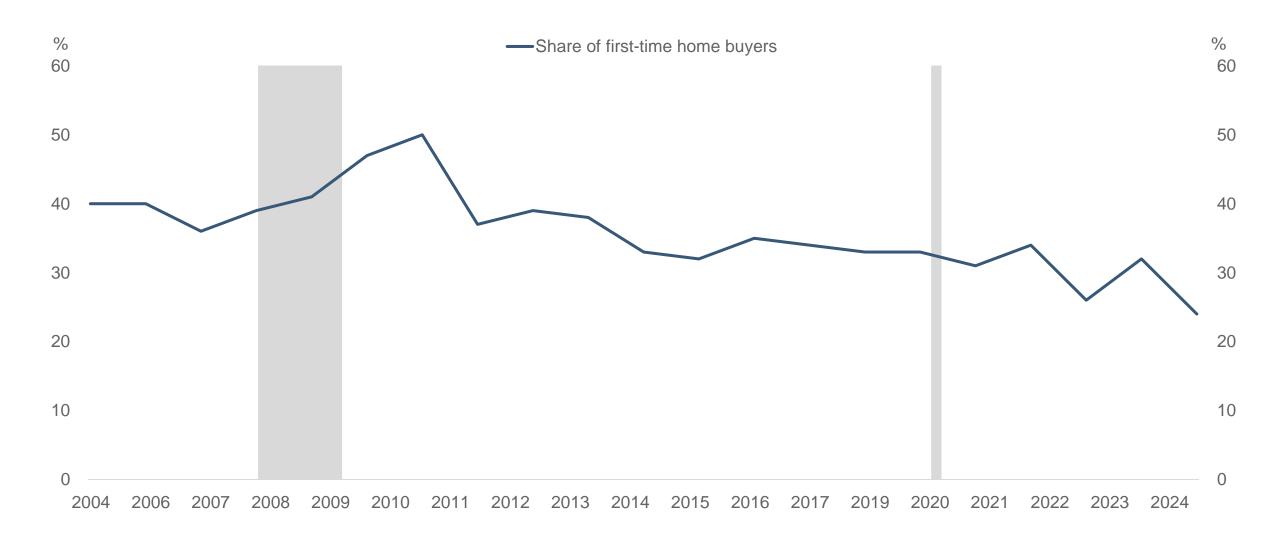
Source: Mortgage Bankers Association (MBA), Macrobond, Apollo Chief Economist

Mortgage rates are high, weighing on housing demand

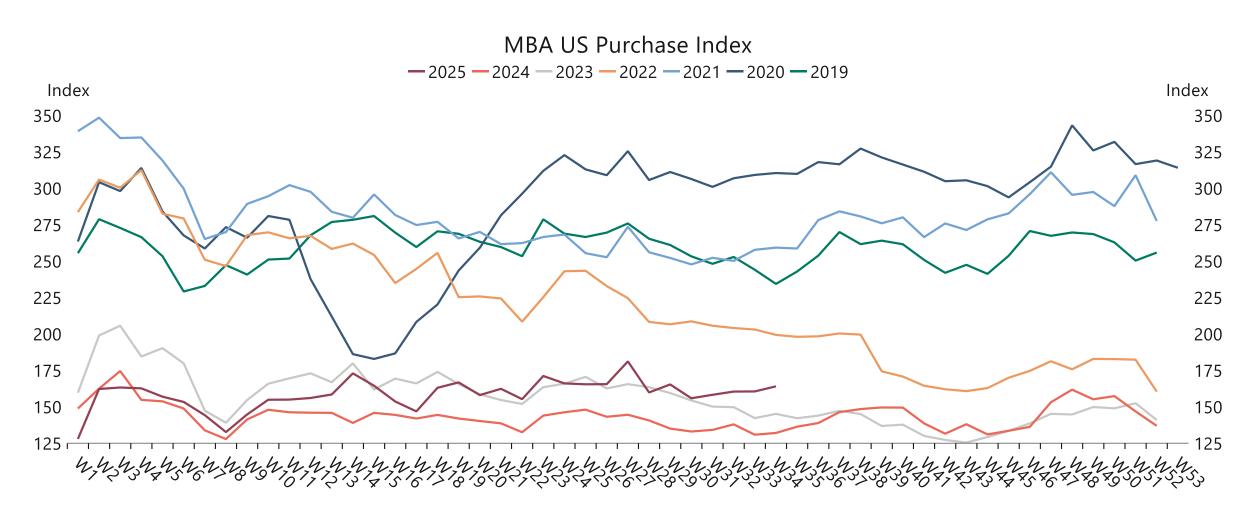


Source: Freddie Mac, U.S. Bureau of Economic Analysis (BEA), Macrobond, Apollo Chief Economist. Note: The effective interest rate (%) reflects the amortization of initial fees and charges over a 10-year period, which is the historical assumption of the average life of a mortgage loan.

Share of first-time home buyers is declining

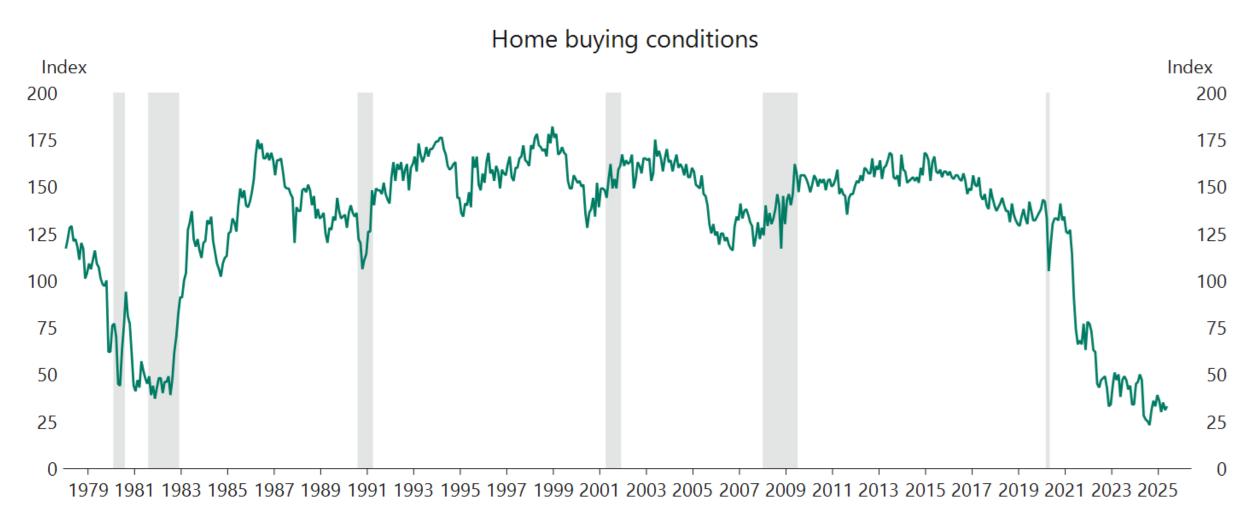


Mortgage purchase applications very low



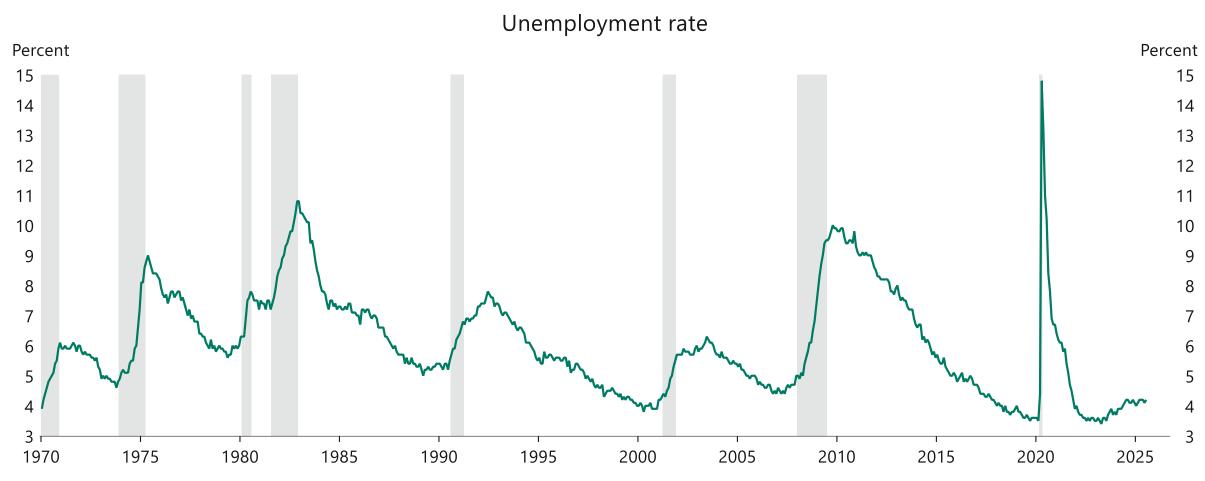
Source: Mortgage Bankers Association (MBA), Macrobond, Apollo Chief Economist

US home buying conditions deep in unfavorable territory



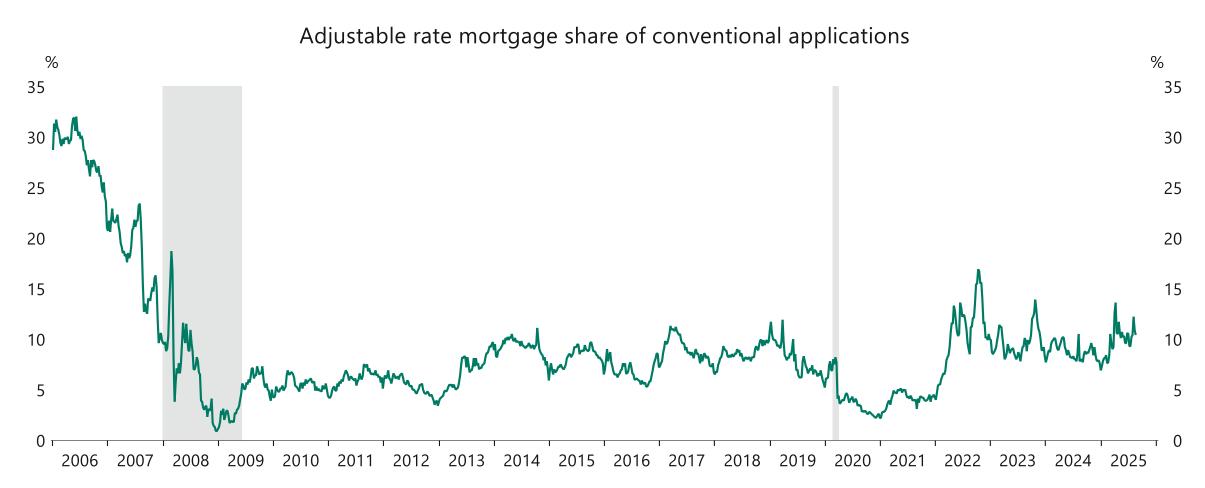
Source: University of Michigan, Macrobond, Apollo Chief Economist. Note: Home buying conditions = Share reporting good conditions - Share reporting bad conditions + 100.

The unemployment rate is low



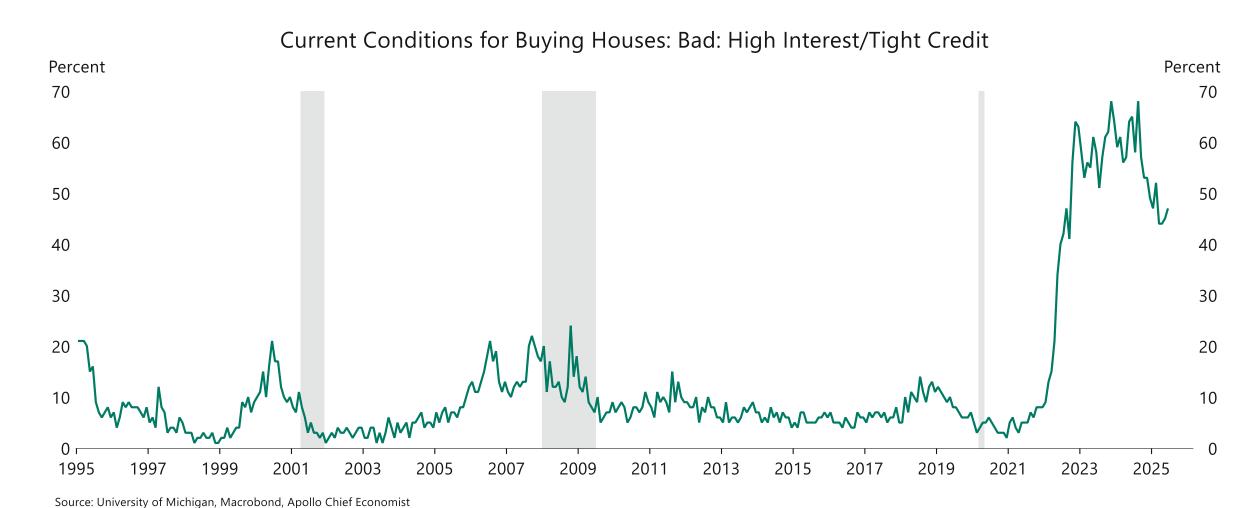
Source: U.S. Bureau of Labor Statistics (BLS), Macrobond, Apollo Chief Economist

ARM share of total mortgage applications: 11%

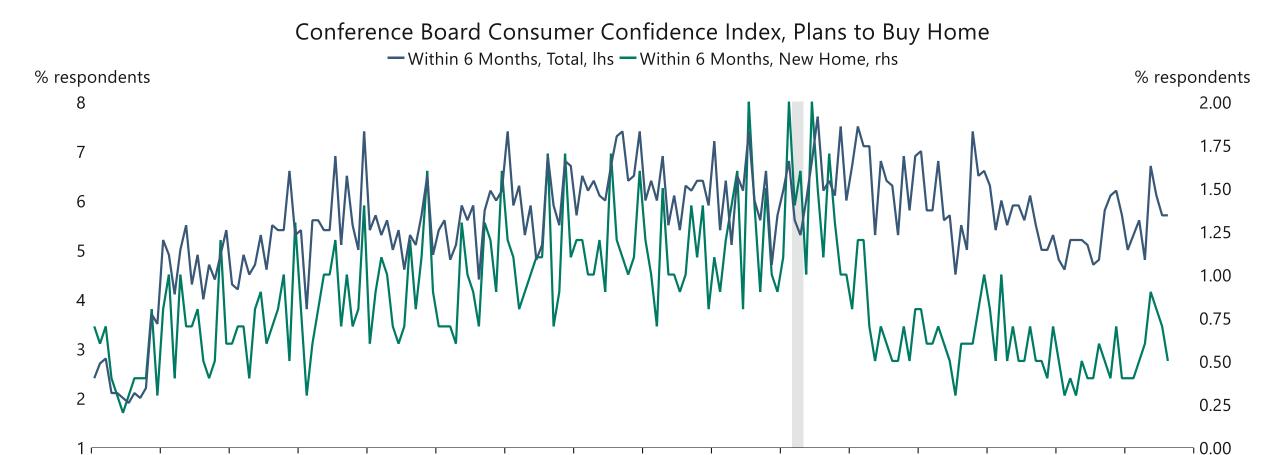


Source: Mortgage Bankers Association (MBA), Macrobond, Apollo Chief Economist

47% of consumers are saying that this is a bad time to buy a house because of high mortgage rates and tight credit



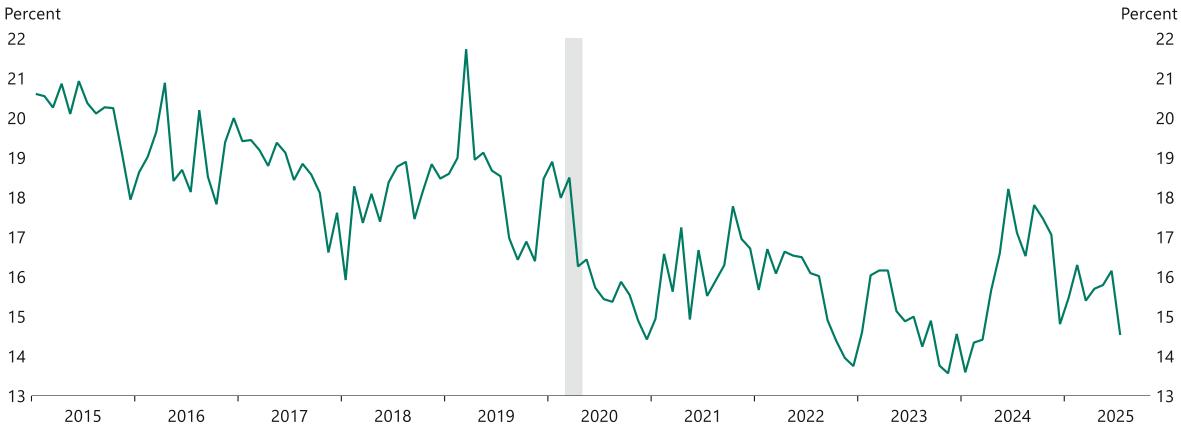
Home buying plans softening



Source: Conference Board, Macrobond, Apollo Chief Economist

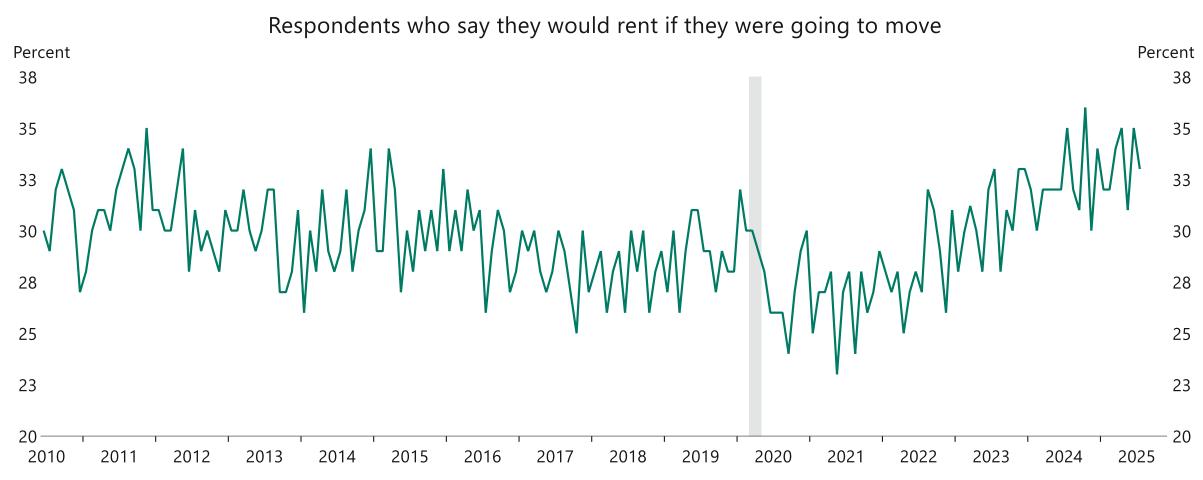
Share of households planning to move over the next 12 months has declined

Survey of consumer expectations, Mean probability of changing primary residence in the next 12 months



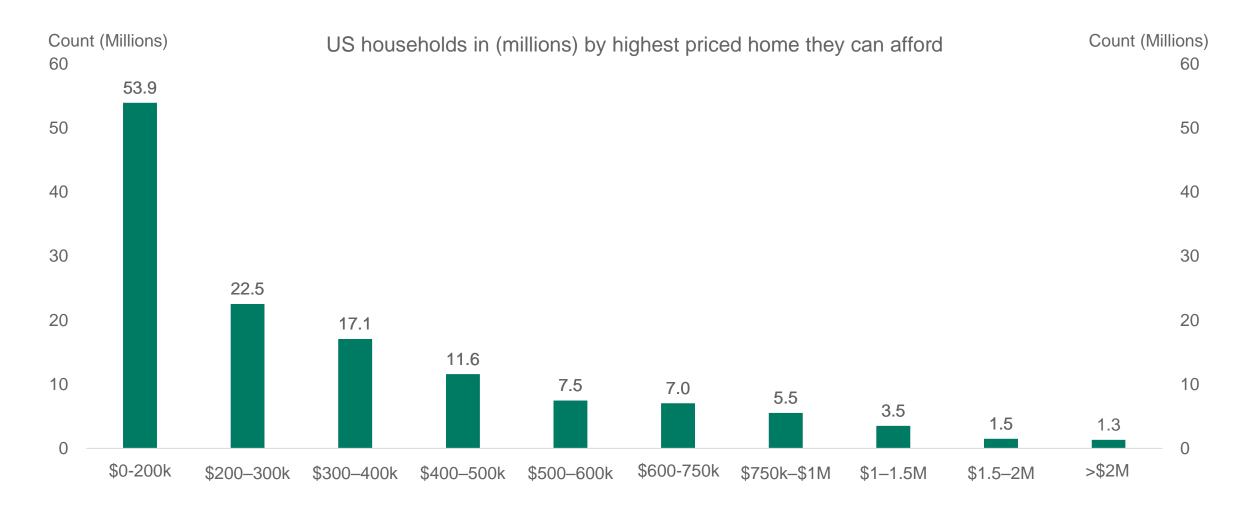
Source: Federal Reserve Bank of New York, Macrobond, Apollo Chief Economist

33% of Americans say they would rent if they were going to move

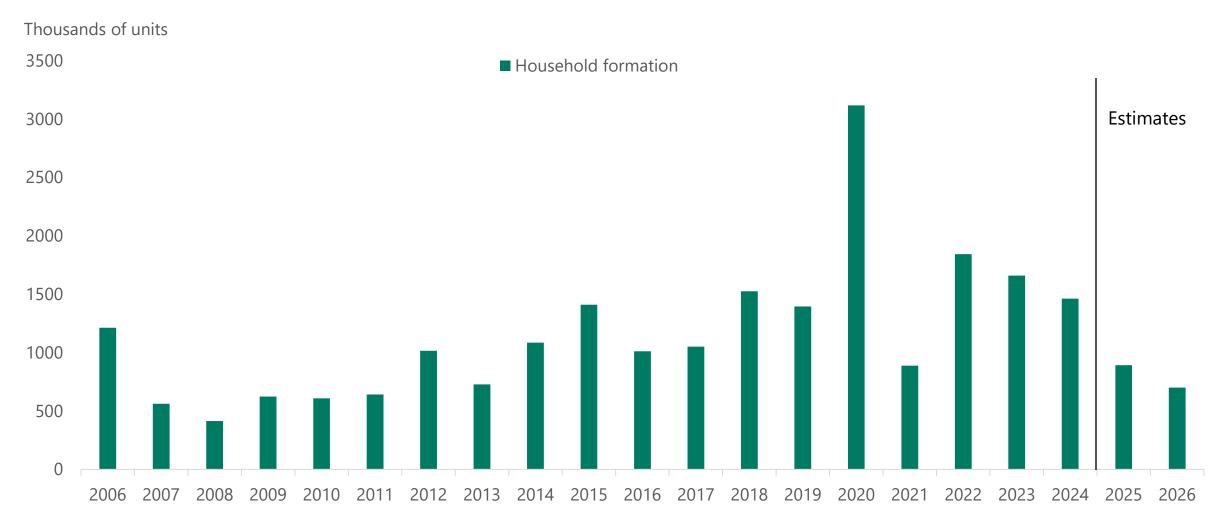


Source: Federal National Mortgage Association (Fannie Mae), Macrobond, Apollo Chief Economist

Most of US households can only afford homes below \$300k

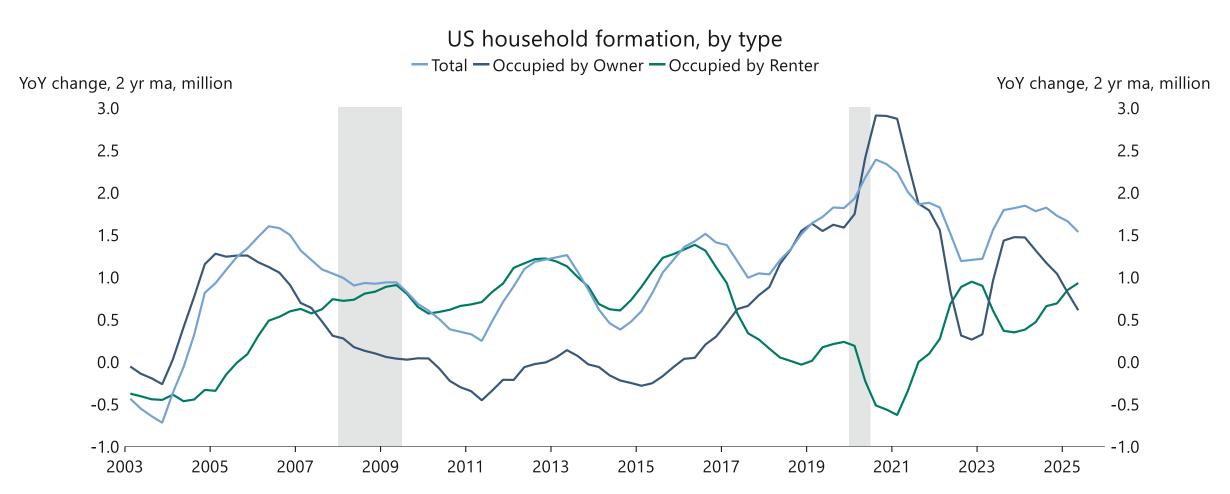


Household formation slowing down



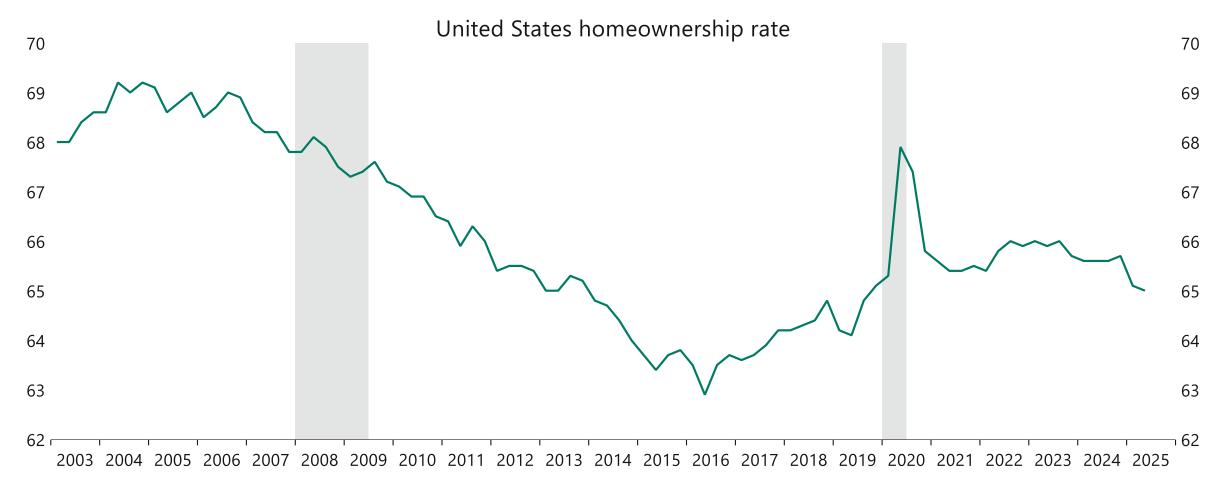
Source: Census Bureau, Haver, Apollo Chief Economist. Note: Household formation estimates for 2025 and 2026 are based on projected natural population growth and legal immigration. We assume unauthorized immigration drops to zero under potential Trump policy scenario. To reflect this, we use natural population growth plus 65% total net migration—based on CBO estimates and Migration Policy Institute's estimates of 0.9 million rise in unauthorized immigrants in 2023 — divided by the average U.S. household size.

