Real Estate & Housing

Figures current as of October 2026

The world's largest asset class: how a home is priced, the American market at record prices and frozen sales, the mortgage machine, the renters, why there aren't enough homes, the world's housing crises, China's bust, commercial property after the office, real estate as an investment, and the insurance that now helps decide what a house is worth.

MODULE 1 — Foundations

Goal: Size the subject and set its vocabulary.

The value of the world's property and America's share, what makes real estate unlike any other asset, and the terms used throughout.

MODULE 2 — A Brief History

Goal: Trace the American market from short loans to the lock-in.

The mortgage before 1930, the federal inventions of the 1930s, the suburbs, two crises of housing finance, the boom of 2020-22, and three lessons.

MODULE 3 — How a Home Is Priced

Goal: Work from rent and rates to price.

The forces that set a price, rent against price in a table, why prices fall slowly, and what the mortgage rate does to what a household can buy, worked.

MODULE 4 — The American Market in 2026

Goal: Read a market at record prices and frozen sales.

The numbers, the lock-in worked through one household, the buyers who are missing, the regions moving apart, and the strain at the bottom.

MODULE 5 — The Mortgage Machine

Goal: Follow the financing that shapes the American market.

The chain from borrower to bondholder, the thirty-year fixed loan and the guarantee behind it, where a mortgage rate comes from, worked, and whether Fannie Mae and Freddie Mac should leave government control, argued both ways.

MODULE 6 — Rent and the Renter Nation

Goal: Follow the third of households that rent.

The numbers, the apartment wave and its end, rent regulation in 2026, and large investors and the new federal rules, with whether those investors raise prices argued both ways.

MODULE 7 — Why There Aren't Enough Homes

Goal: Diagnose the shortage.

The causes in a table, whether supply limits explain prices, argued both ways, the reforms and what they did, and a zoning change's arithmetic, worked.

MODULE 8 — The World's Housing Crises

Goal: Compare the rich world's markets.

Prices against incomes from Hong Kong to Cleveland, the politics of 2025-26 country by country, and the two cities that stand outside the pattern.

MODULE 9 — China's Property Collapse

Goal: Study a bust that has not bottomed.

The numbers, how the boom was built and broken, the developers and the rescue, and a household's flat, worked.

MODULE 10 — Commercial Real Estate

Goal: Map the property that businesses use.

The sectors moving apart, the debt and who lends it now, and the office and what replaced it.

MODULE 11 — Real Estate as an Investment

Goal: Judge property against the alternatives.

The 150-year record, why property returns what it does, the ways to own it, owning against renting at today's rate, worked, and whether a home is still a good investment, argued both ways.

MODULE 12 — Insurance, Climate, and the Uninsurable

Goal: Price the risk that now prices the house.

The losses, the premiums, and the state insurers, what a premium does to a price, worked, and whether insurance prices should follow the risk, argued both ways.

MODULE 13 — Where Things Stand, and What to Watch

Goal: Assemble the picture and name the dates.

The argument on a page, five contradictions, a dated watch list from October 2026 into 2027, and a last word.

A note on the sources: American figures come from the Census Bureau, the National Association of Realtors (NAR), the Federal Housing Finance Agency (FHFA), the Federal Reserve, and Freddie Mac; world figures from Savills and Demographia; China's from its National Bureau of Statistics (NBS); commercial figures from the Mortgage Bankers Association (MBA), Trepp, CBRE, and Cushman & Wakefield. Treasury yields are the close of Wednesday, October 14, 2026, and other figures are the latest release, with its date. The course explains how the market works; it is not advice, and it does not forecast prices.