US household formations by type



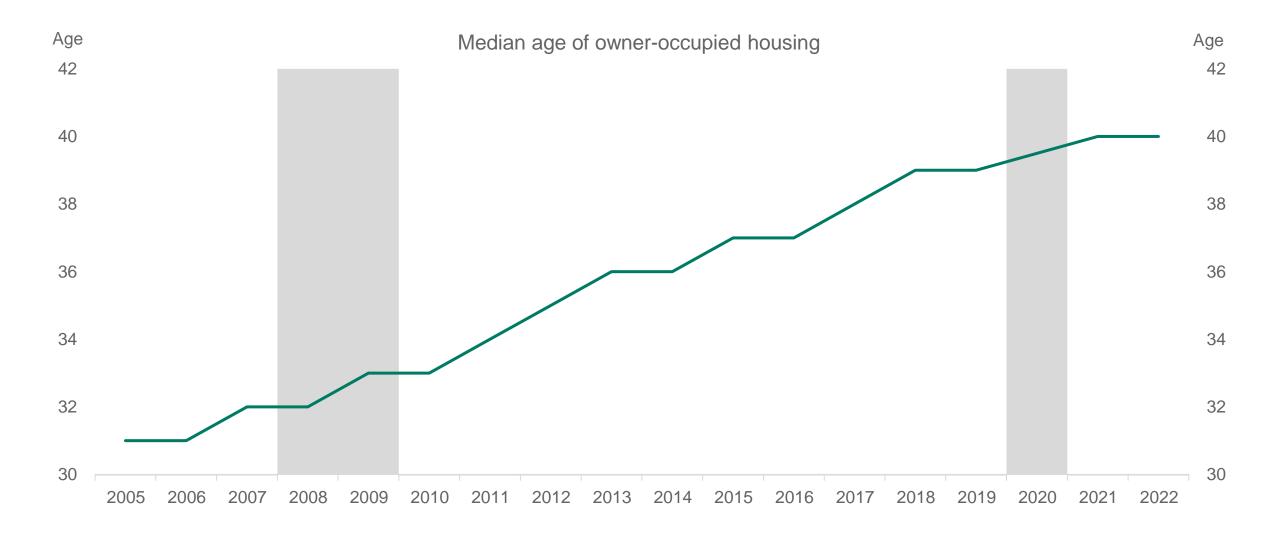
Source: U.S. Census Bureau, Macrobond, Apollo Chief Economist

Homeownership rate

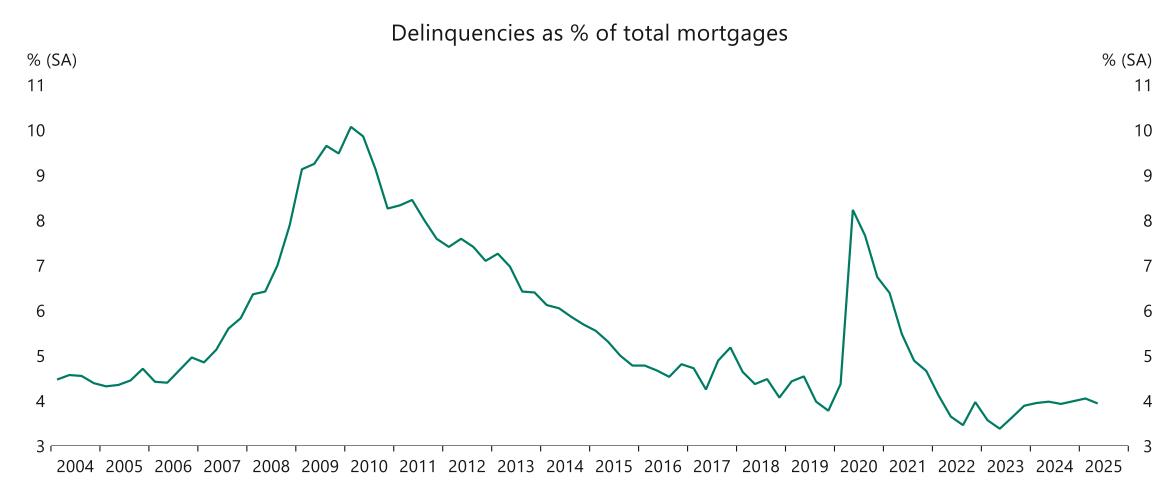


Source: Census Bureau, Bloomberg, Macrobond, Apollo Chief Economist

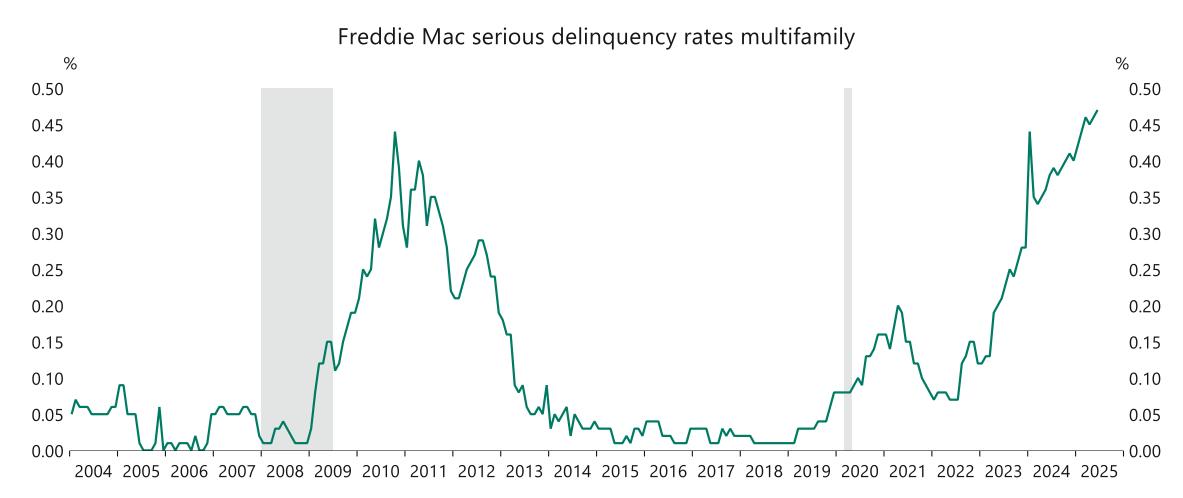
Median age of owner-occupied housing: 40 years old



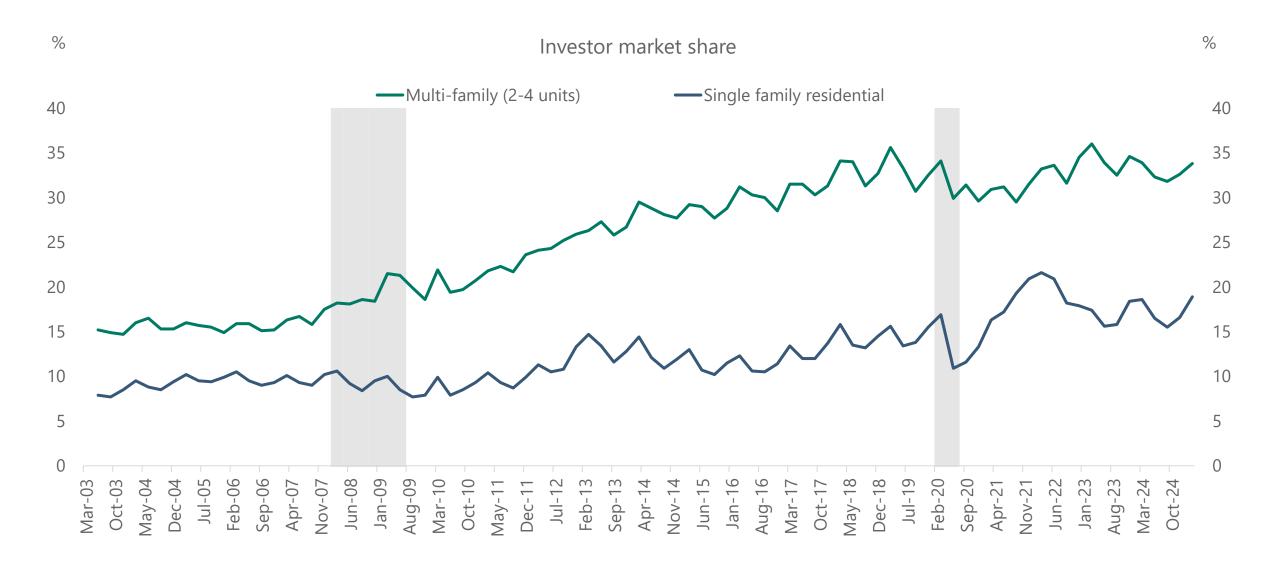
Delinquency rate for mortgages very low



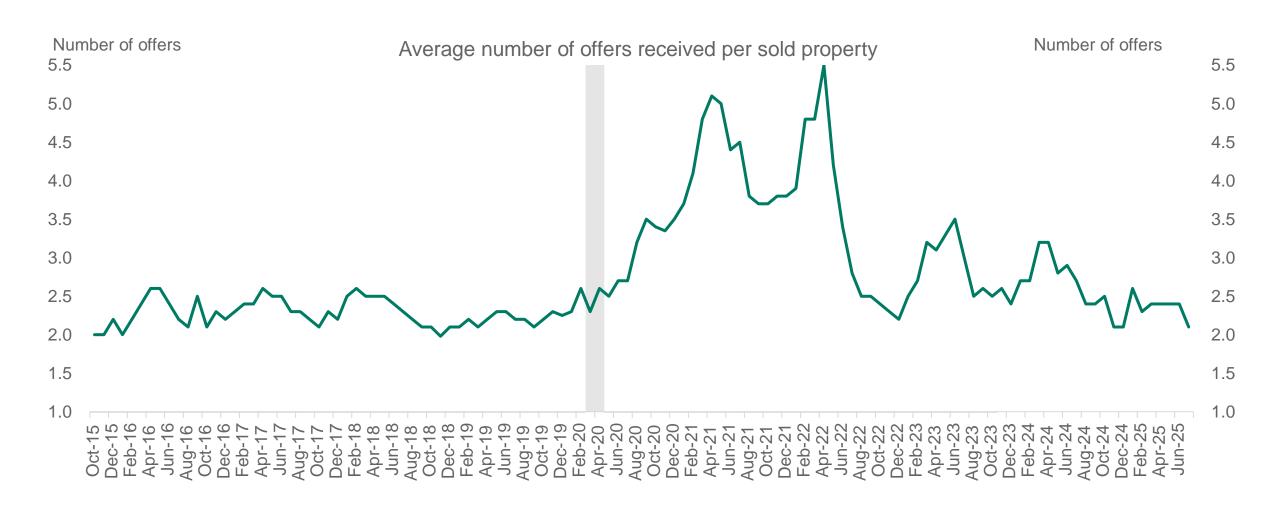
Delinquency rate of multifamily housing on rise



Investor share of single-family is stable

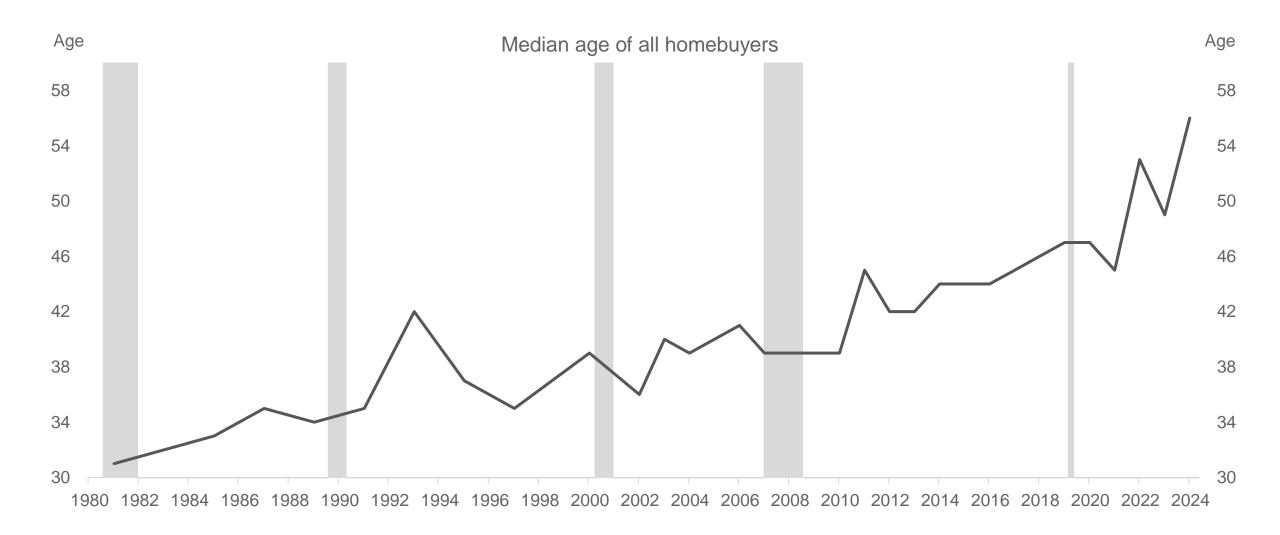


Average number of offers received per sold property

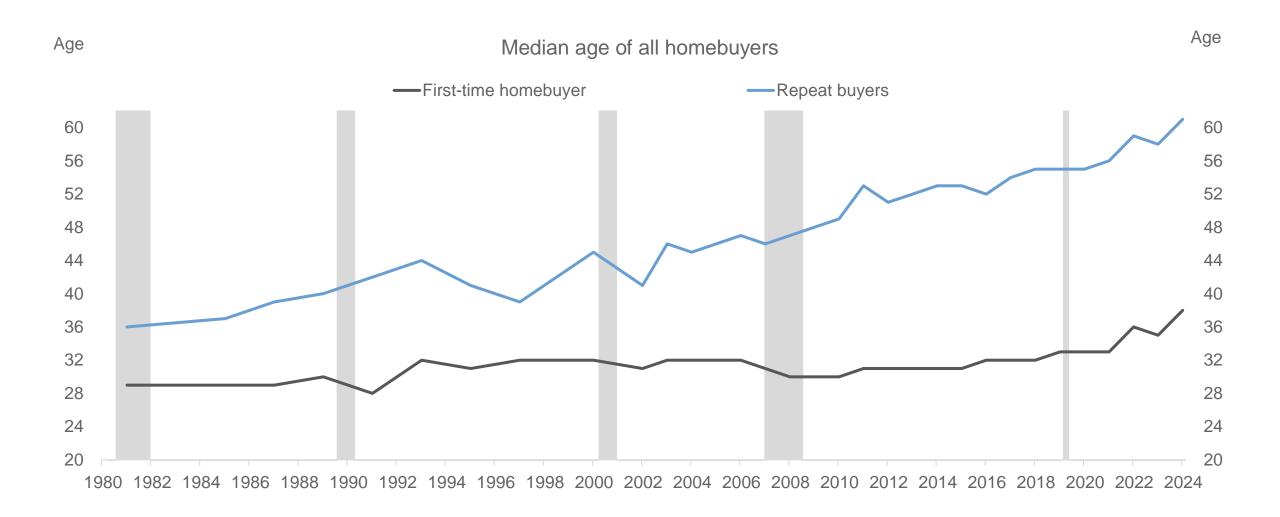


Source: NAR, Apollo Chief Economist

The median age of all homebuyers is now 56 years old, up from 31 in 1981

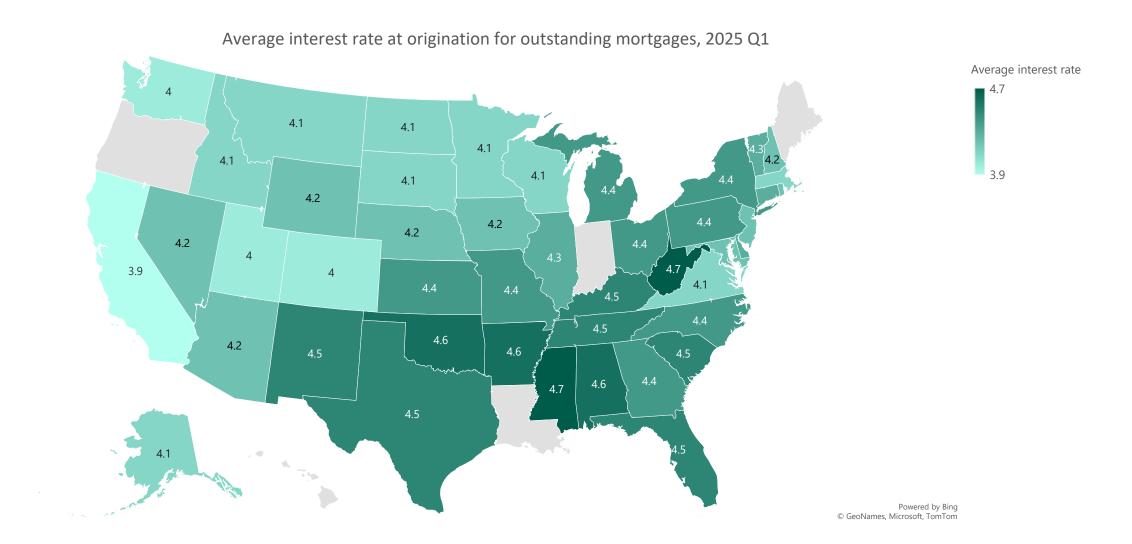


The median age of first-time homebuyers has increased from 30 in 2008 to 38 today



Source: NAR, Apollo Chief Economist

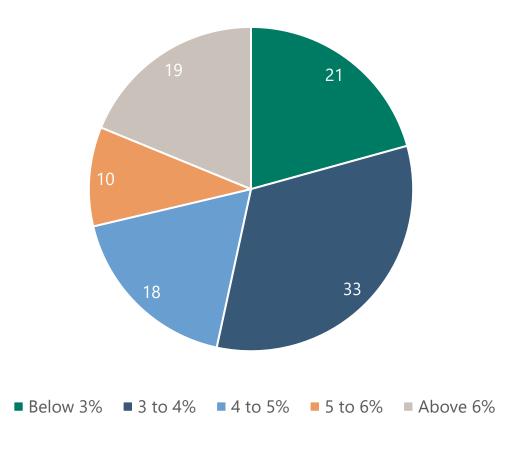
Average interest rate at origination



Source: FHFA, Apollo Chief Economist

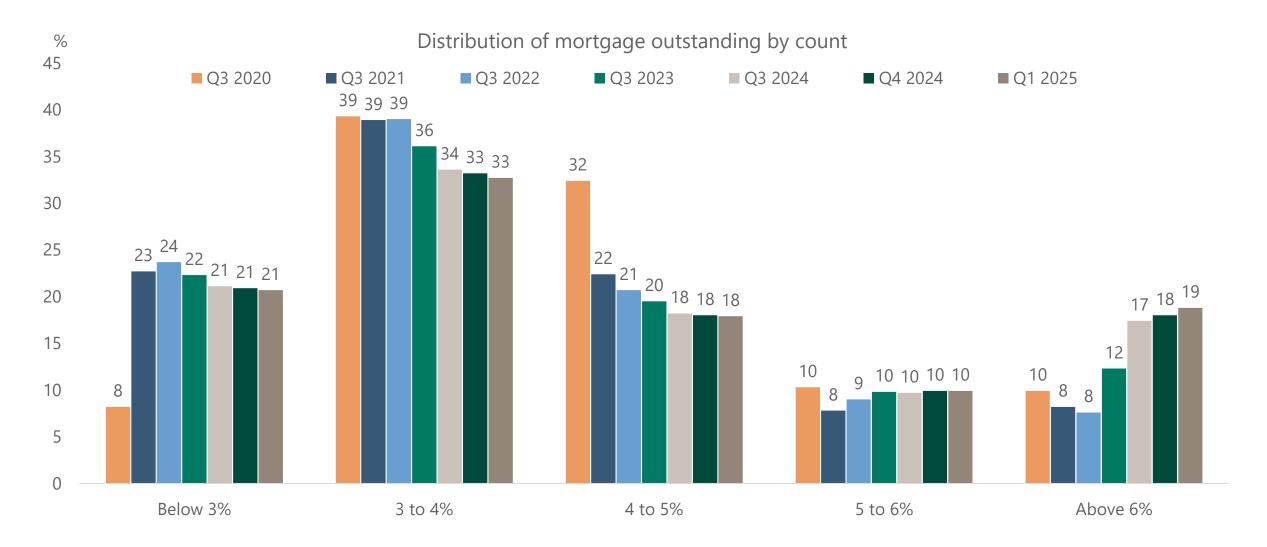
Share of mortgages outstanding by interest rate

Share of mortgages outstanding by interest rate at origination by count, Q1 2025



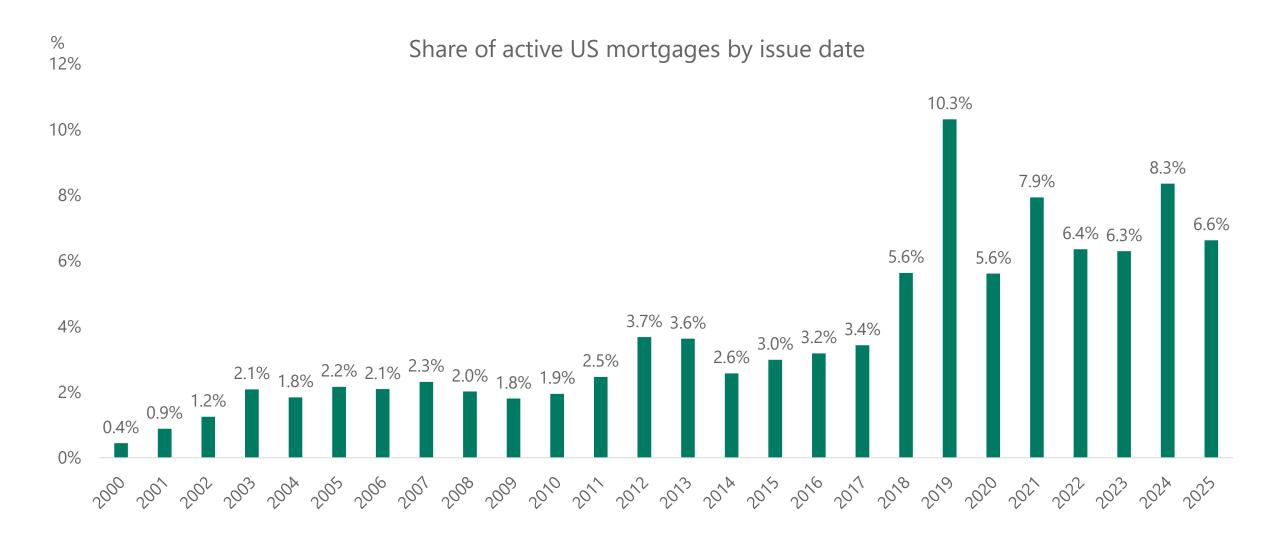
Source: FHFA, Apollo Chief Economist

Distribution of interest rates on outstanding mortgages

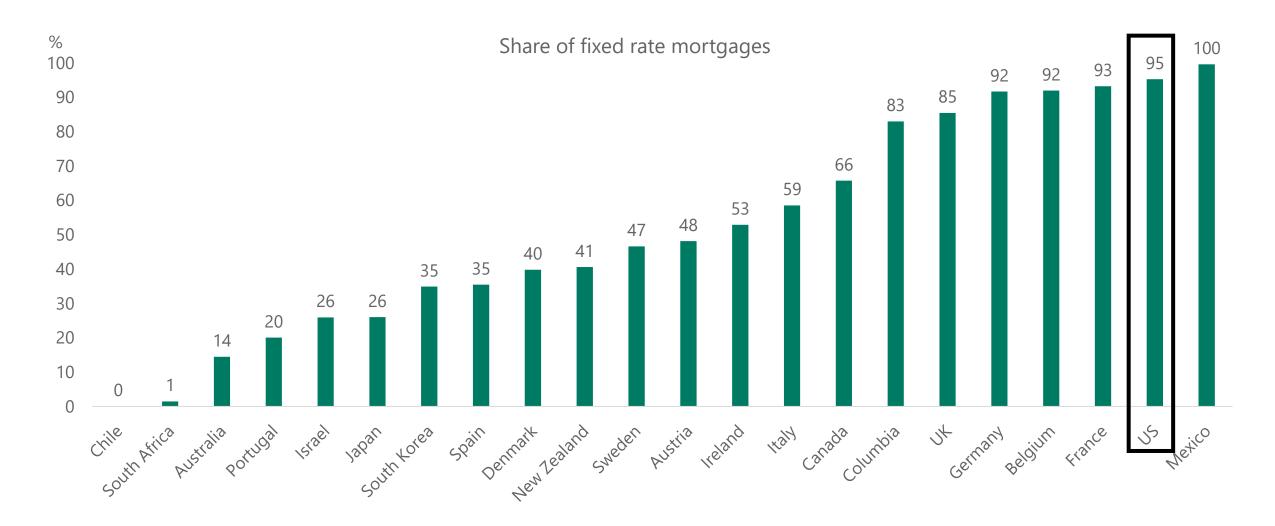


Source: FHFA, Apollo Chief Economist

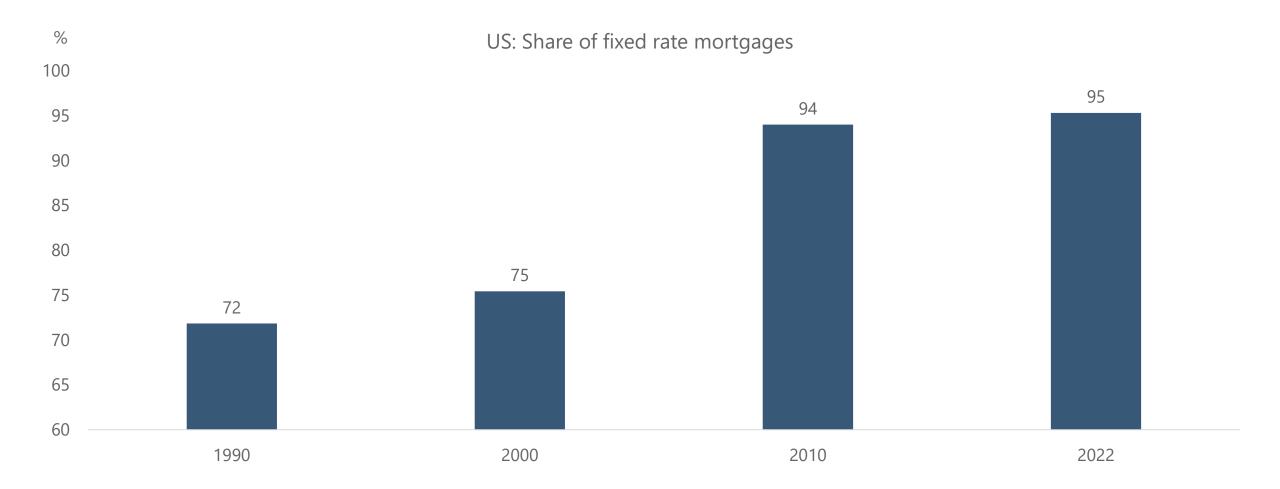
More than 50% of all mortgages outstanding issued since 2018