Market Snapshot

Treasury yields at the close of Wednesday, October 14, 2026, with the latest weekly, monthly, and quarterly releases

Measure	Level	Source
Federal funds rate	3.75-4.00%, raised on September 16; the next meeting October 27-28	Federal Reserve
Ten-year Treasury yield	5.19% (5.31% on October 5)	US Treasury
Thirty-year fixed mortgage rate	7.40% on October 15, the highest since November 2023; 6.27% a year earlier	Freddie Mac
Mortgage rate over the ten-year yield	2.21 percentage points	Derived
Existing-home sales	3.99 million a year in September; median price $417,500, up 1.3% on the year (record $440,600 in June)	NAR, October 13
Existing homes for sale	1.60 million, 4.8 months' supply	NAR, October 13
House prices	Up 1.9% on the year in July on the S&P Cotality Case-Shiller national index; up 2.6% on the FHFA index	S&P Dow Jones Indices; FHFA, September 29
Housing starts and permits	1.275 million and 1.394 million a year in August	Census Bureau, September 17
New-home sales	684,000 a year in August; median price $393,700	Census Bureau, September 24
Homeownership rate; rental vacancy	65.0%; 7.3% (second quarter)	Census Bureau, July 28
Mortgages at rates below 4%; at 6% or more	50.6%; 21.9% (end of 2025)	FHFA National Mortgage Database
Homeowners' equity	$35.8 trillion (second quarter)	Federal Reserve, Financial Accounts
Real estate investment trusts (REITs)	Up 7.9% in 2026 to September 30, against 12.3% for large American shares	Nareit; FTSE Russell
Office vacancy	19.8% (third quarter)	Cushman & Wakefield
Delinquency on commercial mortgage bonds (CMBS)	8.02%; office 12.16% (September)	Trepp
China's new-home prices	Down 3.0% on the year in August, a 38th straight monthly fall	NBS

Annual rates are seasonally adjusted. The derived figure is computed from the two rates shown.

Module 1 — Foundations

The Largest Asset Class

Recommended Reading / Reference

Book: Robert Shiller, *Irrational Exuberance*, third edition (2015), the chapters on housing

Reference: Savills, *Total Value of Global Real Estate* (September 2025); the Federal Reserve's Financial Accounts of the United States (the Z.1 release); the Census Bureau's Housing Vacancy Survey

1a. The Size of It

Measure	Figure	Note
The world's real estate	About $393 trillion at the start of 2025	More than the world's shares ($158 trillion) and bonds ($161 trillion) together, at the end of 2025
Residential	About $287 trillion, nearly three-quarters	Housing is the largest store of wealth on earth
Commercial	About $59 trillion	Offices, shops, warehouses, hotels, and apartments held as investments
Agricultural land	About $48 trillion	The oldest asset
China and the United States	About 24% and 21% of the world's total	Together almost half
American housing units	149.5 million	Of which 133.8 million occupied
American household real estate	Just under $50 trillion	Owners' equity (Module 4); the rest is mortgage debt (Module 5)
Homeownership rate	65.0%	35.2% for householders under 35; 78.6% for those 65 and older
Renter households	46.8 million	35.0% of occupied homes

Savills (September 2025), with the shares and bonds from the Securities Industry and Financial Markets Association (SIFMA); the Federal Reserve's Financial Accounts, second quarter of 2026; the Census Bureau's Housing Vacancy Survey, second quarter of 2026.

1b. What Real Estate Is

Real estate is land and what is built on it, and its economics follow from three facts that no other large asset shares. First, it is fixed in place. Its value is mostly the value of its location, which is why the same house can be worth $200,000 in one city and $2 million in another, and its supply in any place is limited by land, by law, and by the years it takes to build.

Second, it is consumed and held at once. An owner lives in the home and owns it as wealth, so housing is the one asset whose rising price is celebrated by many of the people who must one day buy it. Third, it is bought mostly with borrowed money. Its price therefore depends on the cost and availability of credit as much as on the number of homes, which makes housing the channel through which interest rates reach households and the sector where many financial crises begin (Module 2).

For most households in the rich world the home is the largest asset they will own, and every government taxes property, subsidizes its purchase, regulates what may be built, and depends on the revenue and jobs it brings. The subject is as political as it is economic.