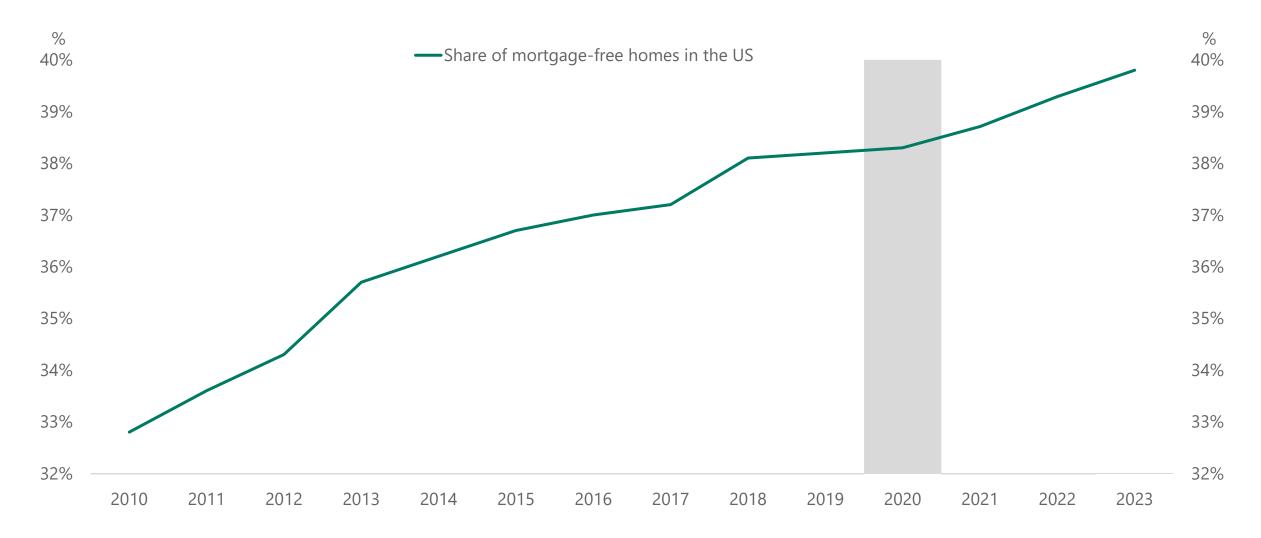
95% of mortgages outstanding are 30-year fixed rate



Share of fixed rate mortgages

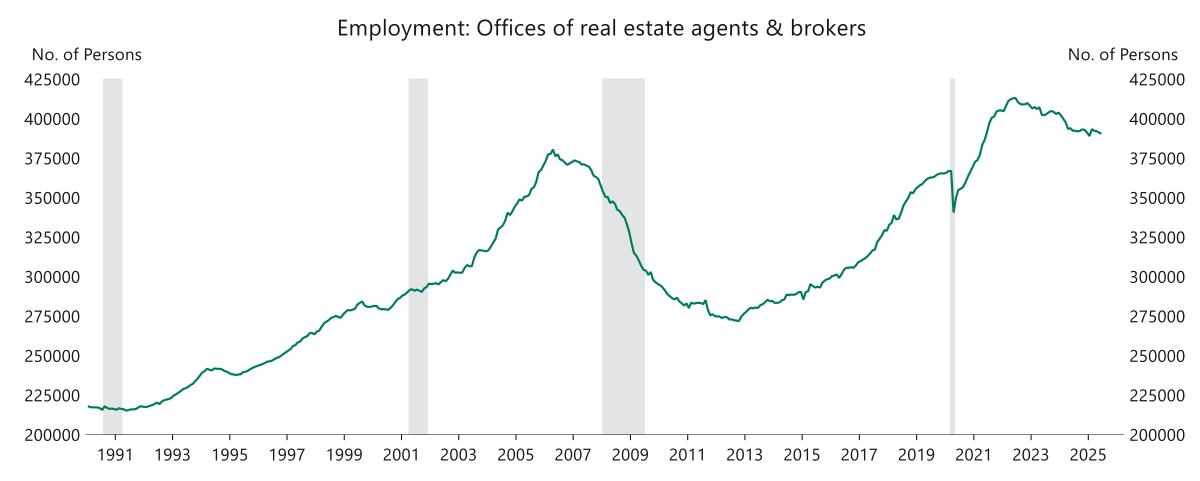


40% of US homes don't have a mortgage



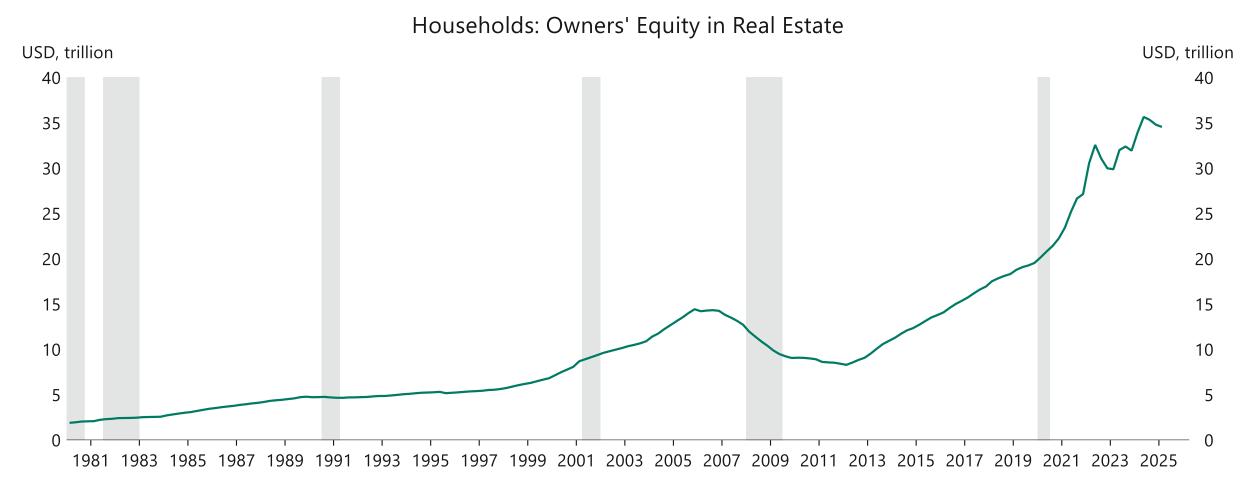
Source: US Census Bureau, Bloomberg, Apollo Chief Economist

Number of real estate agents & brokers



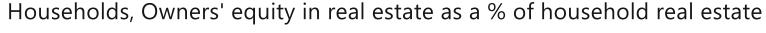
Source: U.S. Bureau of Labor Statistics (BLS), Macrobond, Apollo Chief Economist

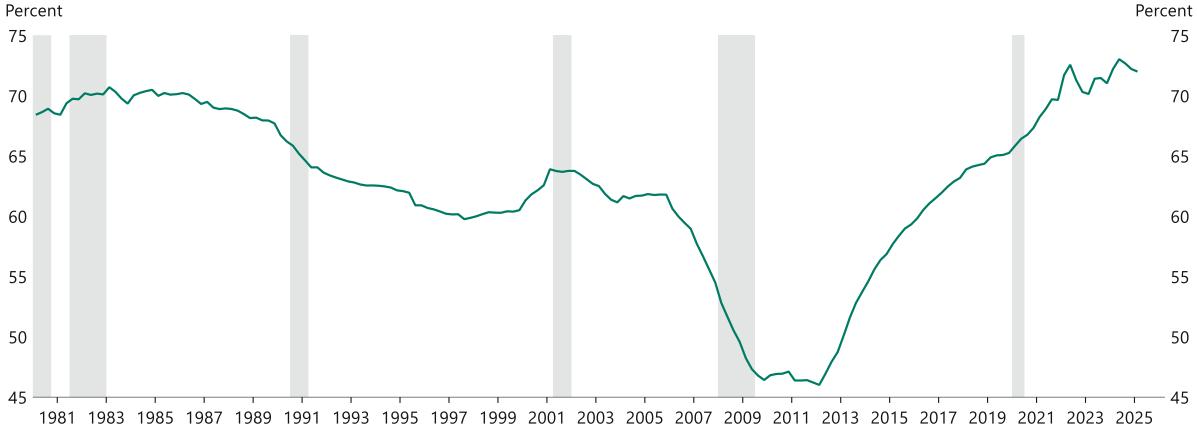
Households' equity in real estate is around \$35trn



Source: Federal Reserve, Macrobond, Apollo Chief Economist

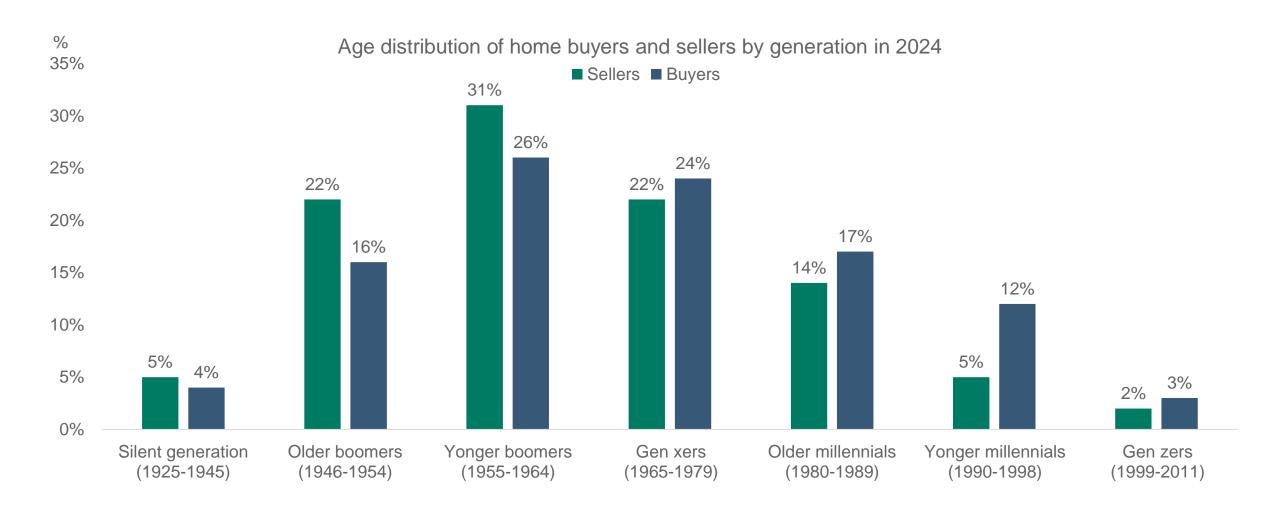
Households' equity share in real estate near all-time high level of 73%



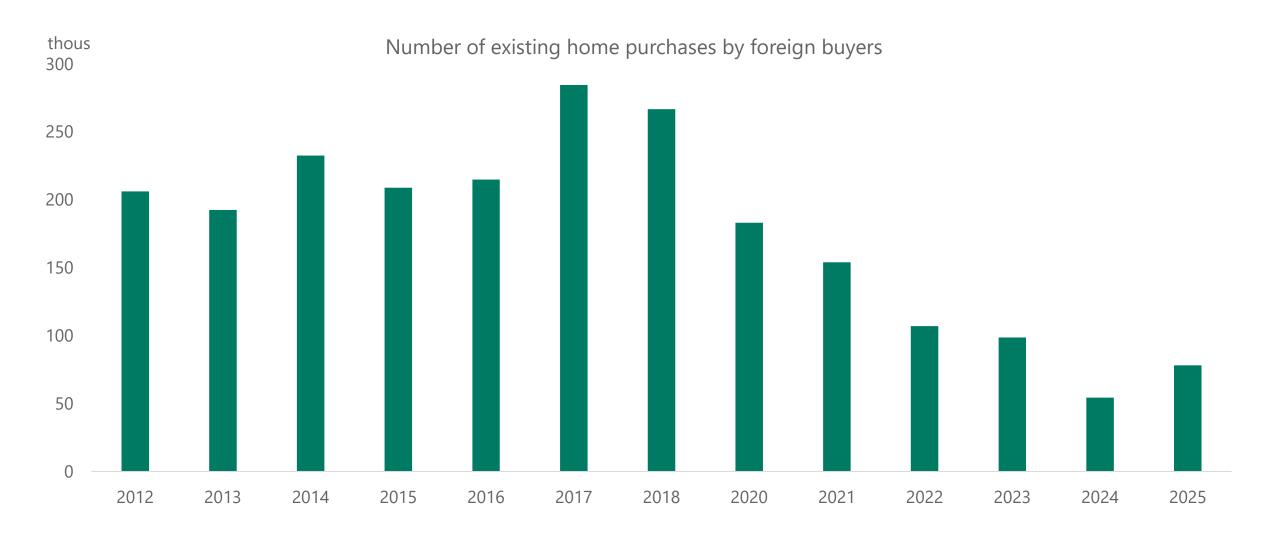


Source: Federal Reserve, Macrobond, Apollo Chief Economist

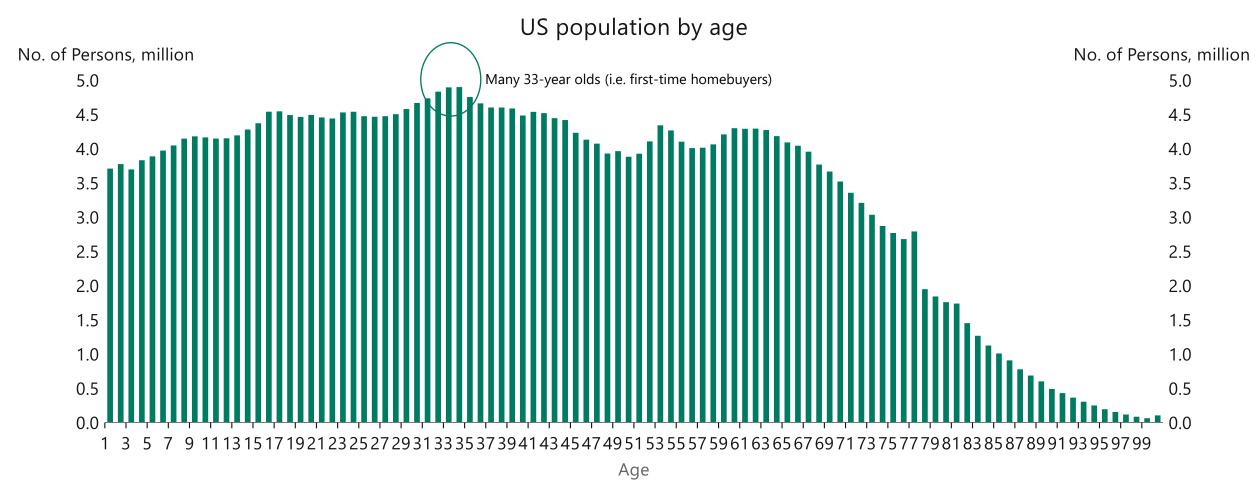
More home buyers in the 70+ age group



International homebuyers



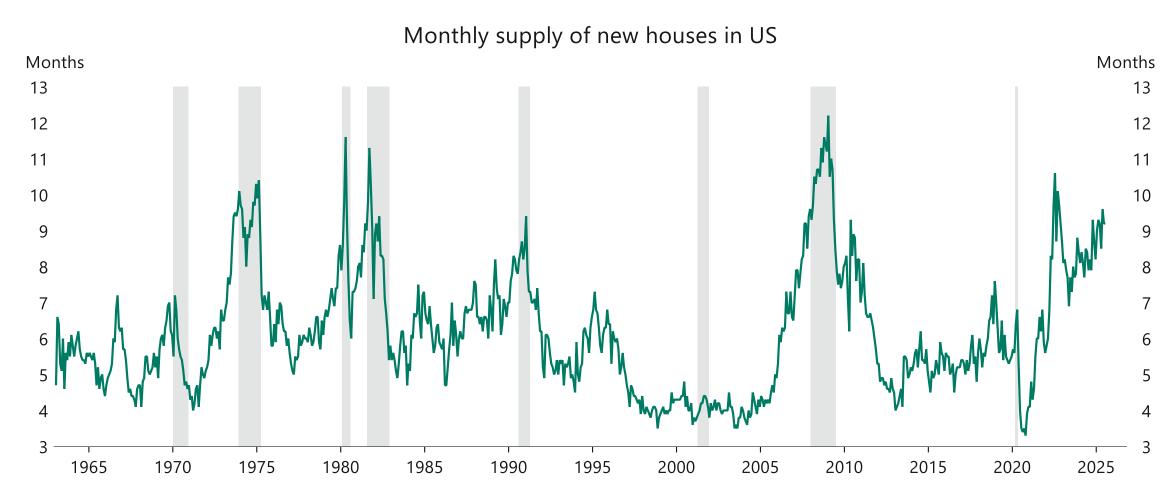
Demographics are a tailwind to housing demand



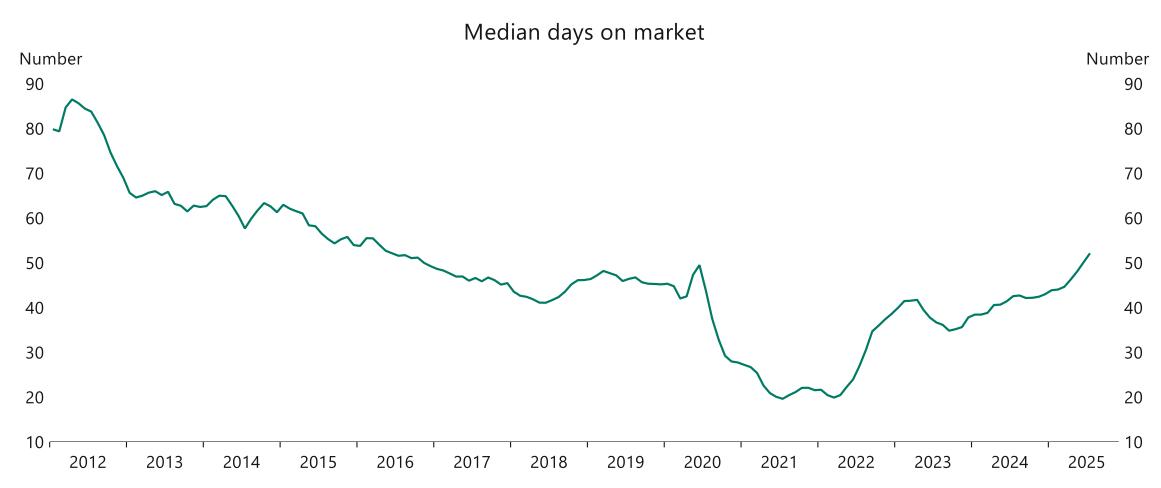
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2) Housing Supply