1c. The Vocabulary

Term	Meaning	Example
Price to income (median multiple)	The median home price divided by the median household income: the standard measure of affordability across places and years	A $400,000 home in a market where the median household earns $80,000 has a multiple of 5
Gross rent yield	A year's rent divided by the price, before costs	A $400,000 house renting for $24,000 a year yields 6% gross, about 4% after taxes, insurance, and upkeep
Capitalization (cap) rate	A commercial property's net operating income divided by its price: its yield before financing	A building with $7 million of net income at a 7% cap rate is valued at $100 million
Loan to value (LTV)	The mortgage as a share of the price: the borrower's leverage	A 10% down payment is a 90% loan to value
Debt to income (DTI)	Monthly debt payments as a share of gross monthly income: the lender's affordability test	The old rule of thumb is 28% for housing and 36% for all debts
Months of supply	Homes for sale divided by a month's sales	About six months marks a balanced market; fewer favor sellers, more favor buyers
Absorption	Space leased or sold in a period, net of space given up	The commercial market's measure of demand
Vacancy rate	The share of units or space standing empty	Measured separately for homes for sale, rentals, and offices
Lock-in	An owner's reluctance to sell because a new mortgage would cost far more than the old one	The force behind the low sales of 2023-26 (Module 4)
Real estate investment trust (REIT)	A listed company that owns property or mortgages	Module 11

Module 1 Key Points

Foundations

• The world's real estate is worth about $393 trillion, more than all shares and bonds together; nearly three-quarters is housing.

• American households hold just under $50 trillion of real estate, with $35.8 trillion of equity.

• Three facts set real estate apart: it is fixed in place, consumed and held at once, and bought with borrowed money.

• Because it is bought on credit, housing is how interest rates reach households, and where many financial crises begin.

• About 65% of American households own and 35%, or 46.8 million, rent.

Module 1 Quiz

Check Your Understanding

1. How does the value of the world's real estate compare with its shares and bonds?

A) About a tenth of them, at about $40 trillion
B) Larger than both together, at about $393 trillion
C) About equal to shares alone, at $158 trillion
D) About half of the bond market alone, at about $80 trillion

2. What does the price-to-income ratio divide?

A) The yearly rent by the price of the home
B) The mortgage payment by the monthly rent
C) Homes for sale by a month's sales
D) Median price by median income

3. Which three facts set real estate apart from other large assets?

A) Liquid, unleveraged, and untaxed
B) It is global, interchangeable, and traded daily on exchanges
C) Fixed in place, consumed and held, bought on credit
D) It is owned mostly by governments and rented to households

4. What is the lock-in?

A) An owner's reluctance to sell because a new loan would cost more
B) A rent rule that keeps tenants in place at the old rent
C) A zoning rule that freezes a parcel's use for a generation
D) A tax on second homes that keeps their owners from selling

5. What share of American households rent?

A) About 10%, or 13 million
B) About 65%, or 87 million households
C) About 50%, or 67 million households
D) About 35%, or 46.8 million

Module 2 — A Brief History

From Short Loans to the Lock-In

Recommended Reading / Reference

Book: Kenneth T. Jackson, *Crabgrass Frontier: The Suburbanization of the United States* (1985)

Reference: The Census Bureau's historical tables on homeownership; the Federal Reserve Bank of St. Louis's FRED series on mortgage rates, prices, and housing starts