New homes supply indicates slower market turnover

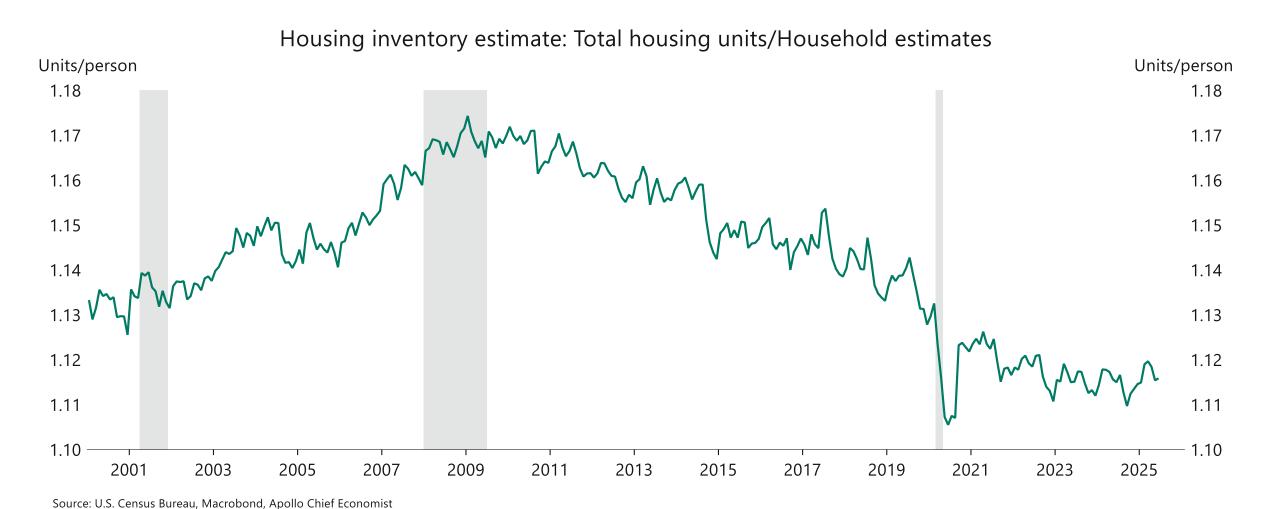


Median days on the market

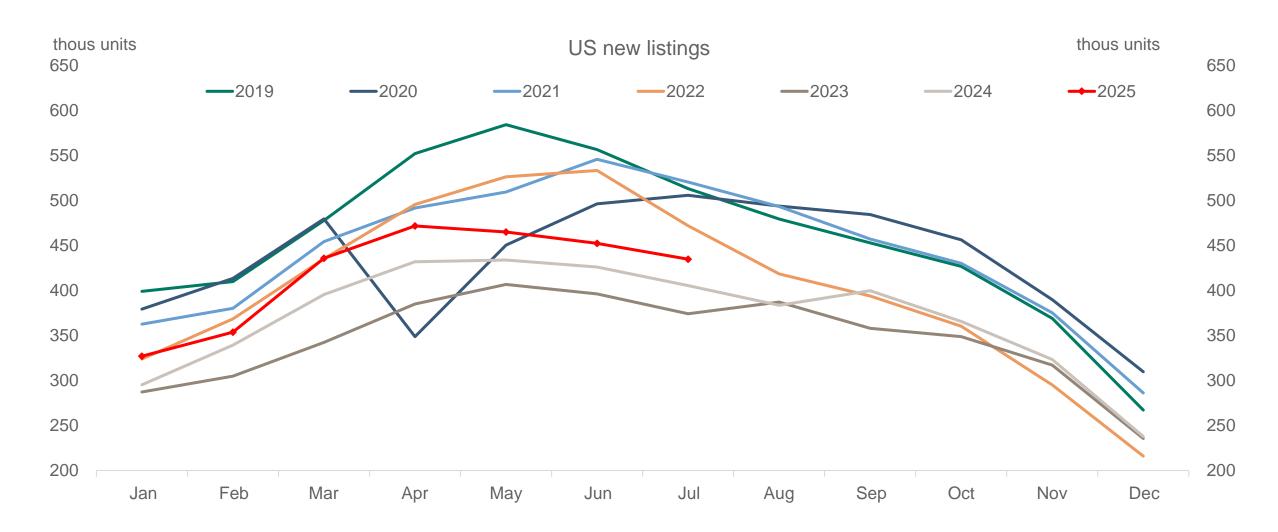


Source: Redfin, Macrobond, Apollo Chief Economist

Total housing inventory per person is very low



The number of newly listed homes is lower than normal

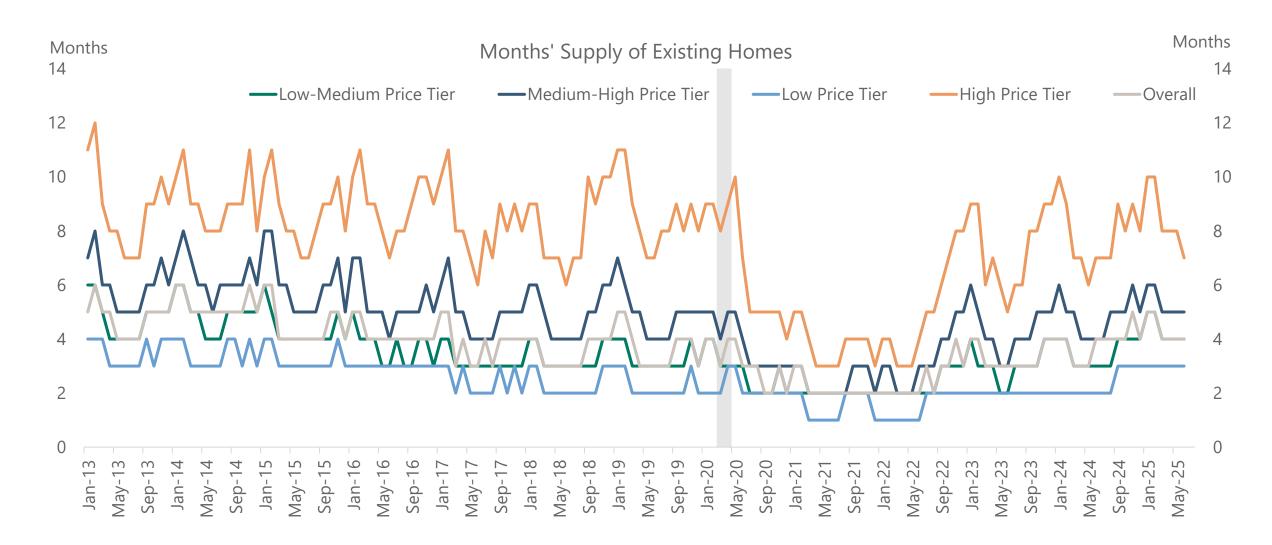


Source: Realtor.com. Apollo Chief Economist

Housing supply is low: Residential new listings remain low

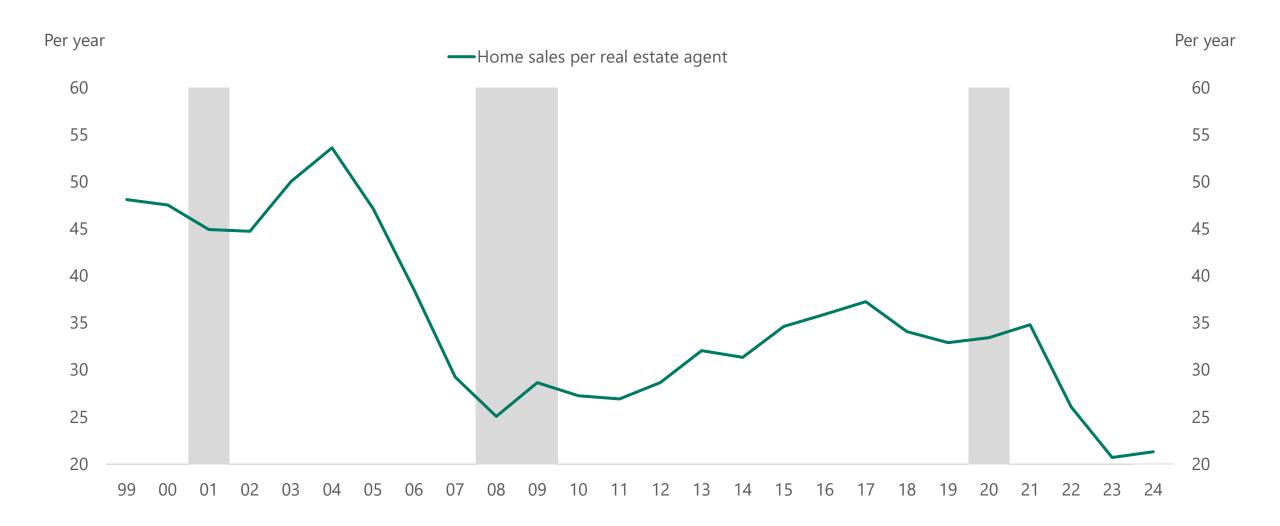


Inventory of existing homes for sale remains low across the price spectrum



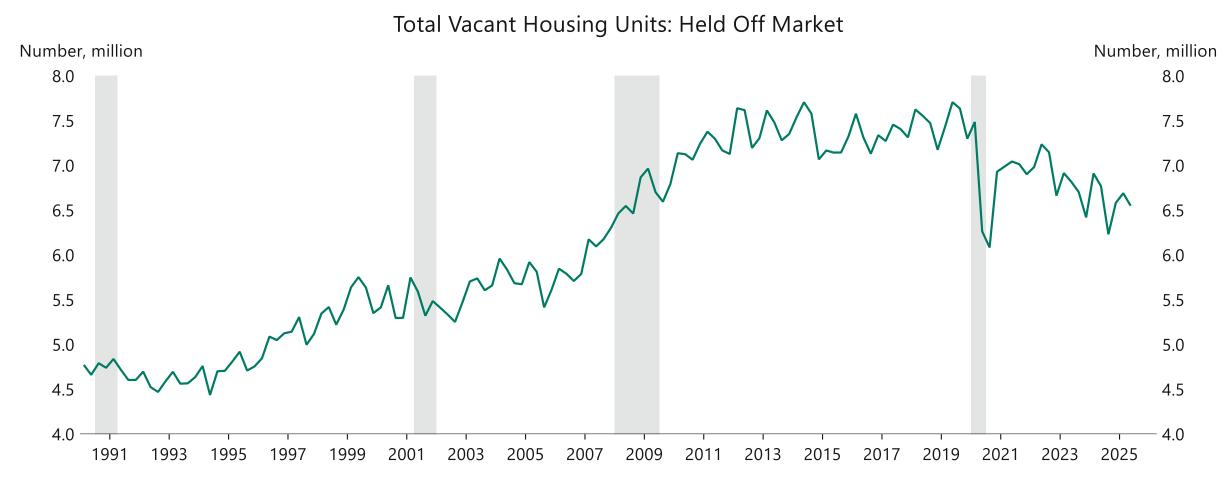
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With lower inventory, real estate sales agents selling fewer homes

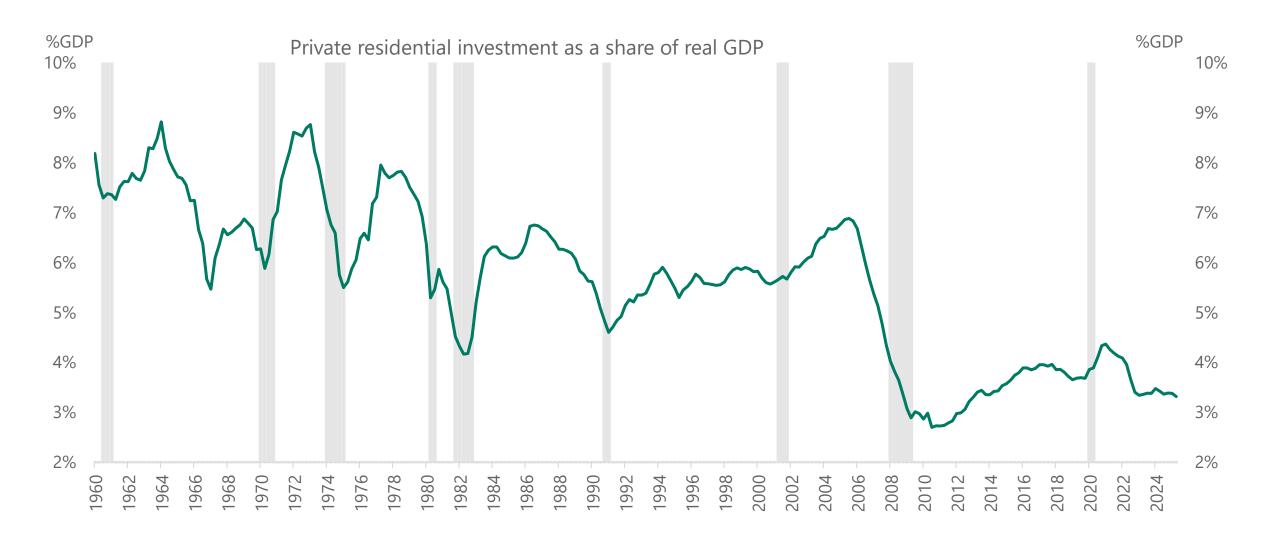


Source: NAR, BLS, Haver Analytics Apollo Chief Economist

The number of vacant housing units held off market

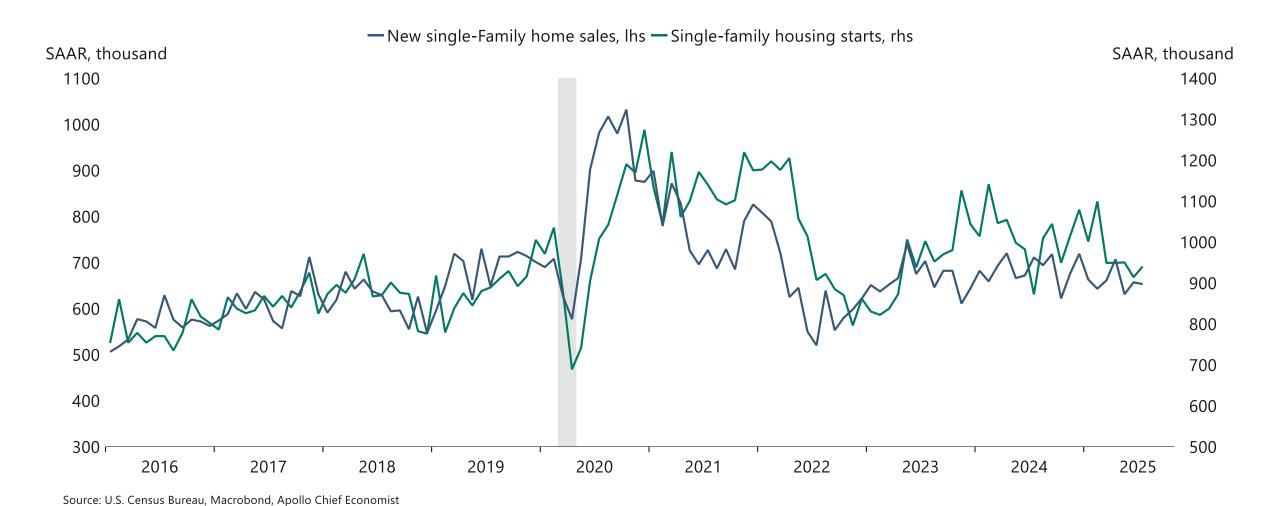


Residential investment as a share of real GDP is close to all-time lows at 3.5%

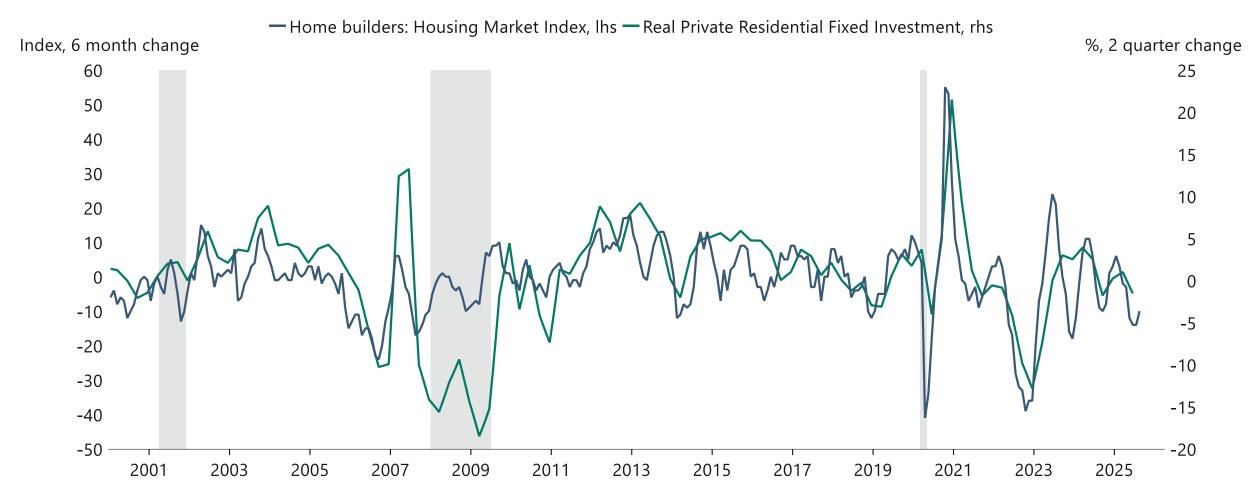


Source: BEA, Haver Analytics, Apollo Chief Economist

US home construction slows

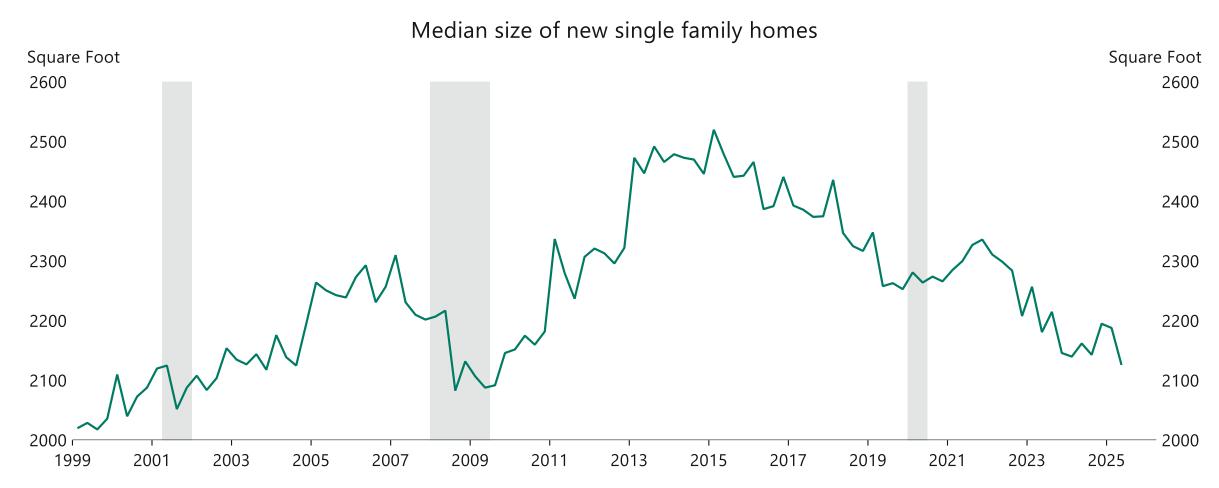


Homebuilder confidence correlated with residential investment

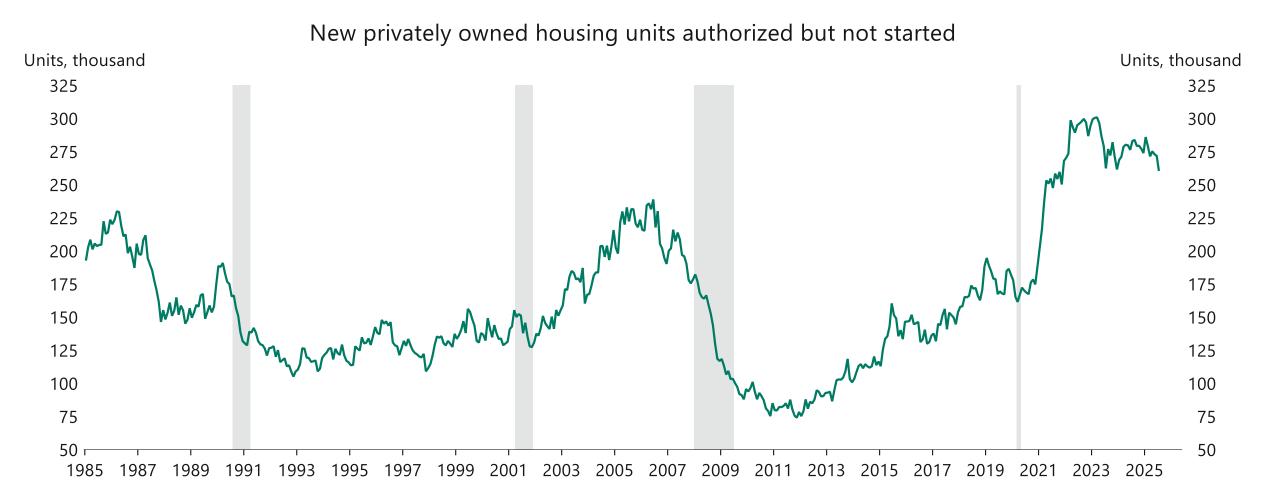


Source: U.S. Bureau of Economic Analysis (BEA), National Association of Home Builders, Macrobond, Apollo Chief Economist

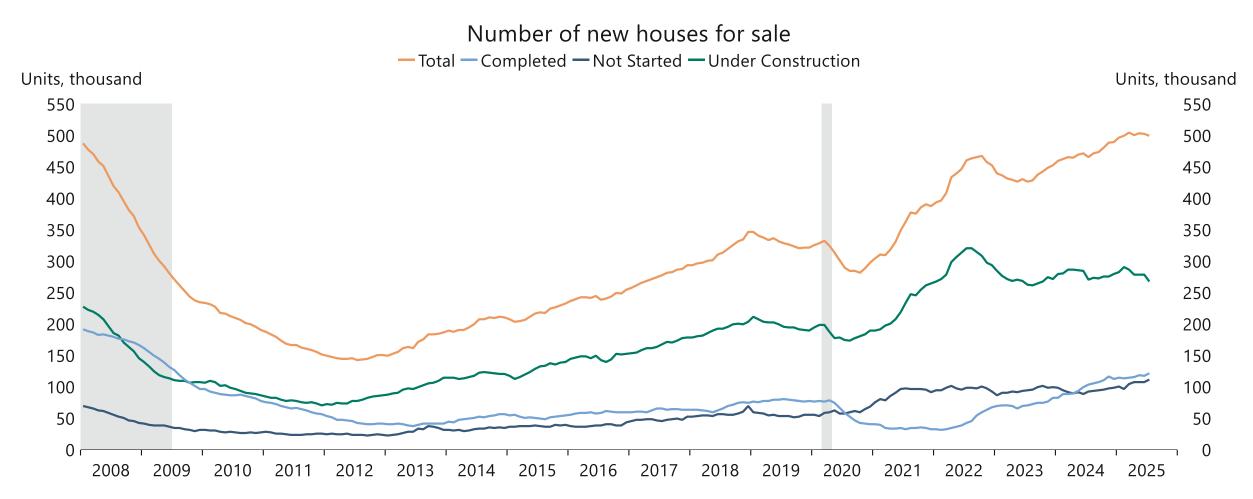
US homes are getting smaller: Median size of new single-family homes declining



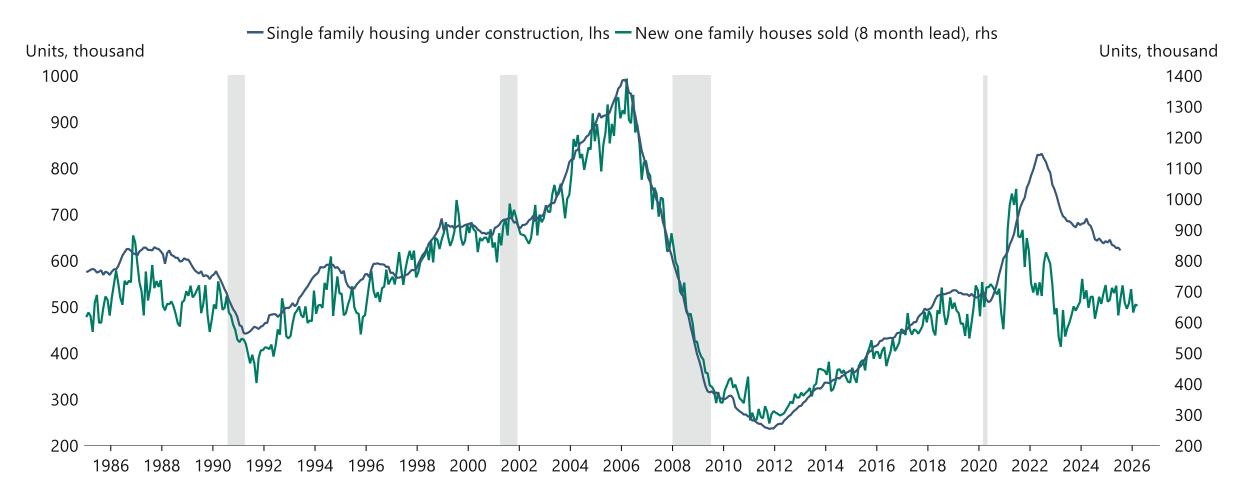
Very high level of new housing units authorized but not started



Number of new houses for sale



Some disconnect between housing under construction and new homes sold

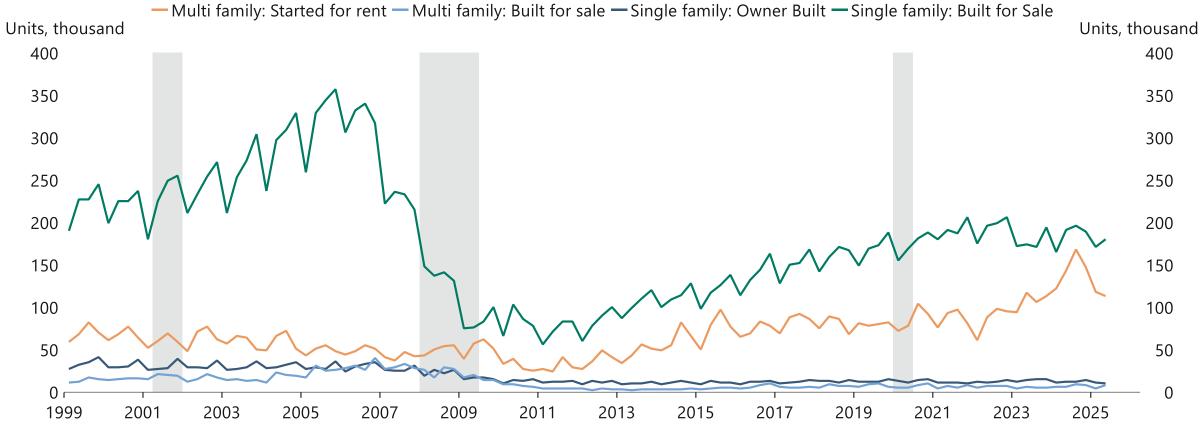


Apartment deliveries about to decline significantly. This will put upward pressure on rents

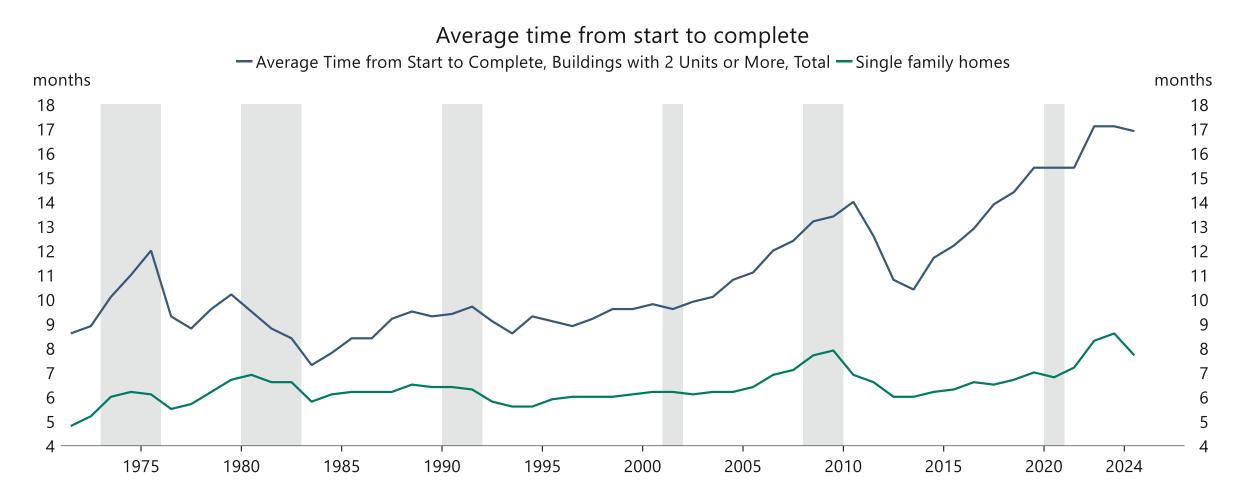


Intent of housing starts

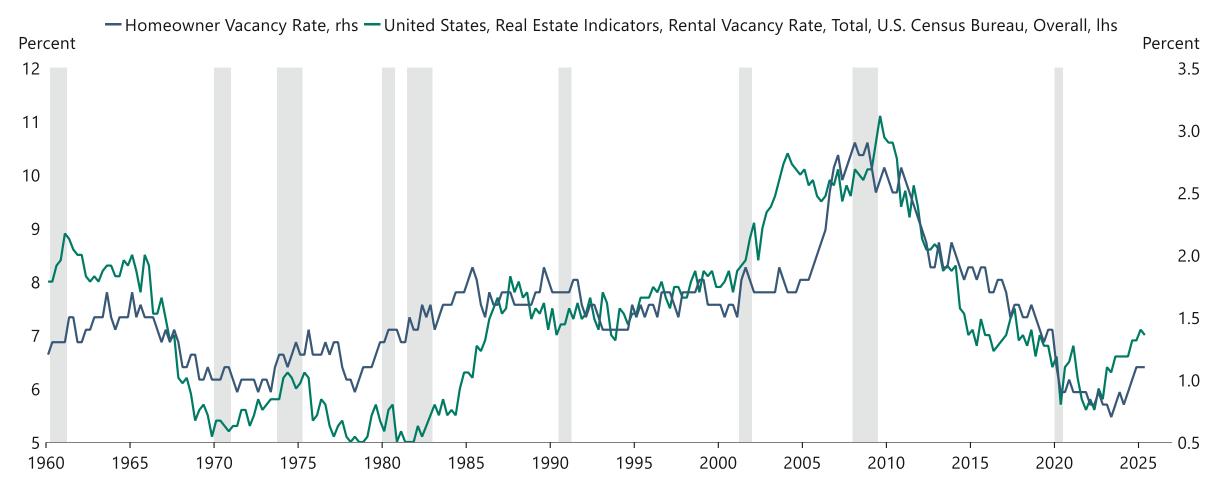
Intent of housing starts



It currently takes 8 months on average to build a single-family house



Homeowner vacancy rate and rental vacancy rate at low levels

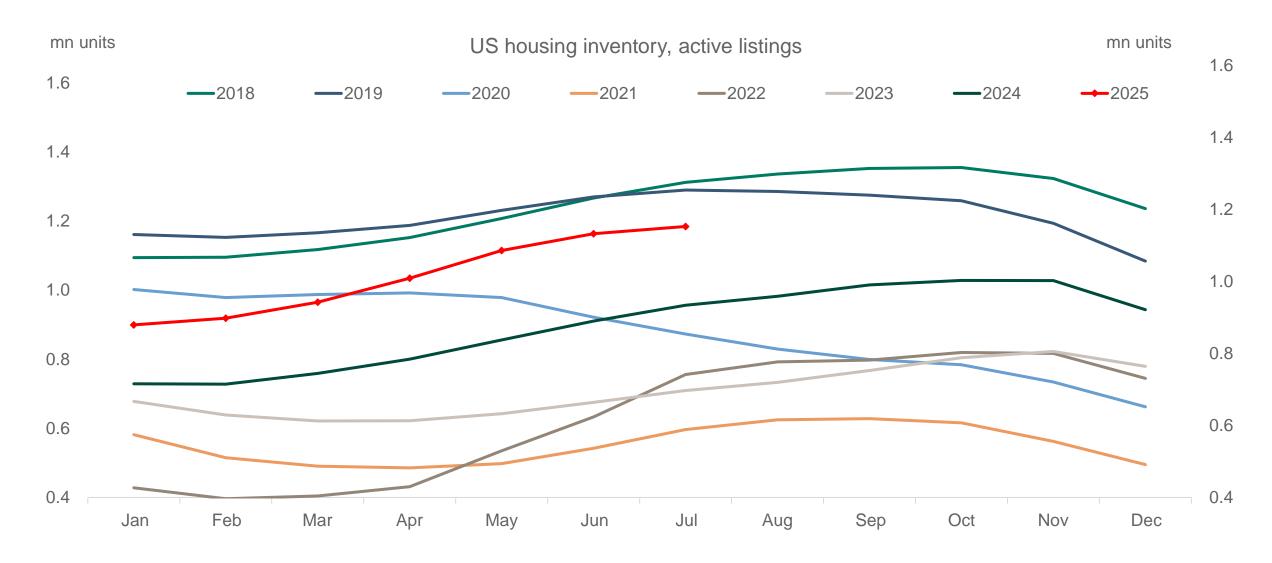


Inventory of existing homes



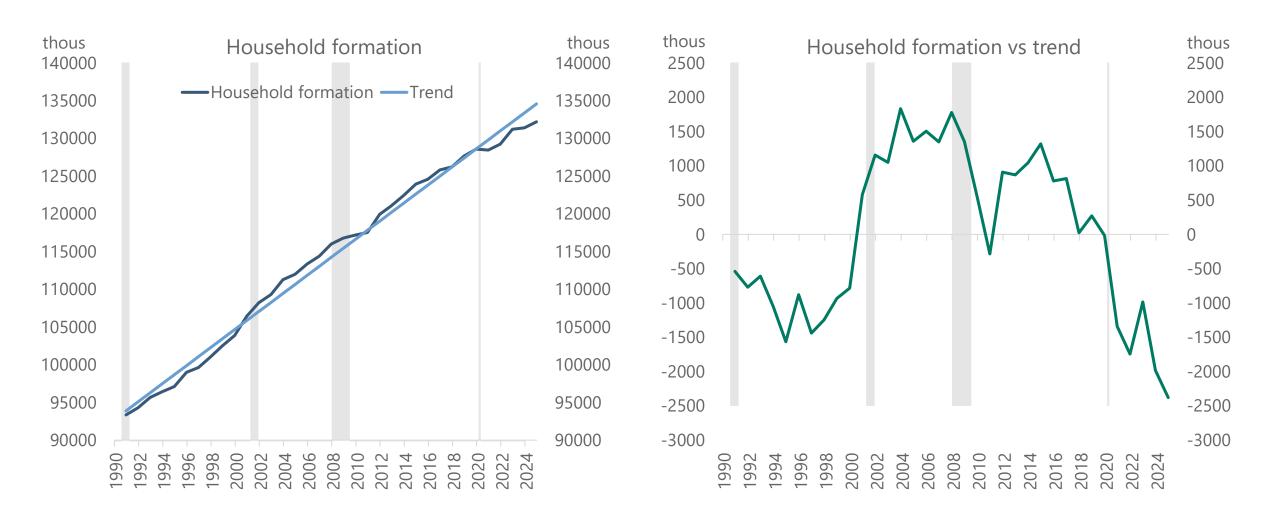
Source: National Association of Realtors (NAR), Macrobond, Apollo Chief Economist

Low inventory of homes for sale



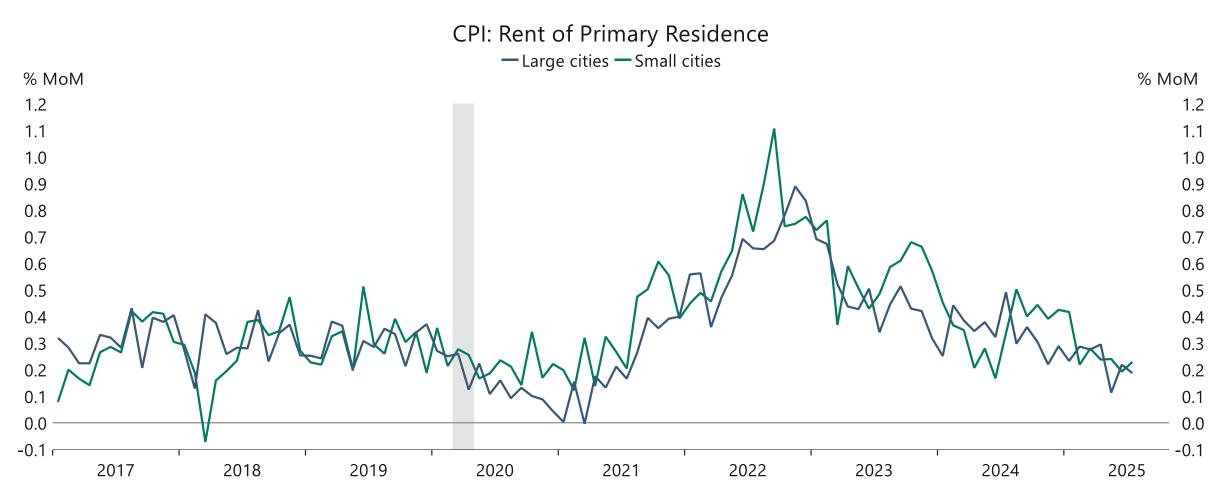
Source: Realtor.com, Apollo Chief Economist

US has an estimated deficit of 2.4mn homes



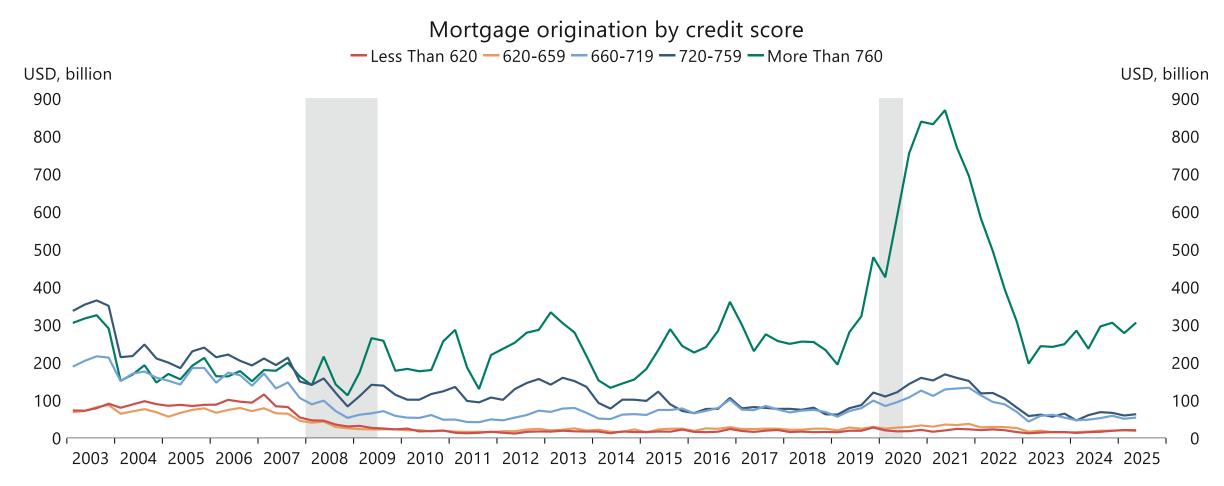
Source: Census, Haver Analytics, Apollo Chief Economist

Rent inflation in large and small cities



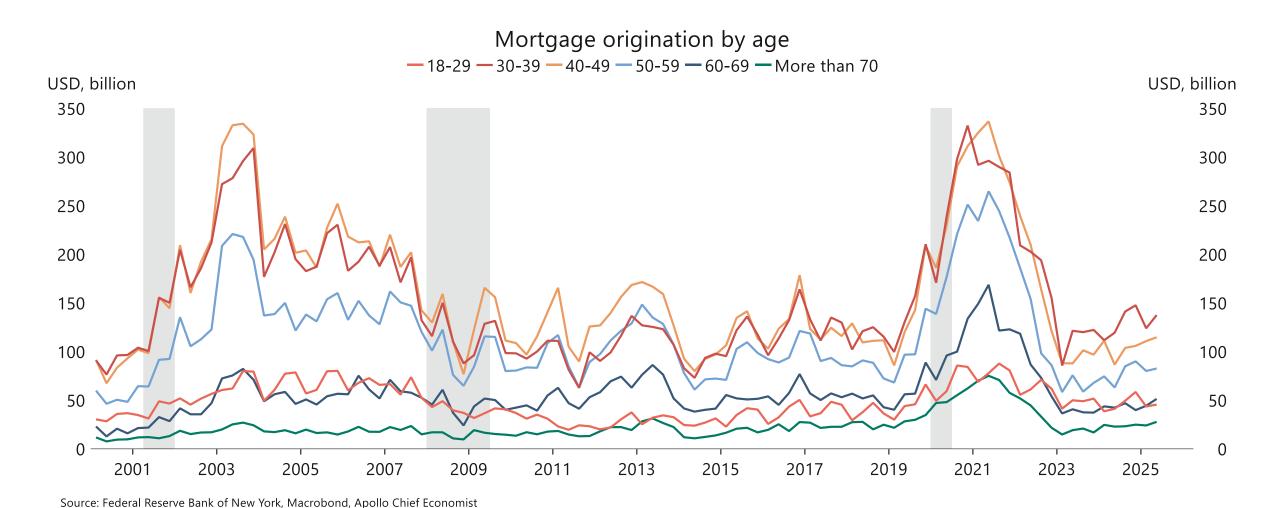
Source: U.S. Bureau of Labor Statistics (BLS), Macrobond, Apollo Chief Economist

Mortgage originations have normalized for households with high credit scores

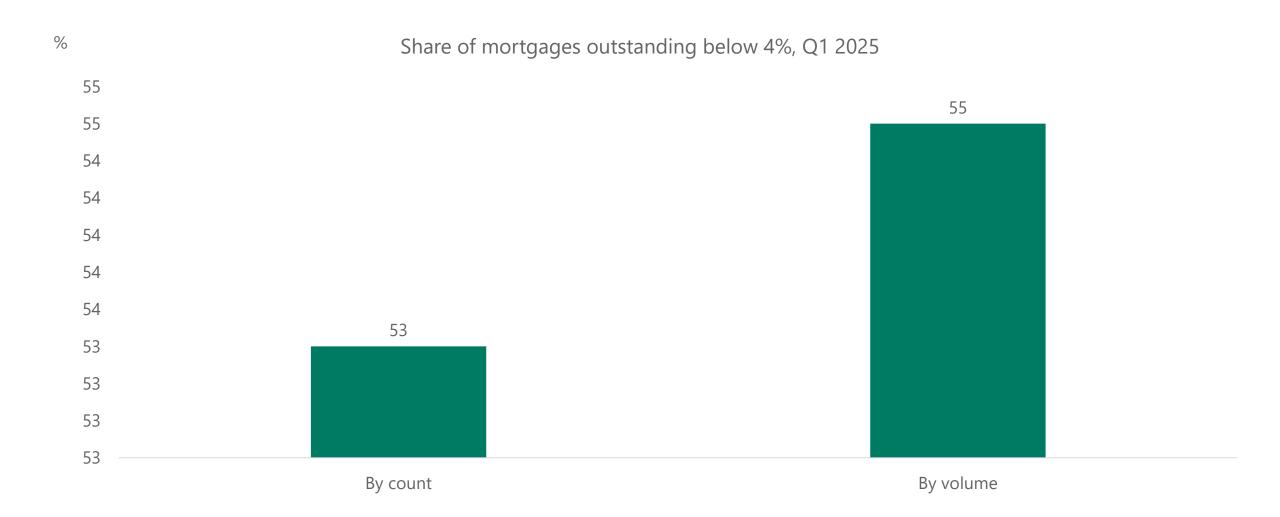


Source: Federal Reserve Bank of New York, Macrobond, Apollo Chief Economist

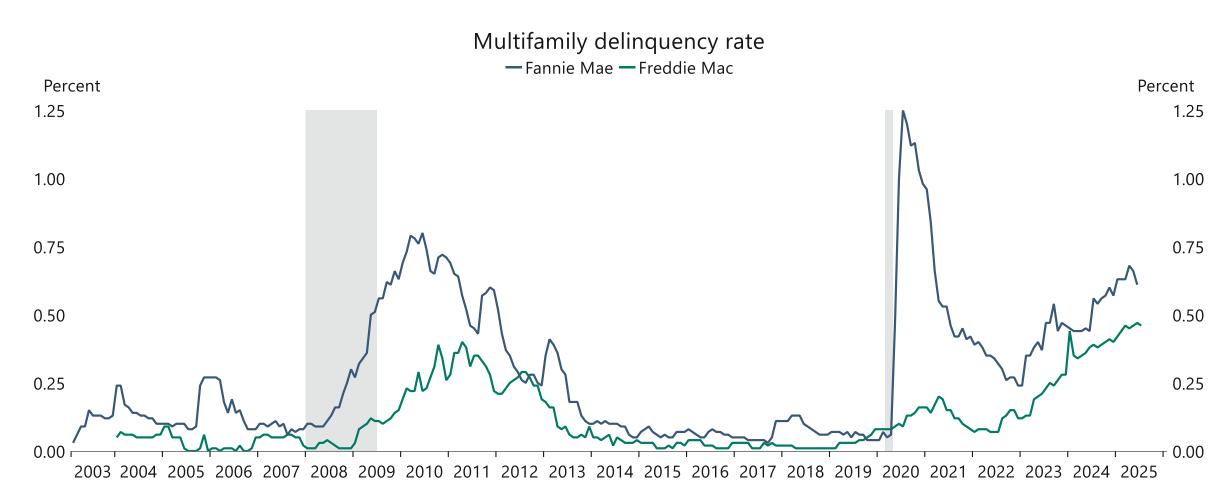
Mortgage originations back at pre-pandemic levels. Rising for people in their 30s



More than half of all mortgages outstanding have an interest rate below 4%

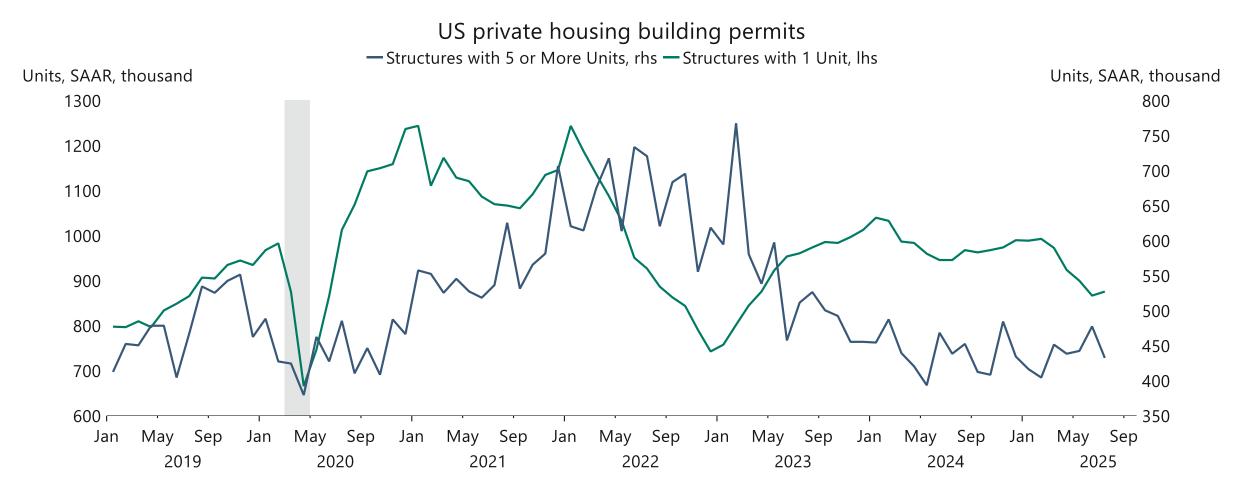


Multifamily delinquencies rising



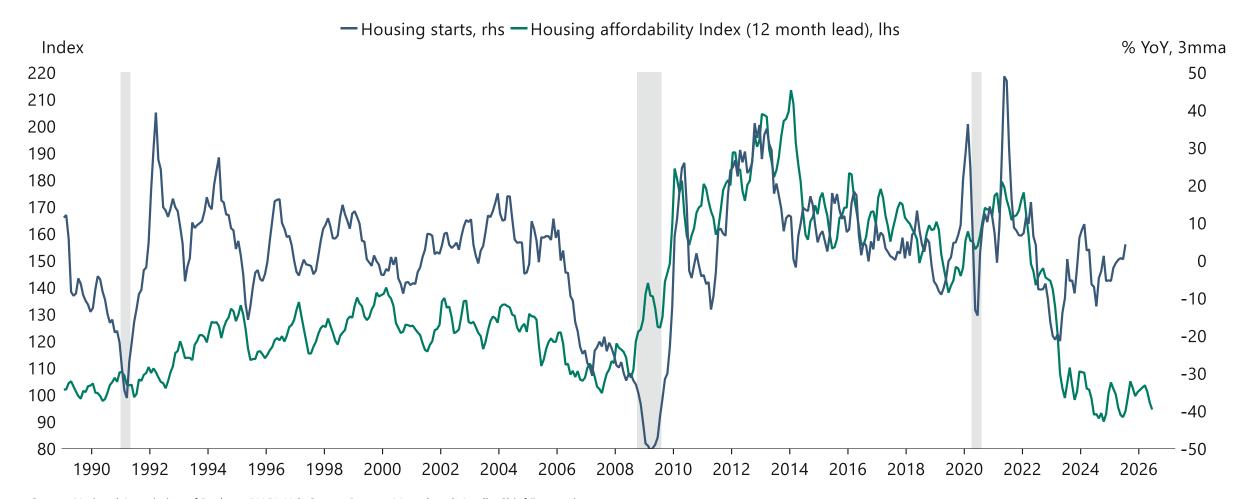
Source: Freddie Mac, Federal National Mortgage Association (Fannie Mae), Macrobond, Apollo Chief Economist

Multi-family and single-family housing units authorized moving sideways



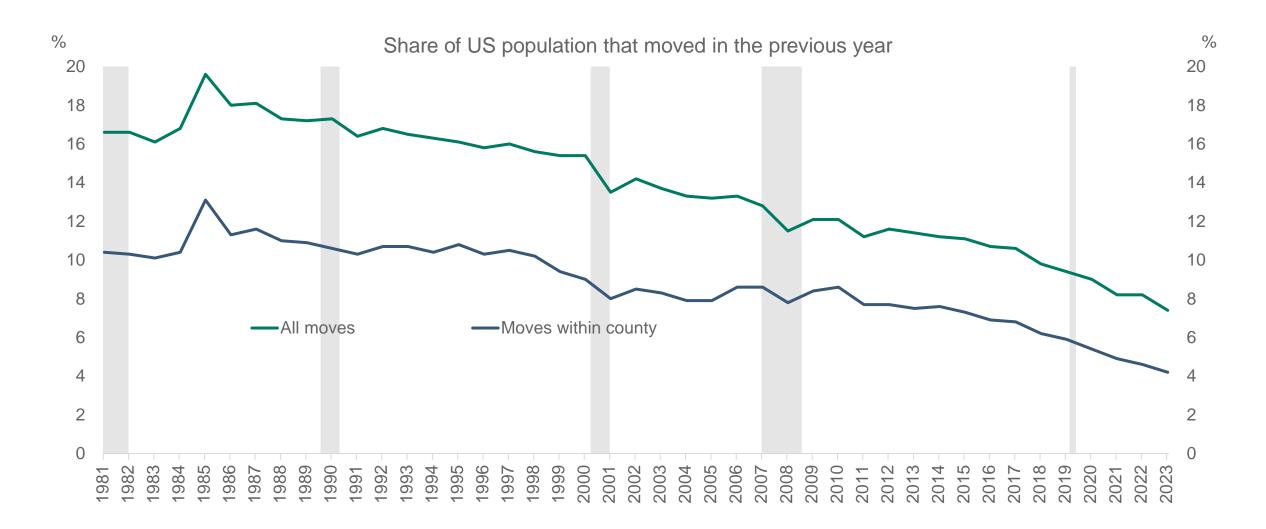
Source: U.S. Census Bureau, Macrobond, Apollo Chief Economist

Housing starts high despite low affordability



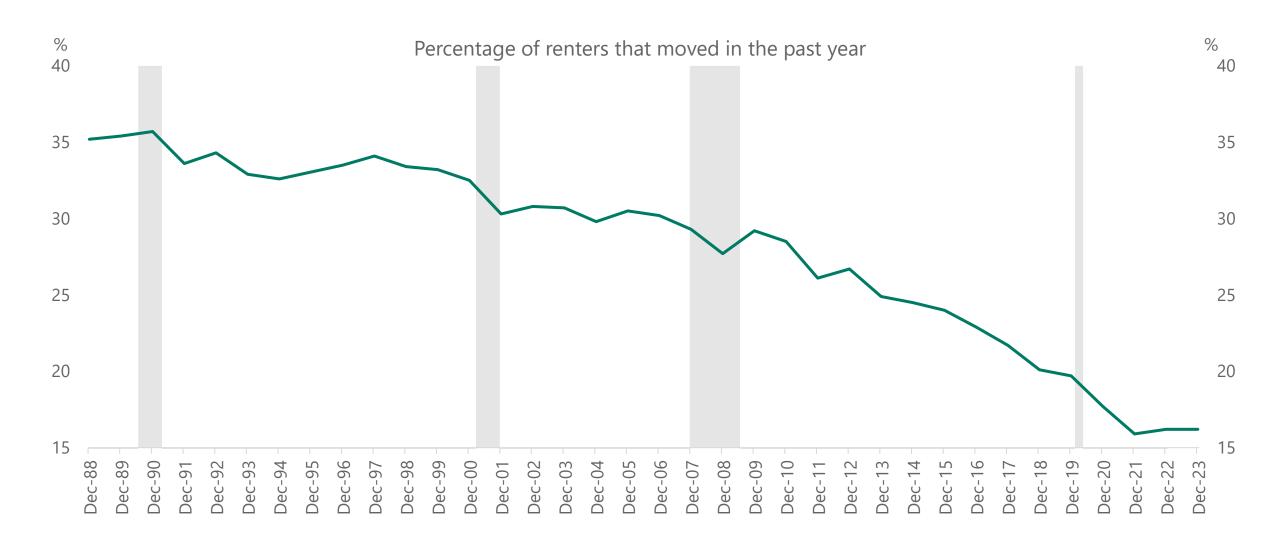
Source: National Association of Realtors (NAR), U.S. Census Bureau, Macrobond, Apollo Chief Economist

Structural decline in the share of the US population moving to a new address



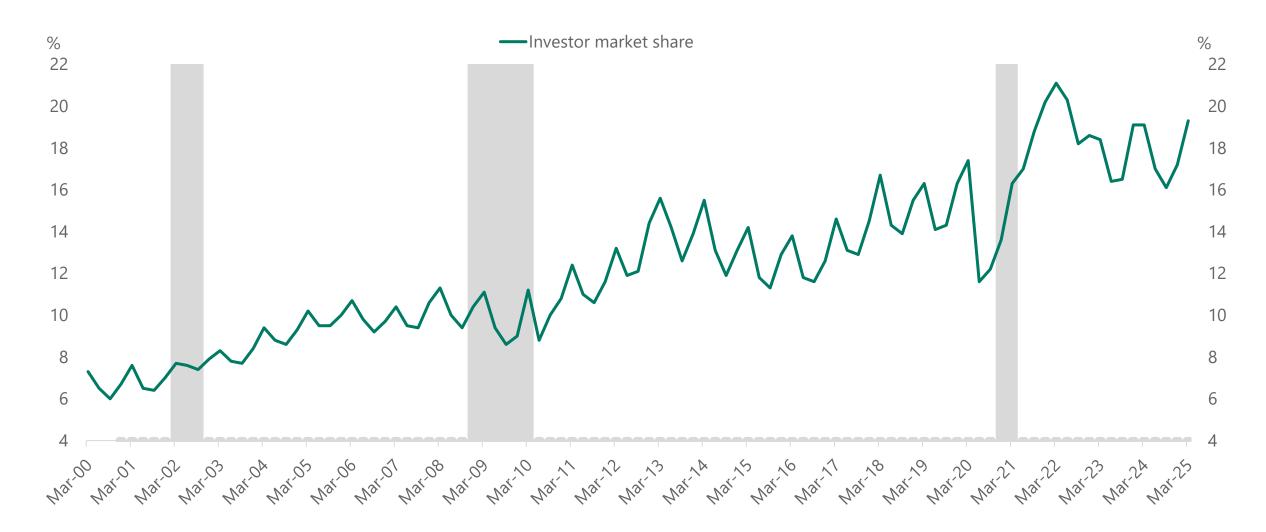
Source: Census CPS, Apollo Chief economist 76

Trend decline in the percentage of renters moving to new apartments or houses



Source: Census Bureau, Apollo Chief Economist

The investor share of home purchases still elevated



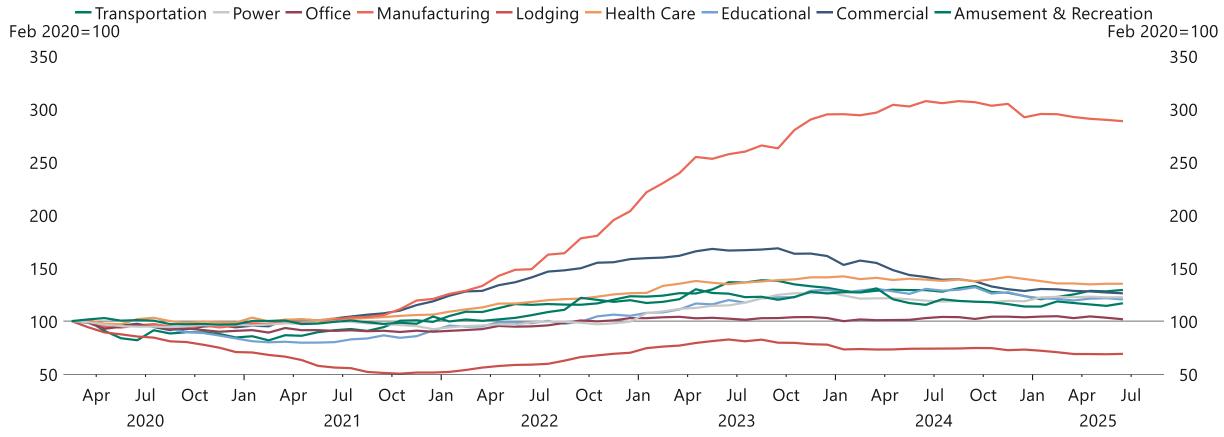
Residential construction job growth slows