2a. The American Market in Eight Periods

Period	What happened	What it left
Before 1930	Mortgages of five to ten years, often interest-only with the whole loan due at the end, for about half the price; homeownership 46-48% in the censuses of 1900-1930	A market of large down payments and refinancing risk, where renting was the urban norm
1933-38	The Depression's foreclosures. The Home Owners' Loan Corporation (1933) refinanced about a million mortgages into long, fully repaid loans; the Federal Housing Administration (FHA, 1934) insured loans of up to 20 years for 80% of the value; Fannie Mae (1938) bought them	The long, amortizing, federally backed mortgage, which became the thirty-year loan after the war
1944-70	The GI Bill's loans for veterans, Levittown, the interstates, and federal maps that marked Black neighborhoods as bad risks; homeownership 43.6% in 1940, 61.9% in 1960, and 62.9% in 1970	The suburban house as the American aspiration, and a racial wealth gap built into the map
1968-90	Ginnie Mae and a private Fannie Mae (1968), Freddie Mac (1970), and the first mortgage-backed securities; mortgage rates of 18.6% in October 1981; 1,043 savings institutions failed in 1986-95, at a cost to taxpayers of about $124 billion	Securitization, and the first modern crisis of housing finance
1995-2006	Falling rates; subprime, adjustable, and low-documentation loans; homeownership peaked at 69.2% in 2004	The bubble
2007-12	Prices fell about a quarter on the national index and a third in the twenty largest cities; about 9.3 million households lost homes to foreclosure or forced sales from 2007 to 2014; Fannie Mae and Freddie Mac taken into conservatorship (Module 5); the Fed bought $1.25 trillion of mortgage bonds in 2009-10	A decade of caution in lending and in building
2012-19	Recovery on low rates; housing starts averaged about 1.1 million a year, about four-fifths of the 1990s pace; large investors began buying single-family homes to rent (Module 6)	The shortage that the 2020s inherited
2020-26	Mortgage rates fell to a record low of 2.65% in January 2021 and prices rose about 45% from February 2020 to June 2022, the fastest rise in the national index's history; rates then rose to 7.79% in October 2023, eased, and climbed again in 2026 (Module 5)	Record prices, owners locked into cheap loans, and frozen sales (Module 4)

Census Bureau; the Federal Deposit Insurance Corporation (FDIC); Freddie Mac; the S&P Cotality Case-Shiller indexes; the Federal Reserve.

2b. Three Lessons of the History

The first lesson is that the American market is a creation of policy. The long fixed-rate mortgage, the federal guarantee behind it, the tax treatment of homeowners, the interstates, and the zoning that followed were each a decision. So was the exclusion of Black families from much of the subsidy, whose effects survive in the gap in homeownership. Which of these decisions can be changed, and how, is the subject of Module 7.

The second lesson is that housing finance is where crises start. The savings-and-loan collapse and the subprime collapse ran on the same mechanism: long loans funded with short money or with fragile securities, leverage on a rising price, and then a shock. The rate shock of 2022-23 did not repeat it, because most borrowers of the 2010s had fixed rates, lenders had been regulated into caution, and the shock fell on buyers who could not get in rather than on owners who could not pay. What strain there is falls on the newest borrowers (Module 4).

The third lesson is that the boom of 2020-22 left the lock-in (Module 4). Every earlier cycle cleared through falling prices; this one has so far cleared through falling sales.

Module 2 Key Points

A Brief History

• Before 1930 mortgages were short, interest-only, and half the price; ownership sat near 46-48%.

• The 1930s invented the long, amortizing, federally backed mortgage, which became the thirty-year loan after the war.

• Housing finance is where crises start: the savings-and-loan collapse and 2008 ran on the same mechanism.

• The 2022-23 rate shock fell on would-be buyers rather than owners, because most loans carried fixed rates.

• The 2020-22 boom left the lock-in: this cycle has cleared through falling sales, not falling prices.

Module 2 Quiz

Check Your Understanding

1. What did the Federal Housing Administration insure from 1934?

A) Interest-only loans due in full after five years
B) Fully repaid loans of up to 20 years for 80% of value
C) Loans to the builders of large apartment towers
D) Adjustable loans with no down payment at all

2. What mechanism did the savings-and-loan collapse and the 2008 crisis share?

A) A shortage of homes in the growing cities of the South
B) A collapse in rents as apartment supply overtook demand
C) Fragile funding, leverage, and a shock
D) Foreign buyers leaving the coastal markets at the same time

3. Why did the rate shock of 2022-23 not produce a financial crisis?

A) Borrowers had fixed rates and lenders were cautious
B) Rates did not rise enough to matter to borrowers
C) Prices fell by a third before the shock arrived
D) The government bought every mortgage the banks could not hold

4. How fast did America build in 2012-19 compared with the 1990s?

A) At about four-fifths of the 1990s pace
B) At twice the 1990s pace
C) At exactly the 1990s pace
D) At about a tenth of the 1990s pace, the lowest on record