Source: U.S. Bureau of Labor Statistics (BLS), Macrobond, Apollo Chief Economist

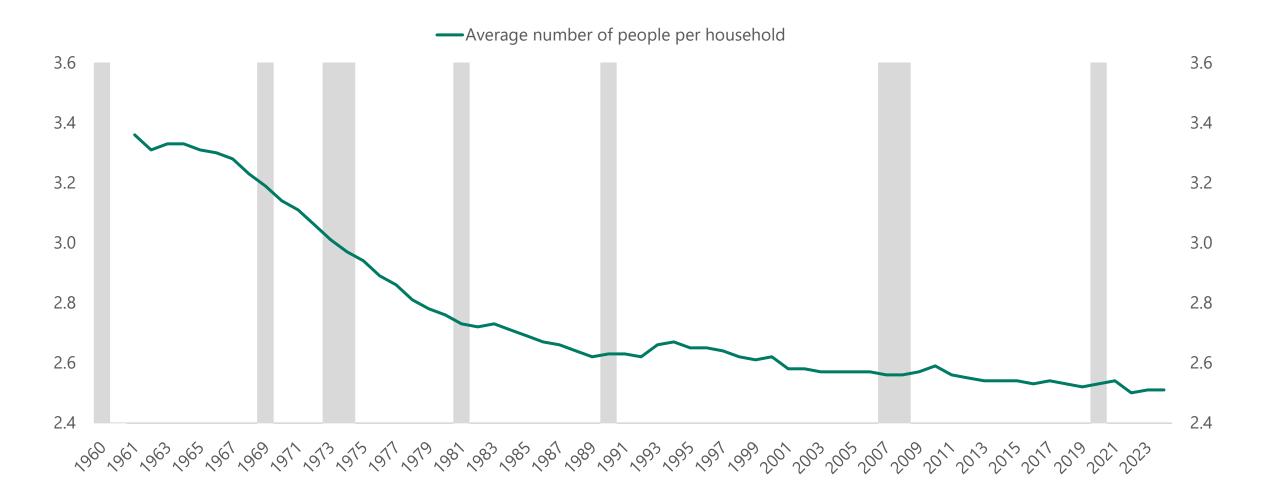
The biggest increase in non-residential construction has been in manufacturing

Private Non-Residential construction spending



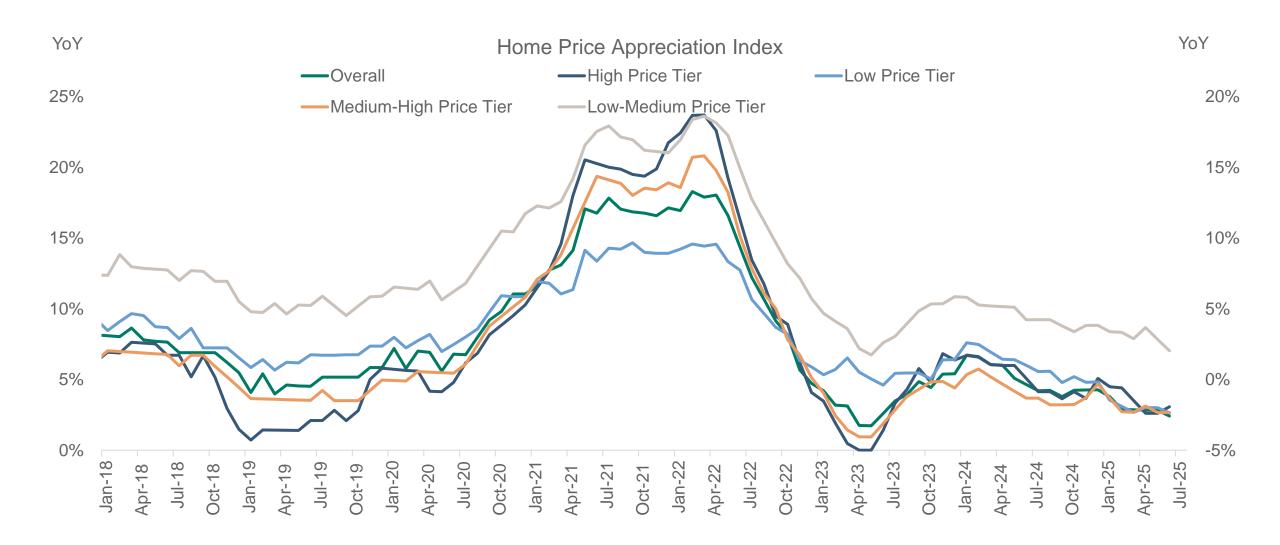
Source: U.S. Census Bureau, Macrobond, Apollo Chief Economist

The average family size in the US has declined from 3.3 in 1960 to 2.5 by 2024

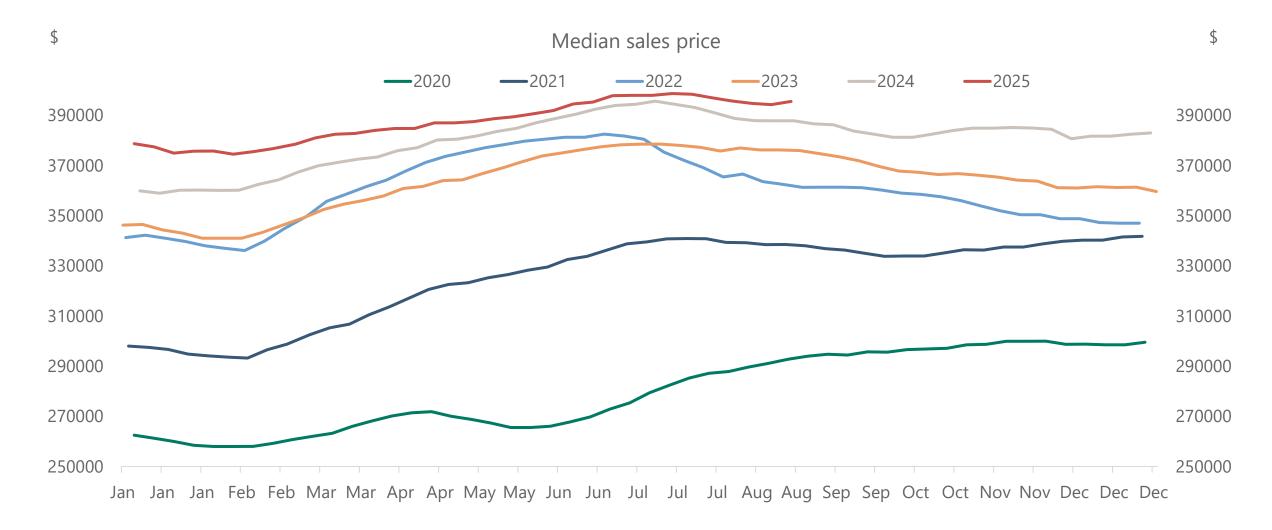


Source: Census Bureau, Apollo Chief Economist 81 3) House Prices

House price inflation easing across price tiers



Median sales price modestly above last year's levels



Source: Redfin, Haver Analytics, Apollo Chief Economist

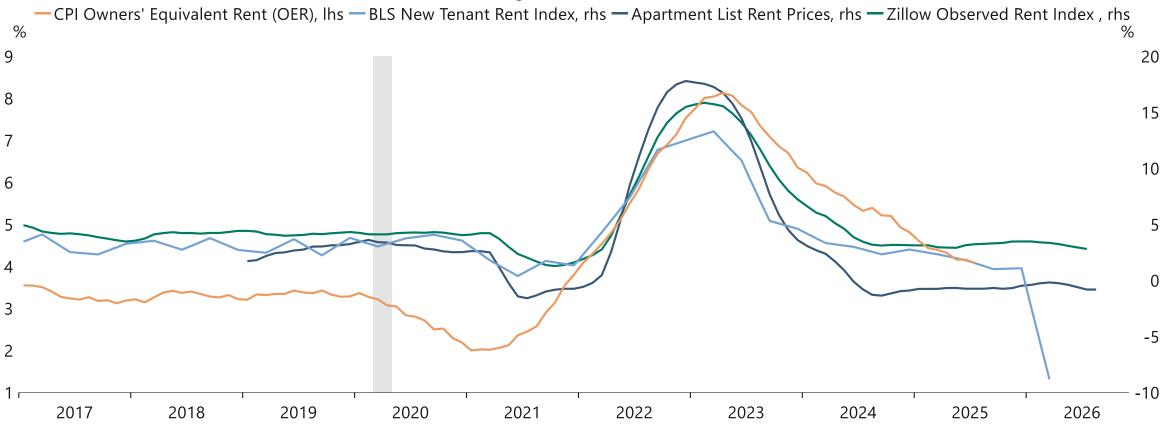
Housing inflation coming down

— CPI-U: Rent of Primary Residence, Ihs — CPI-U: Owners' Equivalent Rent of Residence, Ihs — S&P Case-Shiller Home Price Index (14 month lead), rhs % yoy % yoy -10 -15

Source: S&P Global, U.S. Bureau of Labor Statistics (BLS), Macrobond, Apollo Chief Economist

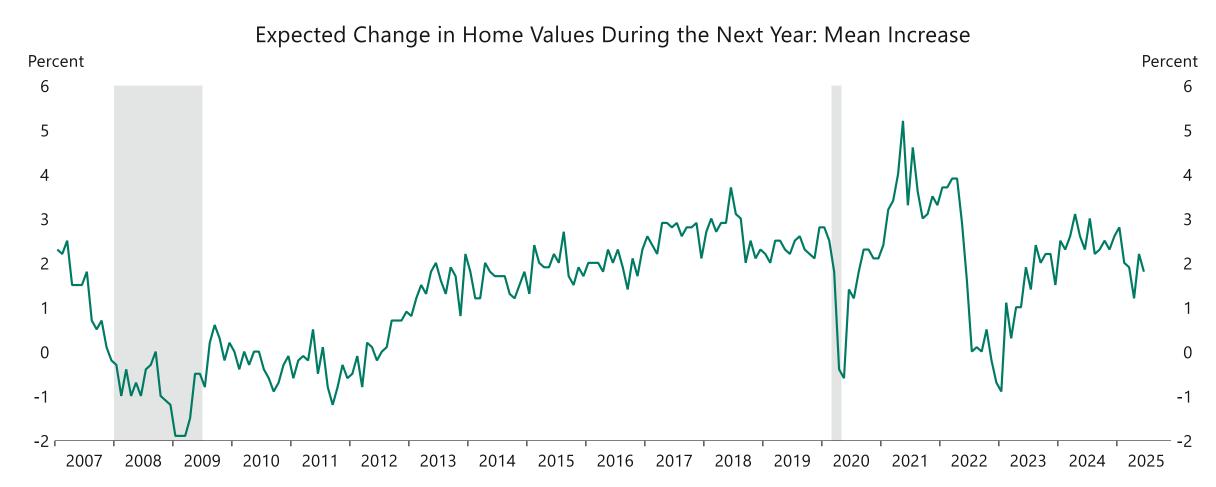
OER housing inflation coming down?

Housing inflation indicators



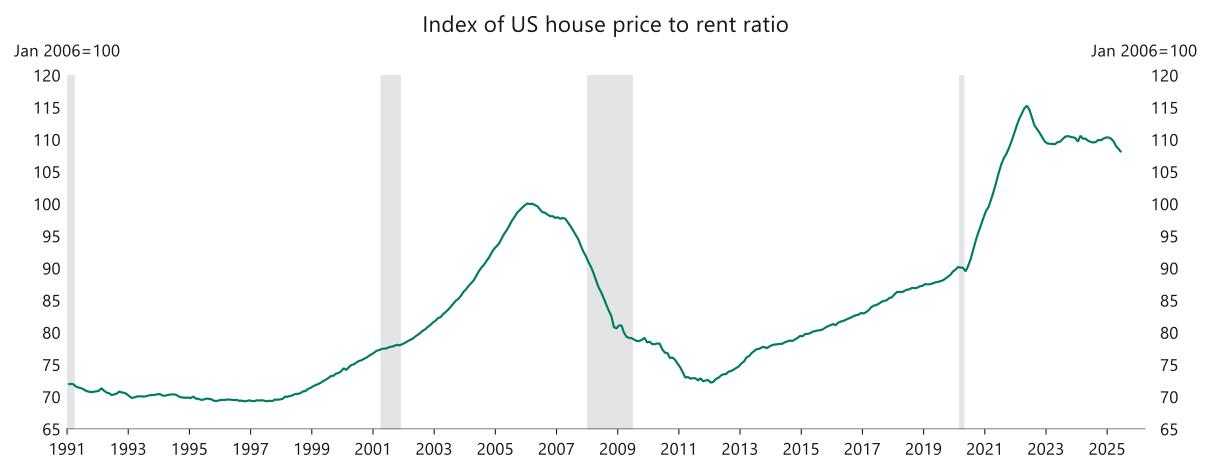
Source: Zillow, Apartment List, U.S. Bureau of Labor Statistics (BLS), Macrobond, Apollo Chief Economist

Consumers' expectations to home price inflation



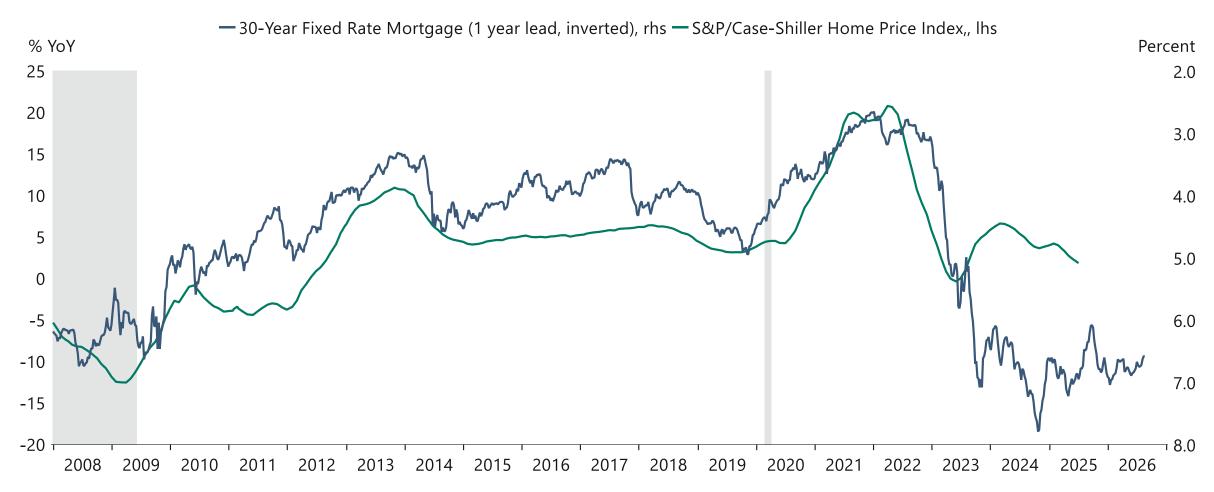
Source: University of Michigan, Macrobond, Apollo Chief Economist

Home price to rent ratio significantly above 2006 levels



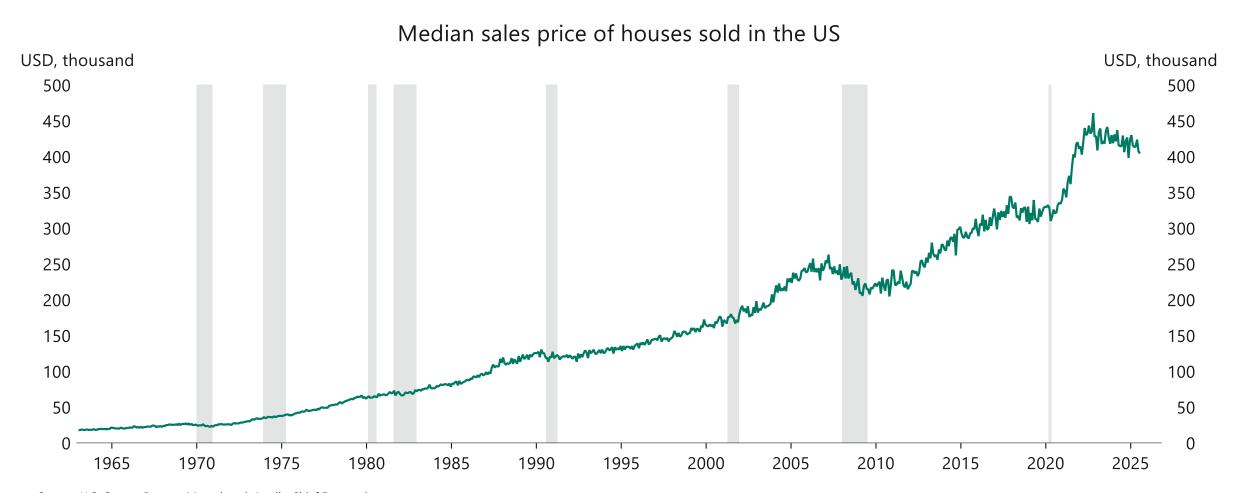
Source: FHFA, BLS, Macrobond, Apollo Chief Economist. Note: the series is indexed ratio of FHFA monthly purchase only house price index divided by the OER component of the CPI.

Disconnect between mortgage rates and home prices because of low housing supply



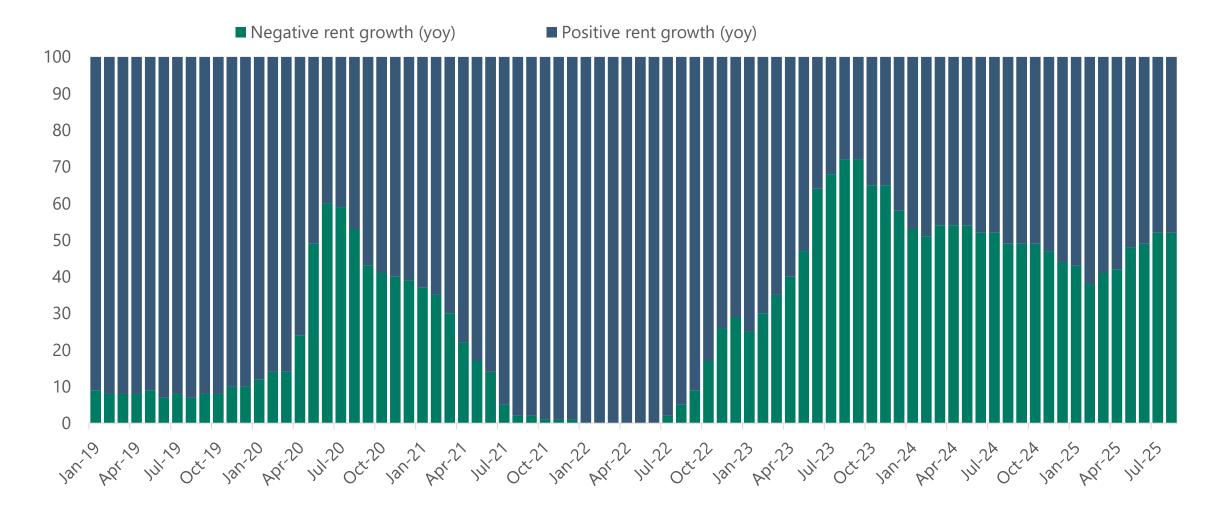
Source: S&P Global, Freddie Mac, Macrobond, Apollo Chief Economist

The median home sales price is \$403K



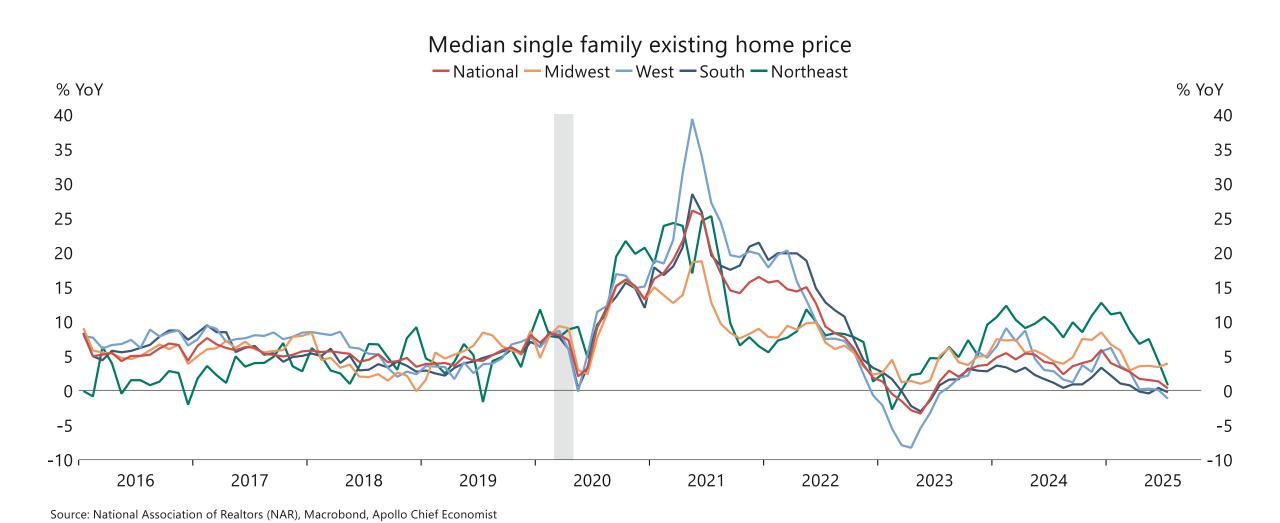
Source: U.S. Census Bureau, Macrobond, Apollo Chief Economist

100 largest US cities: Share of cities with positive rent growth: 48%

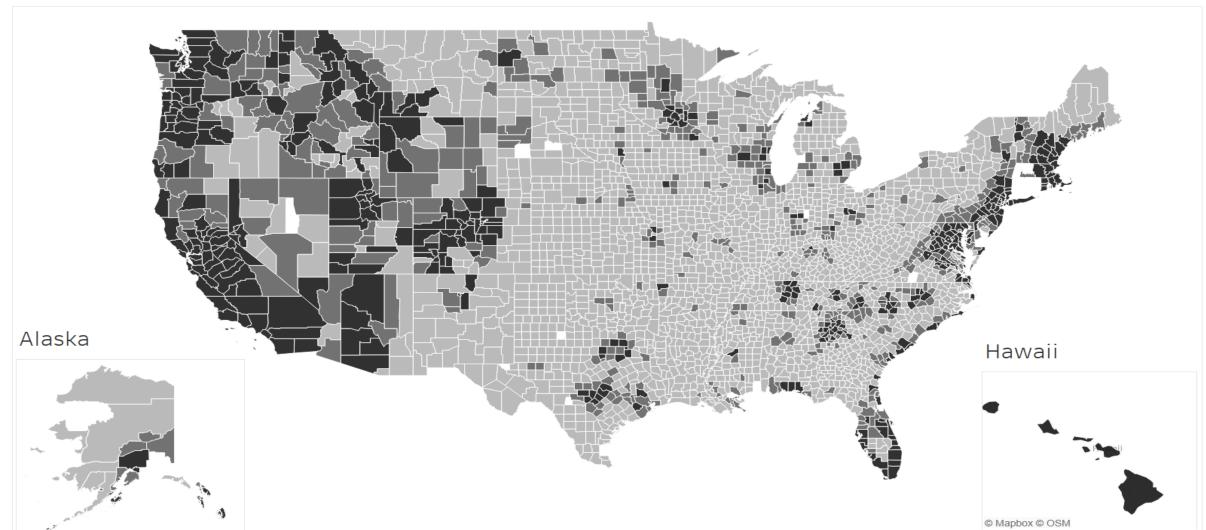


Source: Apartmentlist.com, Apollo Chief Economist

Home price inflation falling across regions

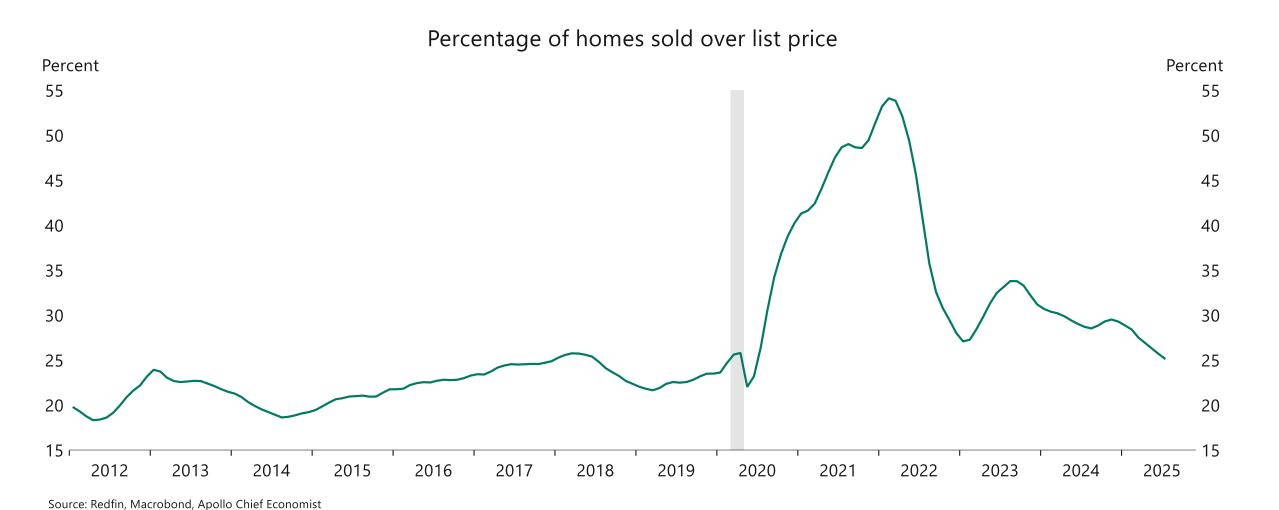


County median home prices



Source: National Association of Realtors, Apollo Chief Economist.