5. How has this cycle differed from every earlier one, on the module's account?

A) Prices fell by a third within two years of the peak
B) Homeownership rose to a record 80% of households
C) Rents halved as owners sold to renters
D) It cleared through falling sales, not falling prices

Module 3 — How a Home Is Priced

From Rent and Rates to Price

Recommended Reading / Reference

Book: Edward Glaeser and Joseph Gyourko, *Rethinking Federal Housing Policy* (2008)

Reference: Freddie Mac's Primary Mortgage Market Survey (weekly); ATTOM's *Single-Family Rental Market Report* (March 2026); the Federal Reserve Bank of Dallas's international house price database

3a. The Forces That Set a Price

A home's price rests on three things and the arithmetic that joins them. The first is the rent it would command, the value of living in it, which rises with local incomes and jobs and falls with the supply of alternatives. The second is the rate at which a buyer can borrow, which turns a monthly payment into a price. The third is supply: how many homes exist and how many can be built, fixed in the short run and set in the long run by land, rules, and the cost of building.

Force	How it works	Where it stands in the United States, 2026
Incomes	Higher incomes raise the rent a household can pay and the loan it qualifies for	Median household income $87,460 in 2025, up 2.6% after inflation, a record; incomes now rise a little faster than prices
Mortgage rates	A point of mortgage rate changes what a given payment can borrow (worked example, 3c)	The dominant force since 2020 (Module 2), now at the highest since 2023
Supply	New homes against new households	Short after years of underbuilding (Module 7)
Credit standards	Down payments, income limits, documentation	Tight since 2010, with the FHA's low down payment the main exception (Module 5)
Investors	Second homes, small landlords, and large firms buy at the margin	Individual investors and second-home buyers made 20% of September's sales, up from 15% a year earlier; large firms in Module 6
Taxes and subsidies	The mortgage-interest deduction, the exclusion of most gains on a home, property taxes	Subsidies raise prices by roughly their capitalized value (Module 11)
Insurance	A required cost that rises with the risk of fire, wind, and flood	A first-order force in exposed states (Module 12)
Expectations	Buyers pay for the gains they expect	Muted after four years of slow gains

Census Bureau (September 2026); NAR (October 13, 2026).

3b. Rent Against Price

The rent yield (Module 1) tells whether a market is priced on the value of living there or on credit, scarcity, and expectations. Where yields are high, homes are cheap relative to what they earn; where they are low, buyers pay for something other than this year's rent.

Place	Gross rent yield	Reading
St. Clair County, Illinois (near St. Louis)	14.5%	The highest of the 416 counties surveyed
Suffolk County, New York	10.8%	High rents on Long Island against moderate prices
Cook County, Illinois (Chicago)	9.8%	A big city priced on rent
Cuyahoga County, Ohio (Cleveland)	9.5%	The affordable interior

Place	Gross rent yield	Reading
Harris County, Texas (Houston)	8.0%	A metro that builds
Alameda and Orange Counties, California	4.5%	Priced on scarcity
Honolulu County, Hawaii	4.2%	Land-constrained
Santa Clara County, California (San Jose)	3.1%	The lowest in the survey, with Walton County, Florida
United States, all homes	5.3%	The median asking rent ($1,531 a month) against the median asking price ($343,800)

ATTOM, *2026 Single-Family Rental Market Report* (March 2026): average three-bedroom rents against median sale prices, gross, before costs. National figure derived from the Census Bureau's Housing Vacancy Survey, second quarter of 2026; ATTOM's method gives higher yields than the Census measure.

3c. Why Prices Fall Slowly

The market's asymmetry follows from who must sell. When credit loosens or supply is short, buyers compete and prices rise quickly. When credit tightens, owners who need not sell simply stay put: listings dry up, sales fall, and the price adjusts through years of stagnation rather than months of decline. That is how 2022-26 has unfolded. National prices rose 1.9% in the year to July 2026 on the S&P Cotality Case-Shiller index while consumer prices rose faster, so real prices fell for a 14th straight month. A frozen market falls in real terms first.