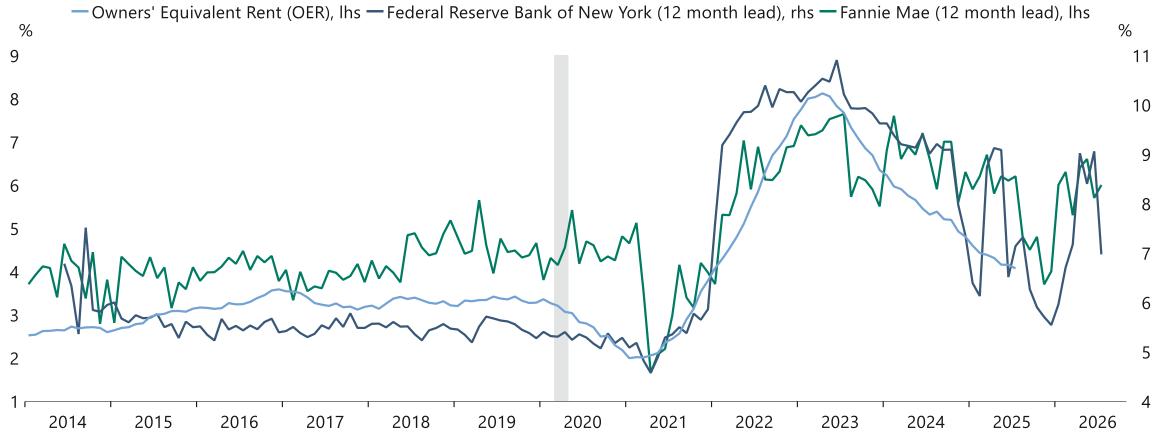
A declining share of homes selling above their list price



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Consumers expect an increase in rental inflation

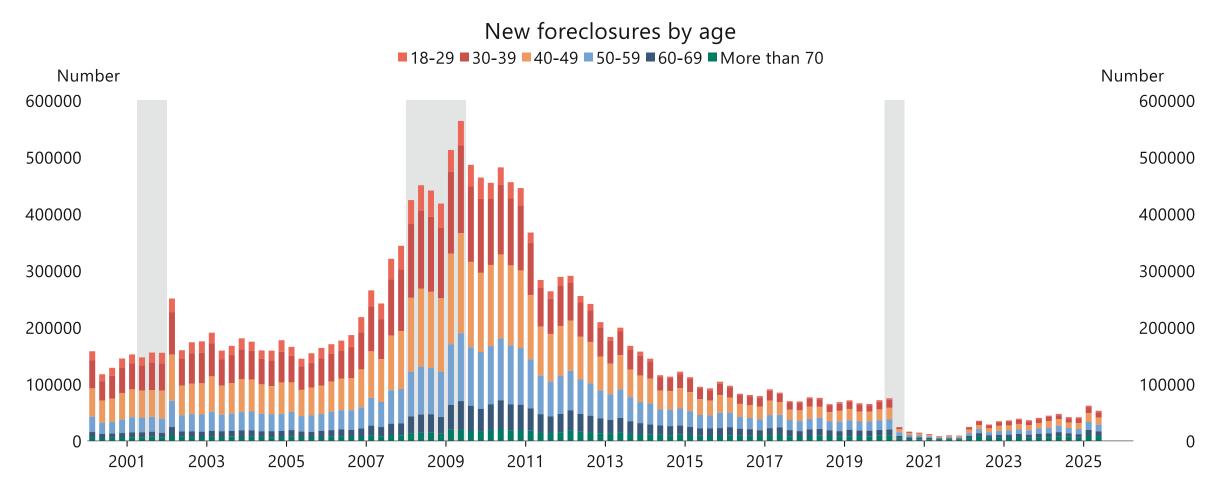
Anticipated rent inflation in the next year



Source: Federal National Mortgage Association (Fannie Mae), Federal Reserve Bank of New York, U.S. Bureau of Labor Statistics (BLS), Macrobond, Apollo Chief Economist

4) Housing Outlook

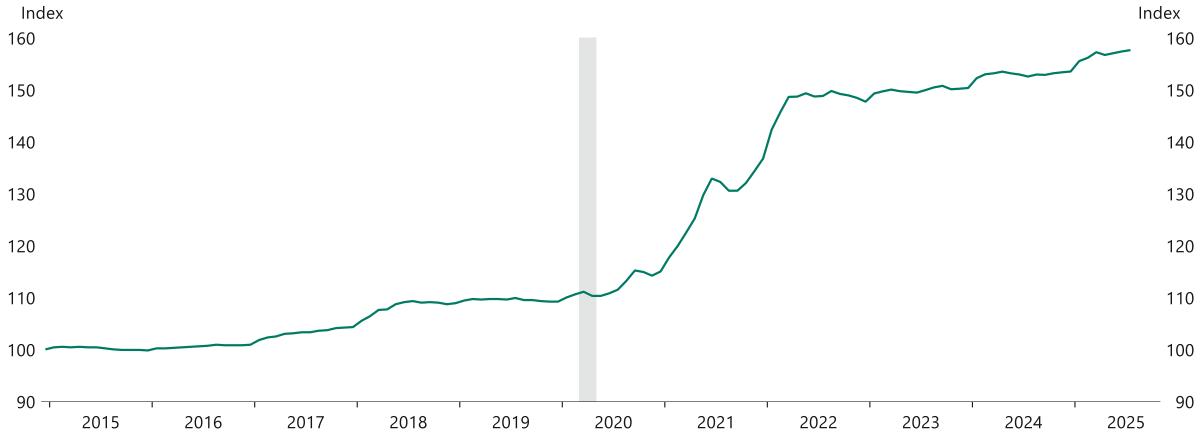
New foreclosures, by age of homeowner



Source: Federal Reserve Bank of New York, Macrobond, Apollo Chief Economist

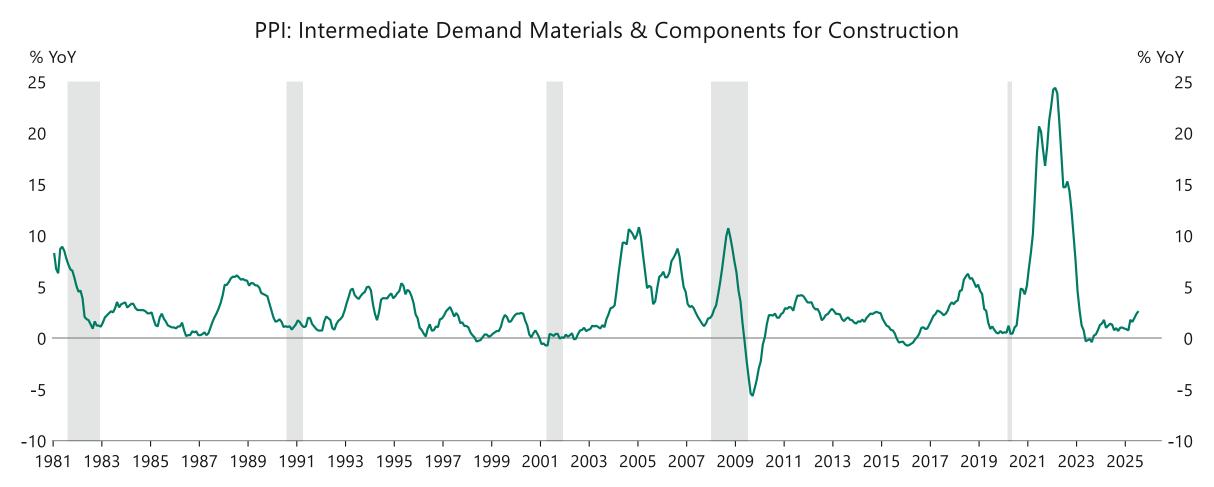
Housing construction costs remain high





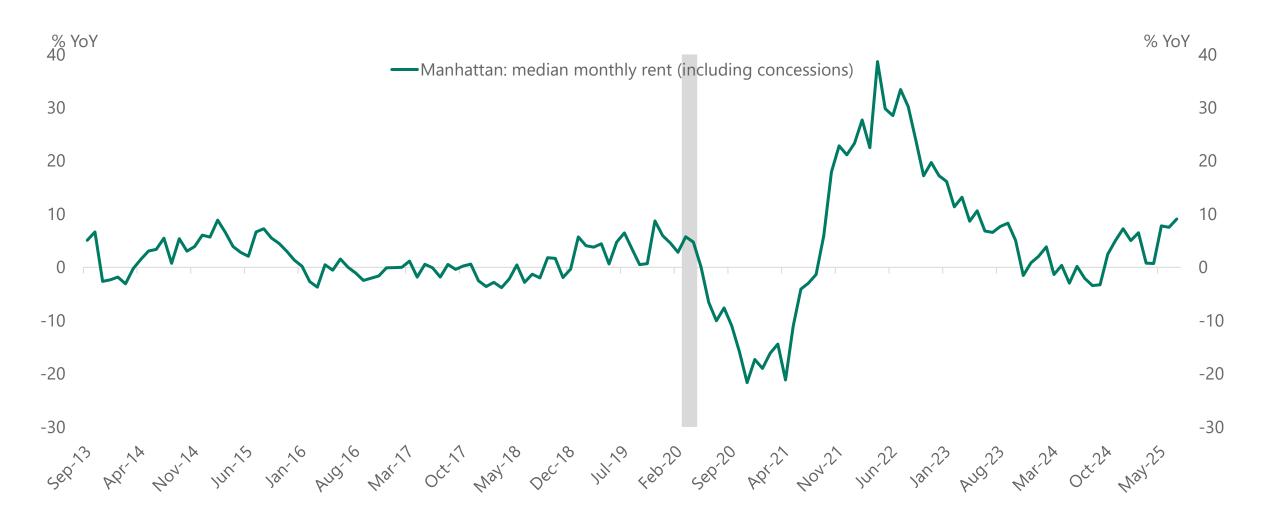
Source: U.S. Bureau of Labor Statistics (BLS), Macrobond, Apollo Chief Economist

Inflation in input costs for home builders have come down



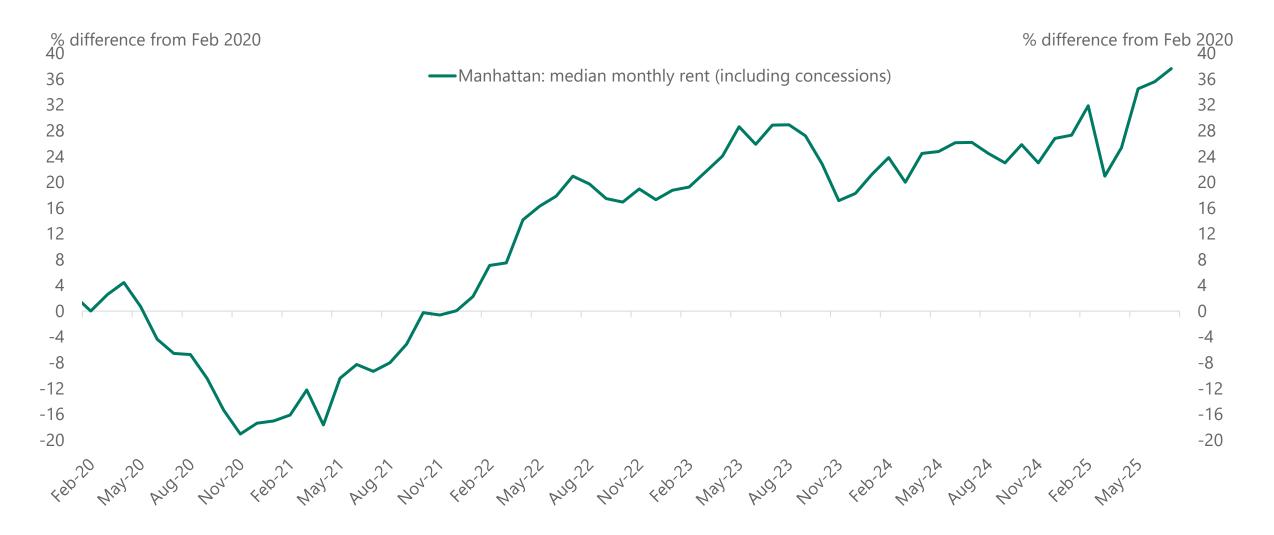
Source: U.S. Bureau of Labor Statistics (BLS), Macrobond, Apollo Chief Economist

Manhattan median rent rose to \$4666 in July 2025



Source: Elliman, Apollo Chief Economist

Manhattan rents well above pre-pandemic levels



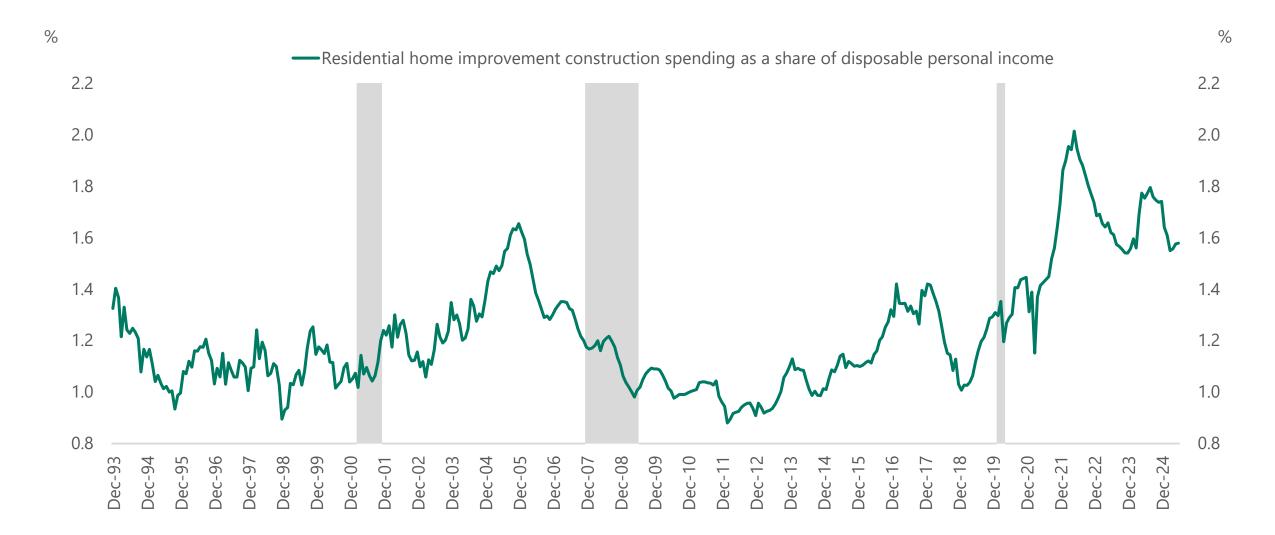
Source: Elliman, Apollo Chief Economist

Rising mortgage rates generally associated with lower home price inflation

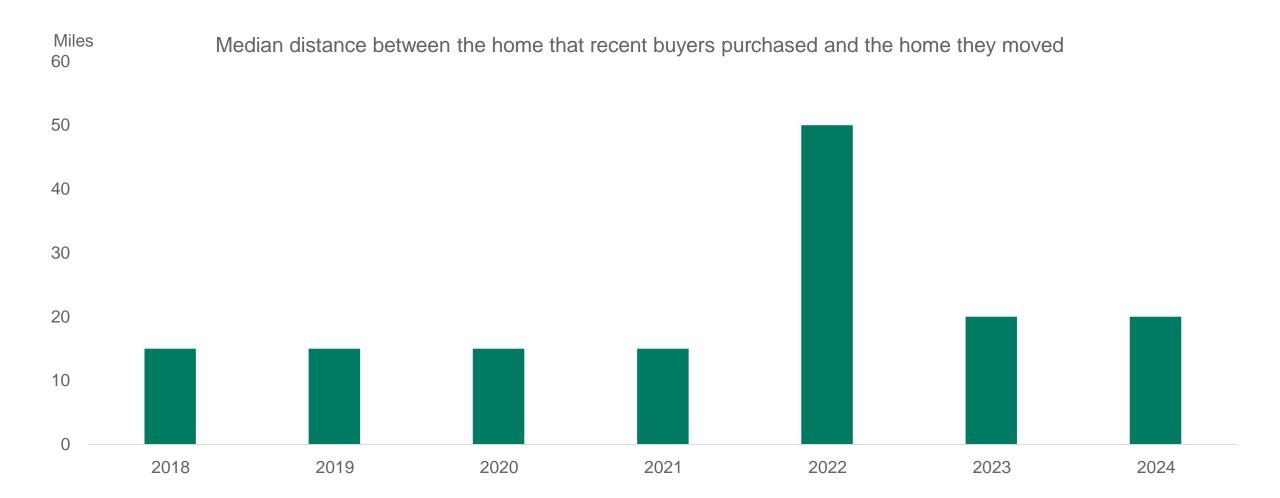


Source: FRED, Apollo Chief Economist

Home improvement spending as a share of disposable income rising



Median distance between the home that recent buyers purchased and the home they moved from at 50 miles in 2022



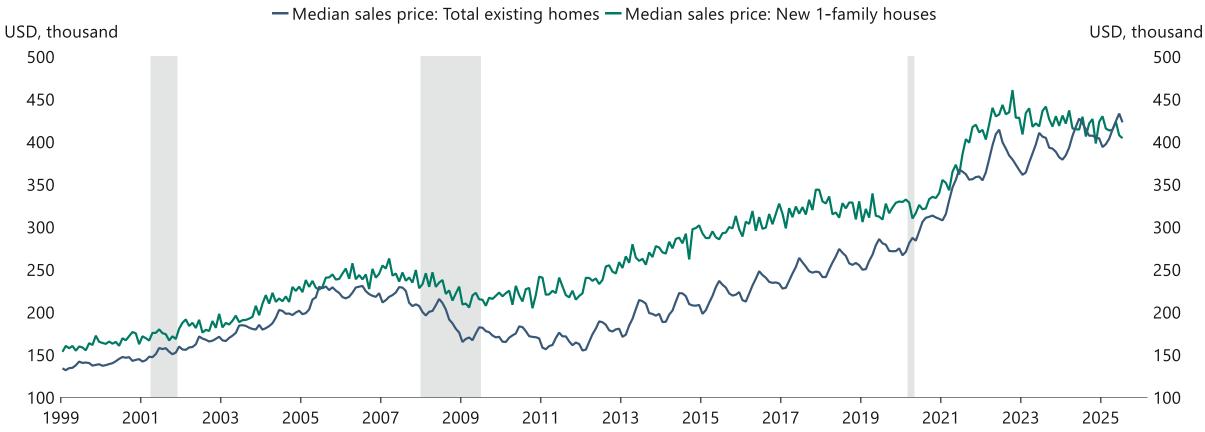
Source: NAR, Apollo Chief Economist

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New versus existing homes

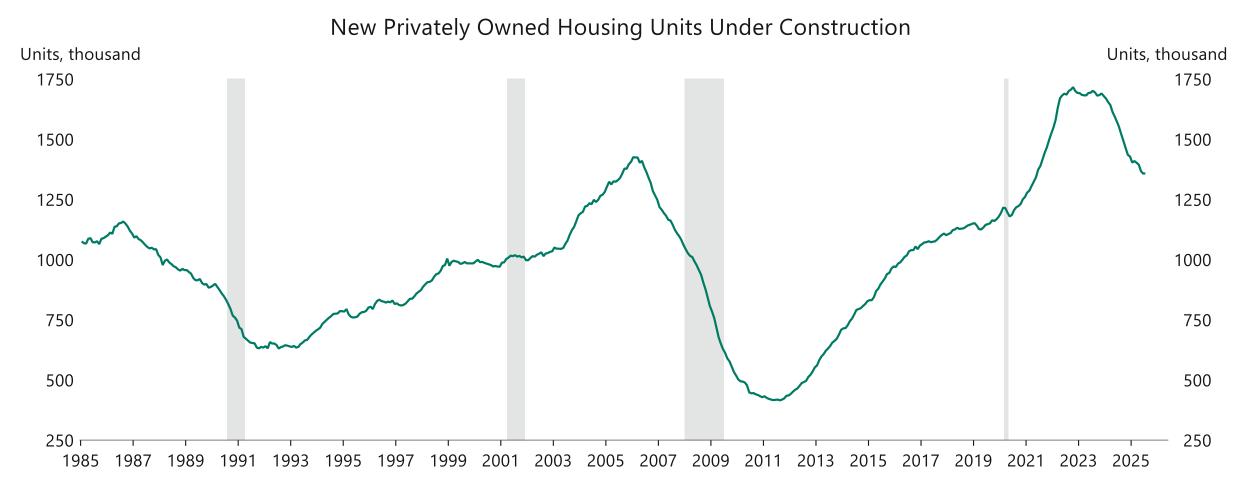
House prices for new homes and existing homes

Median sales price of houses sold in the US



Source: U.S. Census Bureau, National Association of Realtors (NAR), Macrobond, Apollo Chief Economist

New privately owned housing units under construction coming down

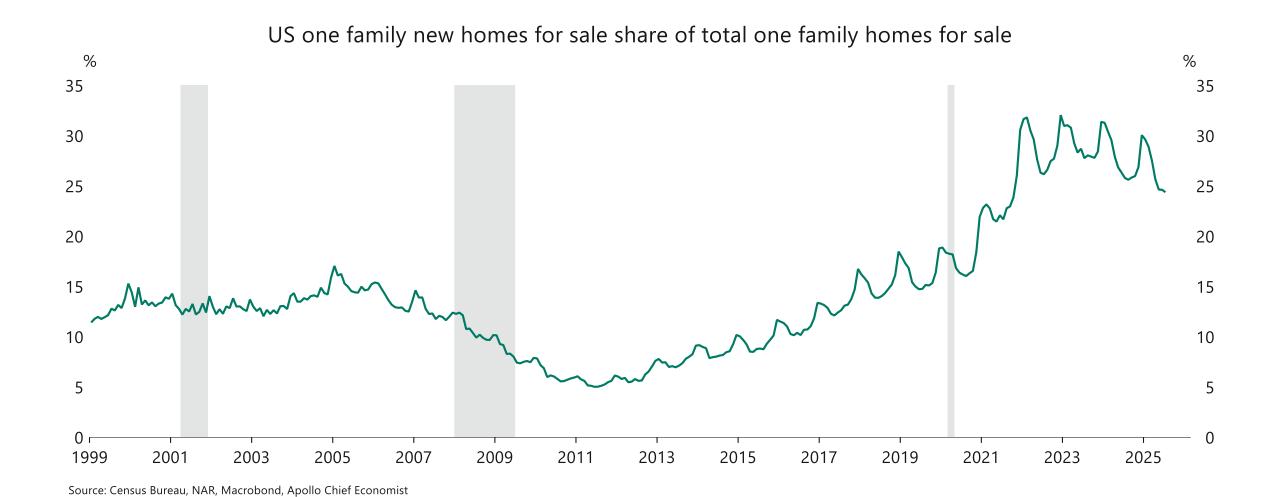


Source: U.S. Census Bureau, Macrobond, Apollo Chief Economist

Consensus is forecasting a sideways move in home sales



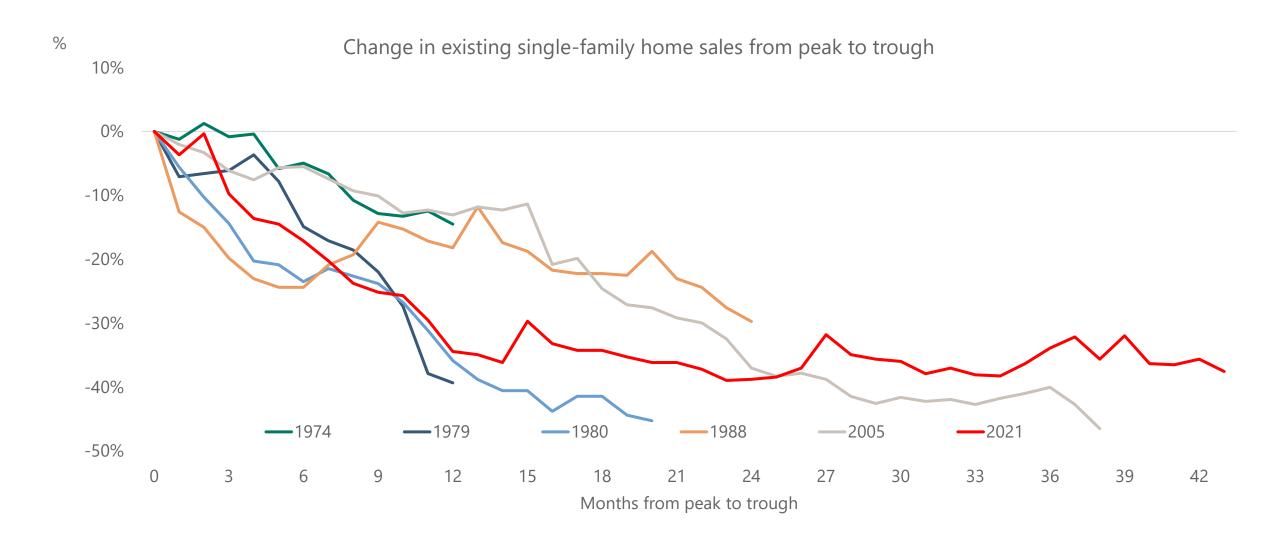
Share of new homes for sale





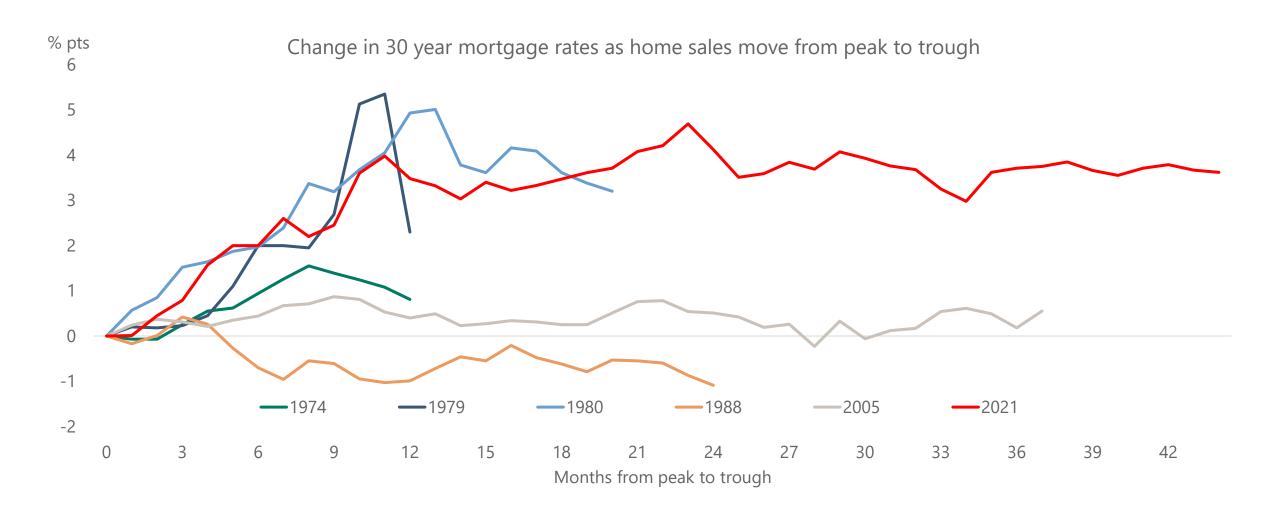
Comparing the current housing slowdown to previous housing slowdowns