Worked example — What the Mortgage Rate Does to What a Household Can Buy

The setup. A household earning the median income of $87,460 (3a) spends 28% of it, $2,041 a month, on principal and interest, and puts down 10% of the price, the median first-time buyer's down payment. The loan it can carry is the payment times $(1 - (1 + r)^{-360}) \div r$, where r is the annual mortgage rate divided by 12 and 360 is the months in thirty years. **At 2.65%** (Module 2), it can borrow $506,400 and buy a $562,700 home. **At 6.27%**, the rate a year ago, $367,500. **At 7.40%** (Module 5), $327,500: 42% less house than in 2021 for the same income. **Against the market.** September's median existing home (Module 4) cost $417,500. With 10% down at 7.40% its payment is $2,602 a month, 35.7% of the median income; to keep it at 28% a household would need $111,500 a year. **The sensitivity.** A point lower, at 6.40%, the same payment carries 10.7% more loan. NAR estimated in July 2025 that a rate of 6% would bring the median home within reach of about 5.5 million more households. Property taxes and insurance come on top (Module 12).

Module 3 Key Points

How a Home Is Priced

• A price rests on the rent a home commands, the rate that turns a payment into a price, and the supply that exists.

• Rent yields run from 14.5% in parts of the Midwest to 3.1% around San Jose; low yields mean credit, scarcity, and hope.

• Prices fall slowly because owners withdraw rather than sell; American real prices have fallen 14 months running.

• At 7.40% the median household can buy 42% less house than at 2.65%: about $327,500 against $562,700.

• A point of mortgage rate moves what a payment can borrow by about 10%.

Module 3 Quiz

Check Your Understanding

1. Why do house prices fall slowly when credit tightens?

A) Governments set a floor under prices through the agencies
B) Rents rise at once to compensate owners for the higher rates
C) Owners who need not sell stay put, so sales fall instead
D) Banks buy the homes of owners who can no longer pay

2. What does a low rent yield suggest about a market?

A) It is cheap relative to what homes earn
B) Priced on credit, scarcity, or hope
C) Its rents are rising faster than prices
D) Its homes are mostly owned by landlords

3. In the worked example, what can the median household buy at 7.40%?

A) About $562,700, the same as in 2021
B) The September median, $417,500
C) $111,500
D) About $327,500

4. How much does a point of mortgage rate change what a payment can borrow?

A) About 10%
B) About 1% at most
C) About a quarter
D) About half

5. Which county had the lowest gross rent yield in the 2026 survey?

A) Cuyahoga, Ohio, home to Cleveland
B) St. Clair, Illinois, near St. Louis
C) Santa Clara, California, with Walton, Florida
D) Harris, Texas, home to Houston

Module 4 — The American Market in 2026

Record Prices, Frozen Sales, Rising Rates

Recommended Reading / Reference

Reference: Harvard's Joint Center for Housing Studies (JCHS), *The State of the Nation's Housing 2026*; NAR's monthly existing-home sales and its annual *Profile of Home Buyers and Sellers*; the Mortgage Bankers Association's National Delinquency Survey; the Department of Housing and Urban Development's (HUD) *Annual Homelessness Assessment Report*

4a. The Numbers

Measure	Latest	A year earlier	Peak or trough	Note
Existing-home sales (annual rate)	3.99 million (September)	About 4.08 million	6.12 million in 2021	2025's 4.06 million was the lowest year since 1995
Median existing-home price	$417,500 (September)	$412,300	Record $440,600 (June 2026)	A 39th straight month above the year before
Existing homes for sale	1.60 million; 4.8 months' supply	About 1.53 million; 4.5 months	About 0.86 million (January 2022)	Short of a balanced market (Module 1)
Housing starts (annual rate)	1.275 million (August)	About 1.29 million	2.36 million in 1972	Completions down 27% on the year as the apartment wave ends (Module 6)
New-home sales (annual rate)	684,000; median $393,700 (August)	About 698,000	—	The new-home median is below the existing-home median
Homeowners' equity	$35.8 trillion (second quarter)	$35.0 trillion	The latest, a record	The owners' side of the same market

NAR (October 13, 2026); Census Bureau (September 17 and 24, 2026); Federal Reserve, Financial Accounts (September 2026).