The current decline in existing home sales is in line with previous housing slowdowns

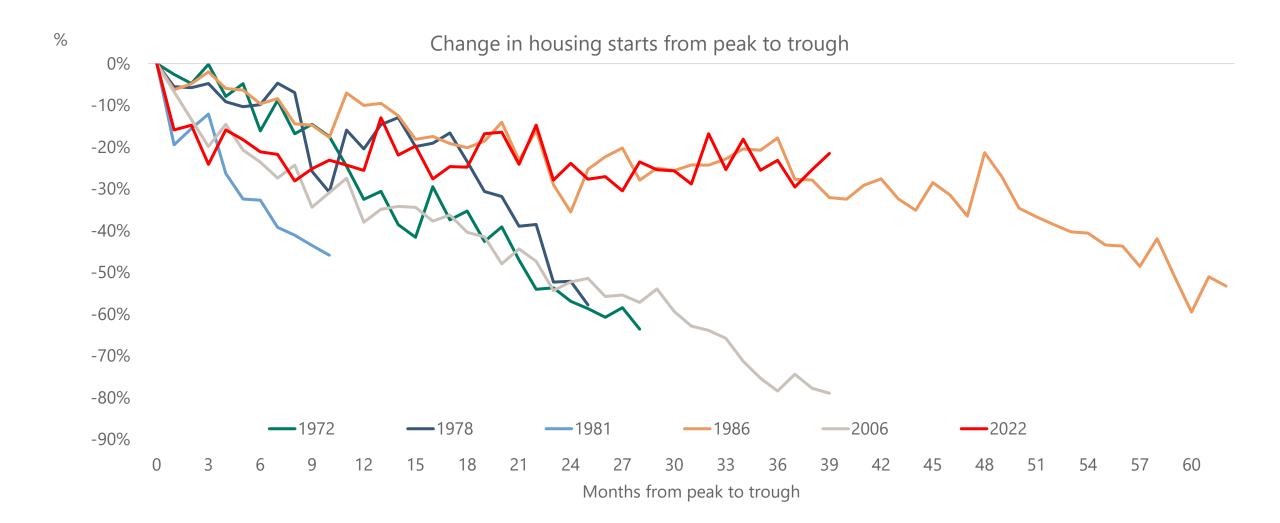


Source: NAR, Haver Analytics, Apollo Chief Economist

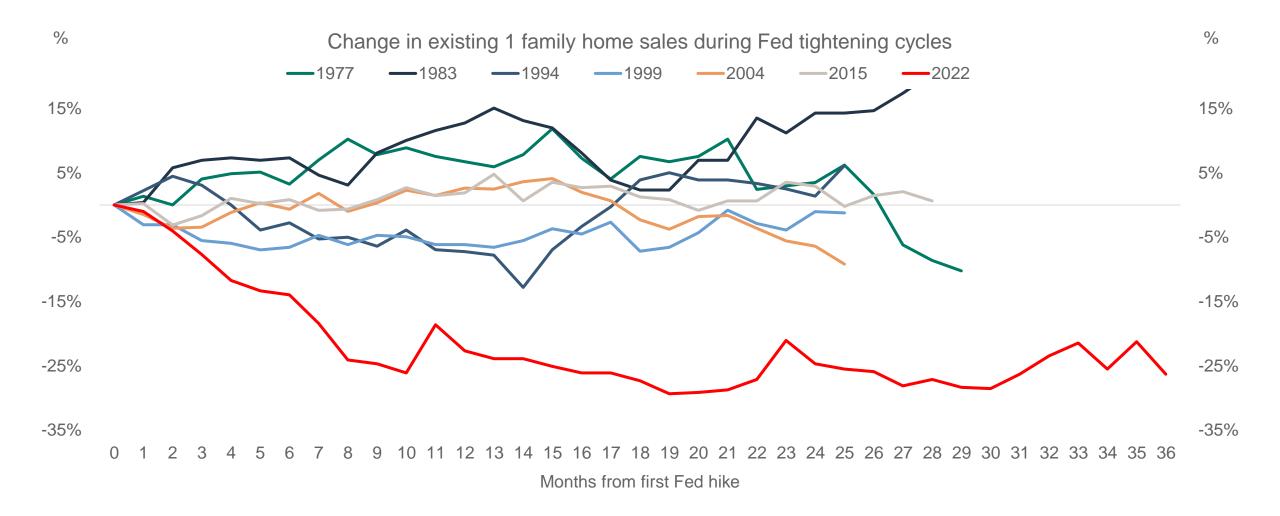
The current rise in mortgage rates is similar to what we saw during the Volcker disinflation



The current decline in housing starts is a bit milder than previous slowdowns

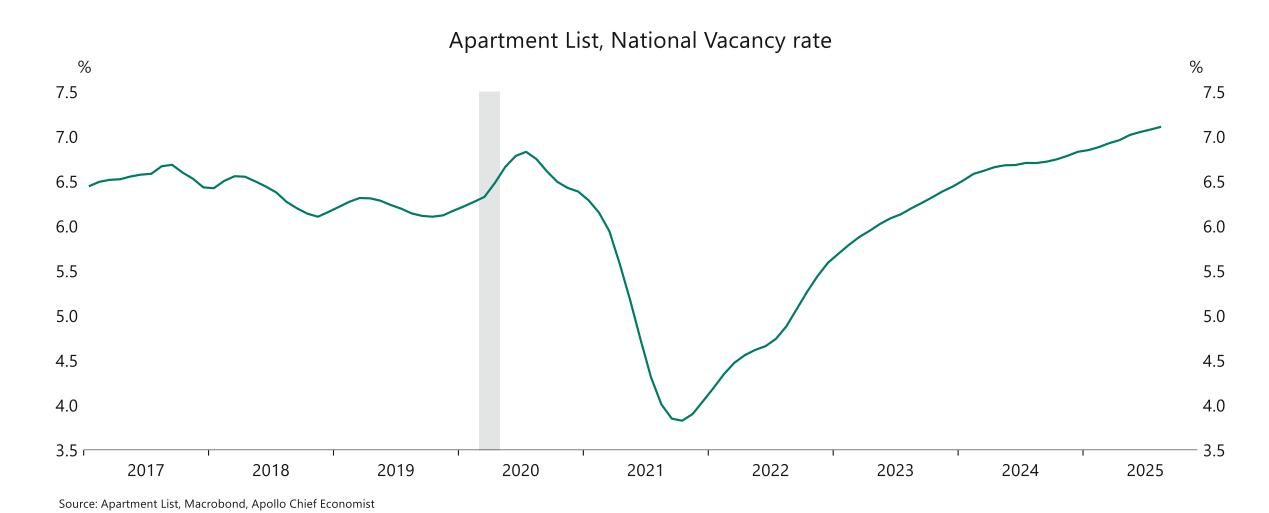


This is the fastest Fed-driven housing slowdown on record



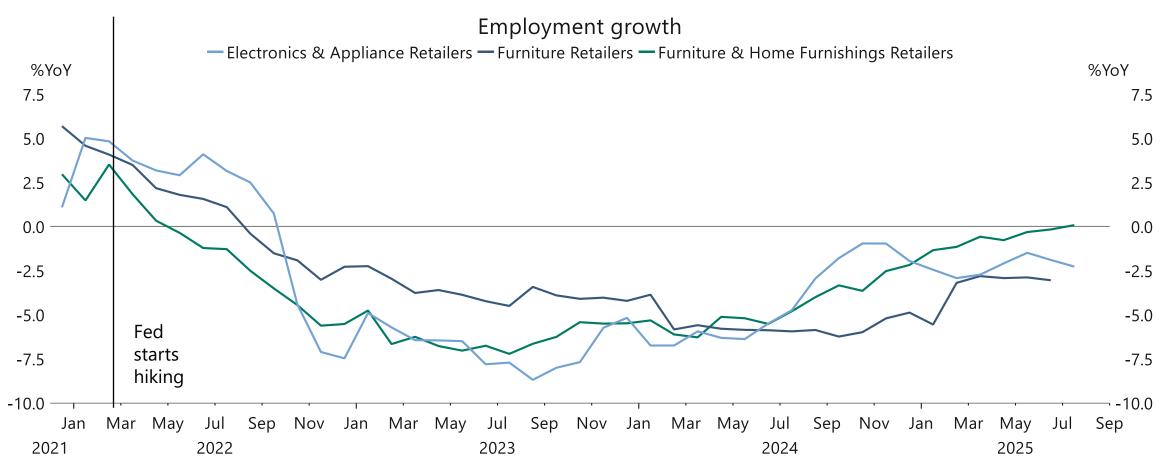
Source: NAR, Haver Analytics, Apollo Chief Economist

Apartment vacancies above pre-pandemic levels



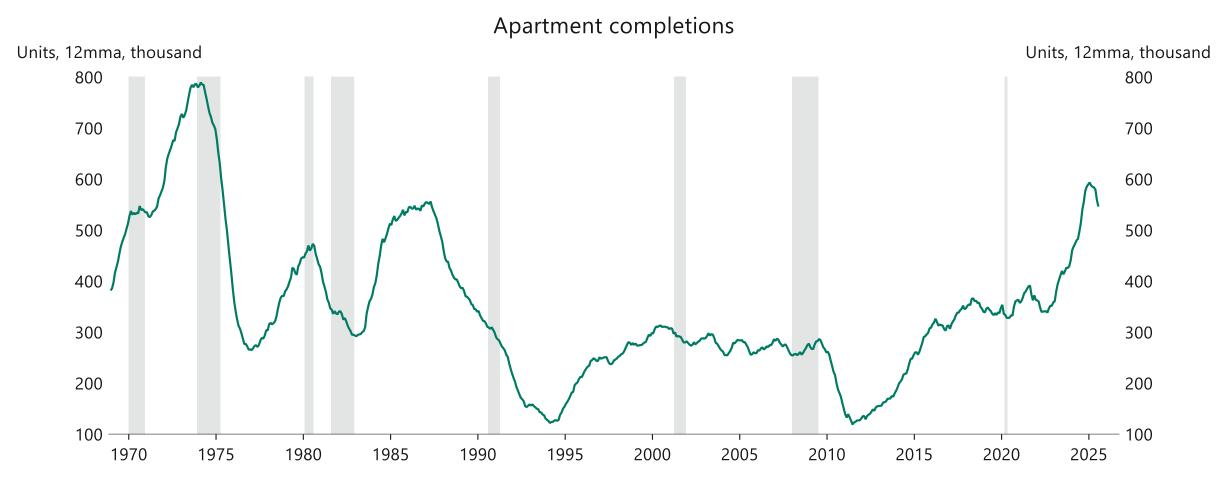
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When the Fed raised interest rates, employment in retail trade declined



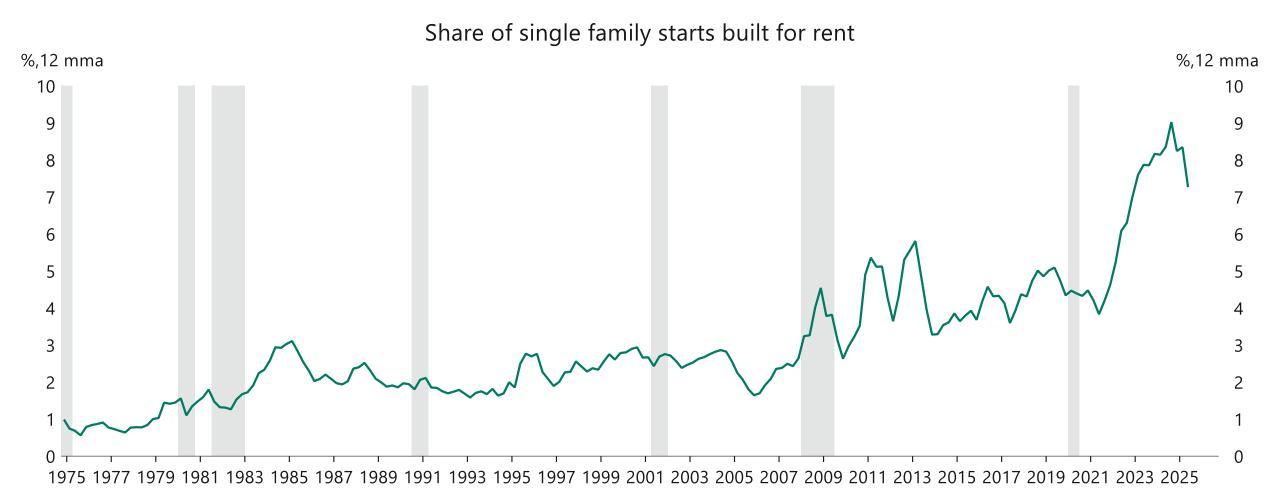
Source: U.S. Bureau of Labor Statistics (BLS), Macrobond, Apollo Chief Economist

US apartment supply gradually increasing



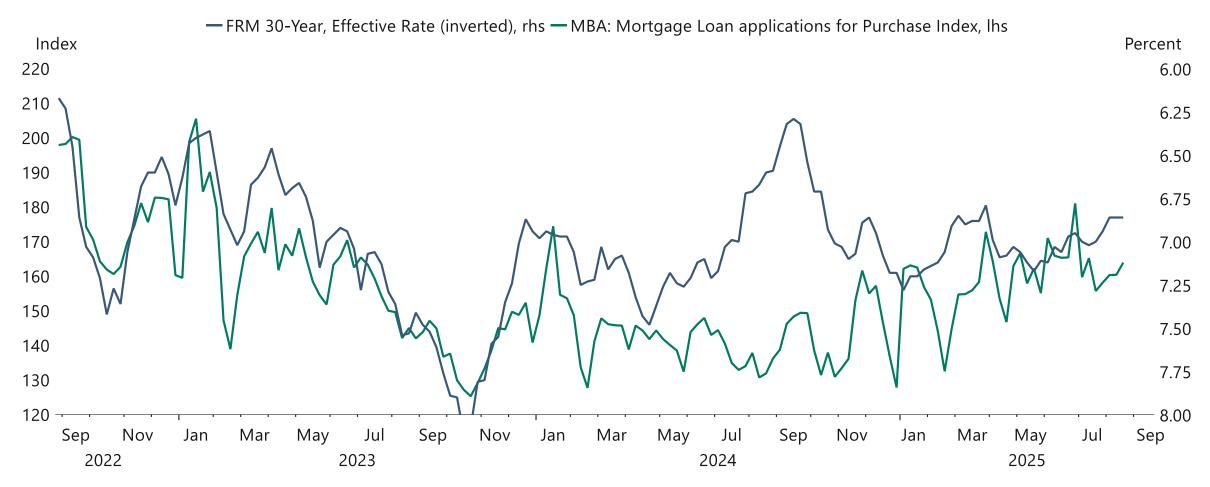
Source: U.S. Census Bureau, Macrobond, Apollo Chief Economist. Note: Apartment buildings are defined as buildings containing five units or more.

Share of homes built for rent going up

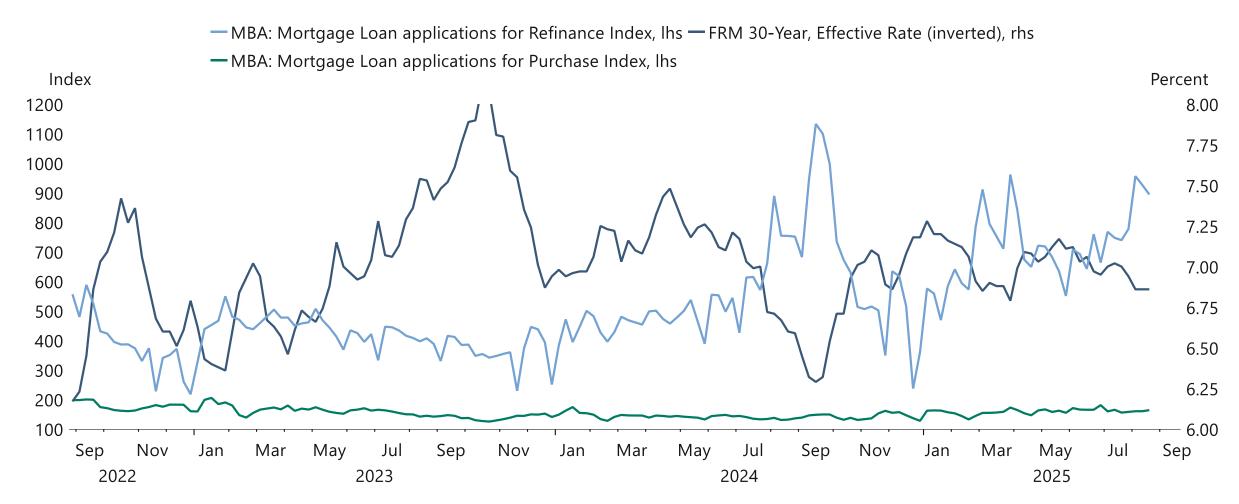


Source: U.S. Census Bureau, Macrobond, Apollo Chief Economist

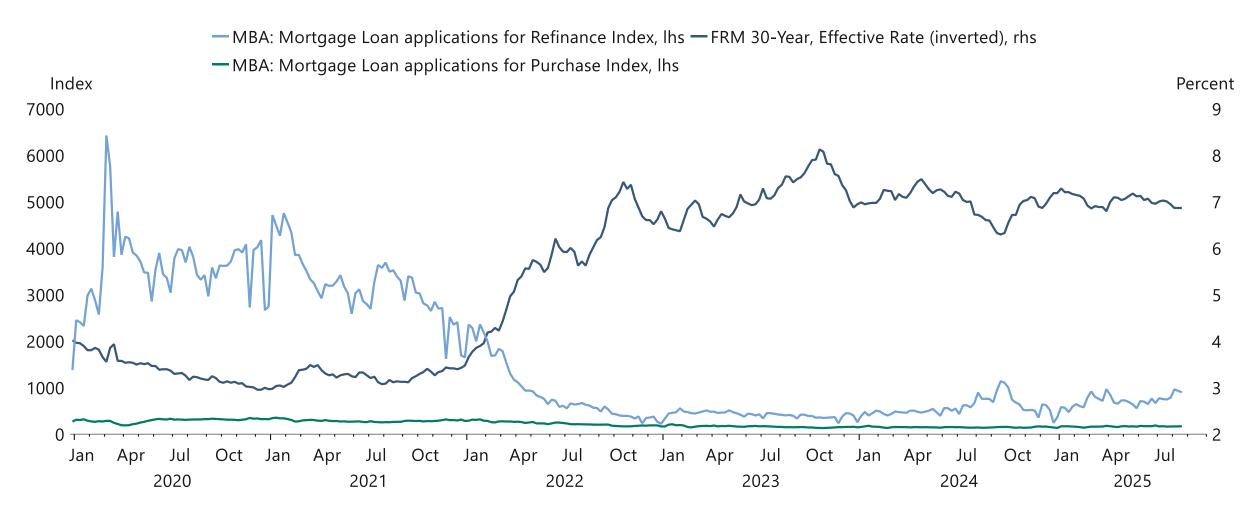
Purchase loan applications remain low



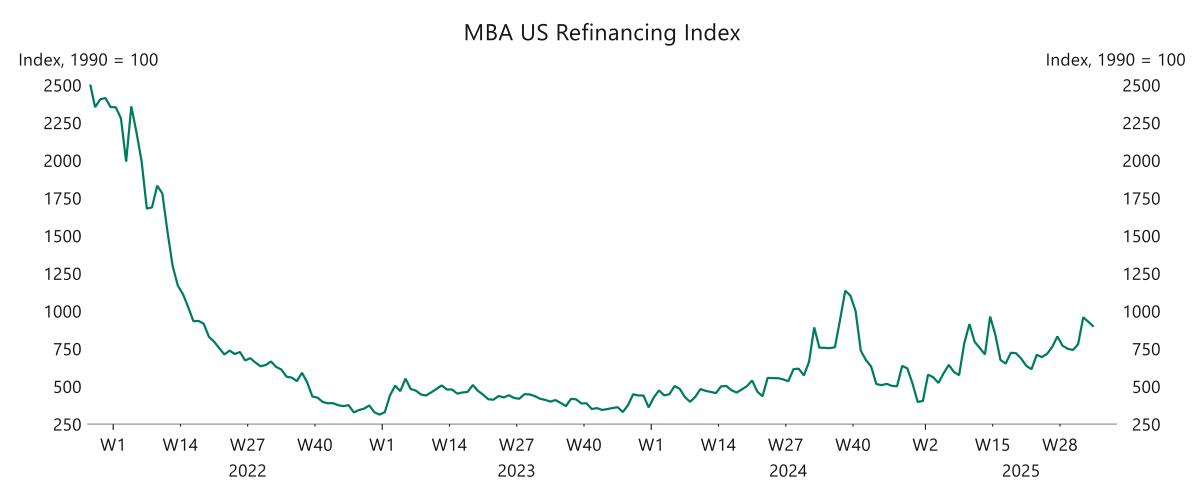
Rising interest rates putting downward pressure on mortgage purchase applications



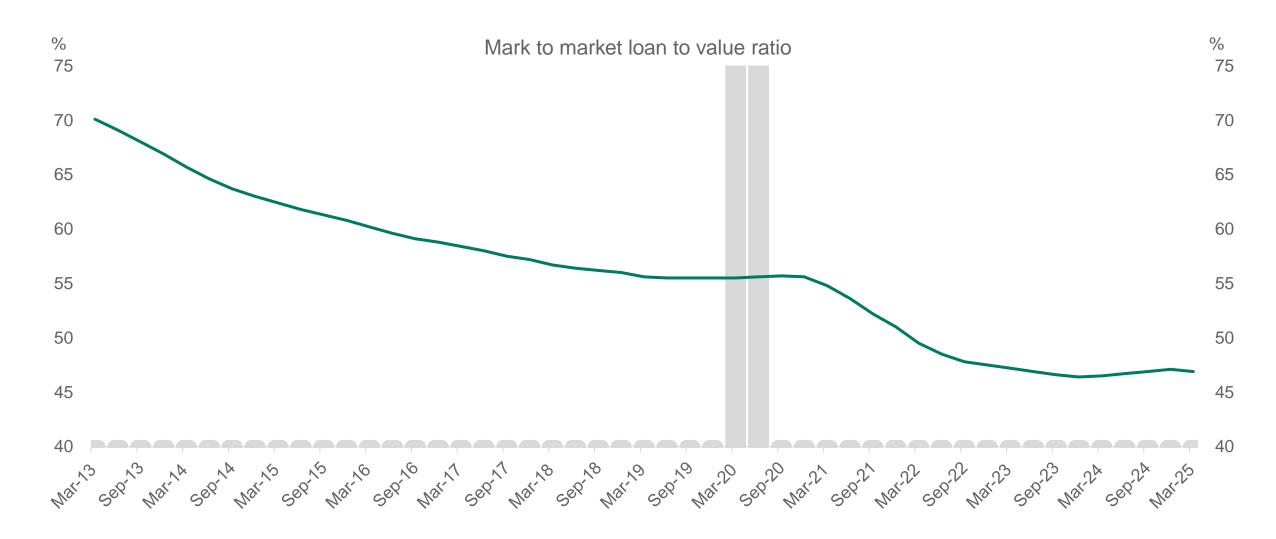
Mortgage applications fall as interest rates rise



Higher mortgage rates has pushed refinancing activity down



Loan-to-value ratio for US mortgages

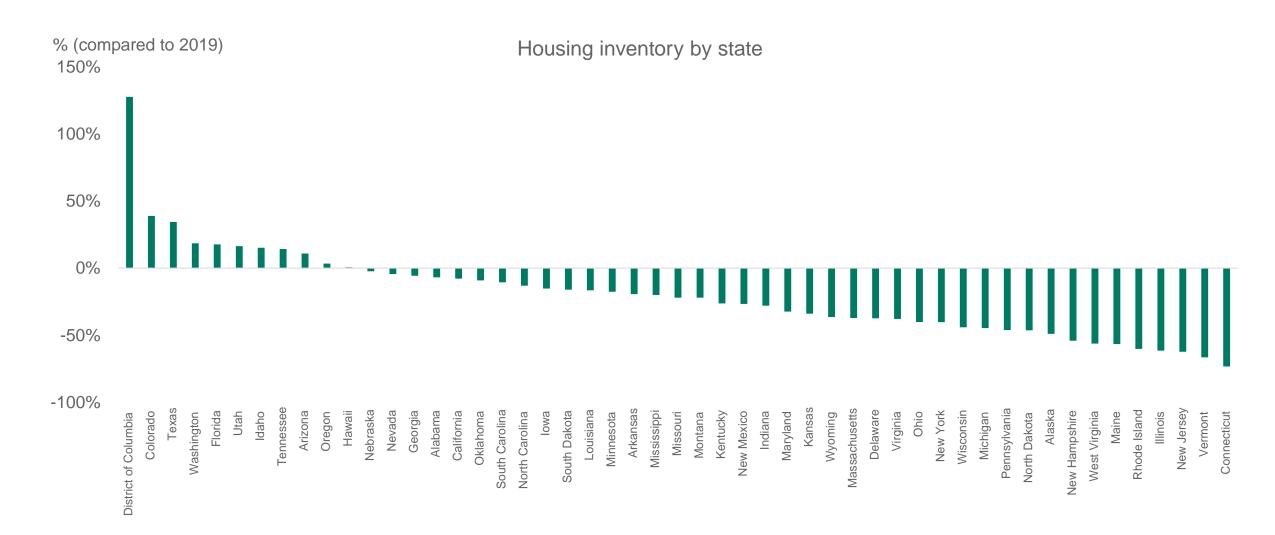


Source: FHFA, Apollo Chief Economist.

Home ownership affordability at national level



Housing inventory yet to recover to 2019 levels





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Torsten Slok joined Apollo in August 2020 as Chief Economist and he leads Apollo's macroeconomic and market analysis across the platform.

Prior to joining, Mr. Slok worked for 15 years as Chief Economist at Deutsche Bank where his team was top ranked in the annual Institutional Investor survey for a decade. Prior to joining Deutsche Bank Mr. Slok worked at the IMF in Washington, DC and at the OECD in Paris.

Mr. Slok has a Ph.D in Economics and has studied at the University of Copenhagen and Princeton University.