4b. The Frozen Market

The American market in 2026 is in a state no earlier cycle produced. Prices stand near their record while sales are stuck near a thirty-year low, and real prices are falling (Module 3). The mortgage rate has risen again since the summer (Module 5), after the Fed's rise in September.

The mechanism is the lock-in. About half of all mortgages carry rates below 4%, down from 65% at the peak in early 2022, and 21.9% now carry 6% or more. Owners with cheap loans do not sell unless life forces them to; buyers who would replace them cannot afford record prices at today's rates; and the market clears far below the 5 to 6 million sales of a normal year, with prices held up by the sellers' absence.

Worked example — The Lock-In, in One Household

The setup. An owner has $300,000 left on a thirty-year mortgage at 3%, a monthly payment of principal and interest of $1,265. **The move.** To buy an identical house down the street with the same loan at 7.40% (Module 5), the payment becomes $2,077: $812 more a month, 64% more, for the same home. **The result.** Only a new job, a new child, a divorce, or a death is worth that, which is why sales track life events rather than prices, and why the lock-in erodes only as cheap loans are paid off or their owners move anyway. Each year more mortgages are new ones at high rates, so the share at 6% or more now exceeds the share below 3%.

4c. The Missing Buyers

First-time buyers made up 21% of purchases in NAR's 2025 survey of buyers, the lowest share on record, and their median age reached 40, the highest; the median repeat buyer was 62, and sellers had held their homes a record 11 years. NAR's monthly survey, which counts transactions differently, puts first-time buyers at 31% of September's sales. On either measure the young are buying later and less, while owners stay longer, and the gap shows up in the age of the buyer more than in the price.

4d. The Regions Moving Apart

Region	Prices, latest year	What happened	Reading
Northeast	Up 4.7% (NAR, September); New York up 5.8% (Case-Shiller, July)	Little new building and the deepest lock-in	Scarcity: prices rise on few listings
Midwest	Up 3.1%; Chicago up 6.9%, Cleveland 4.2%	Cheap by income, with little supply added	The affordable interior, now in demand
South	Up 0.2%; Austin down 4.5%, Florida's Punta Gorda and Cape Coral down about 4%	The largest building wave since 2006 met slower migration and rising insurance	The softest region: where supply arrived, prices stopped
West	Down 0.3%; Seattle, Las Vegas, Denver, and Portland down	High prices against incomes, and buyers stretched by rates	Prices falling at the top of the market

NAR regional medians (September 2026, change on a year); S&P Cotality Case-Shiller (July 2026); ResiClub (July 2026 data), which counted 64 of the 300 largest metros with falling prices, down from 105 a year earlier.

4e. The Strain at the Bottom

The households under the most pressure are the newest owners and those without homes. In the second quarter of 2026, 4.37% of mortgages were delinquent, and 11.79% of those insured by the FHA, which lends to many first-time and lower-income buyers, up 1.2 points in a year; serious delinquencies have risen for four quarters. At the very bottom, HUD counted 745,652 people homeless on a night in January 2025, down 3% from the record of January 2024 but still far above the 2010s.

Module 4 Key Points

The American Market in 2026

• Sales are stuck near 4 million a year, the lowest since 1995, while the median price stands near June's record of $440,600.

• About half of mortgages are below 4%; moving from 3% to 7.40% raises a payment by 64% for the same house.

• First-time buyers were 21% of purchases at a record median age of 40 in NAR's 2025 survey.

• Prices rise in the Northeast and Midwest, which built little, and fall in parts of the South and West, which built most.

• FHA delinquency reached 11.79%; homelessness fell 3% in January 2025 from its 2024 record.

Module 4 Quiz

Check Your Understanding

1. What is the state of the American market in 2026 that no earlier cycle produced?

A) A crash of 30% in prices with record sales
B) Prices near a record with sales near a thirty-year low
C) Falling prices and rising sales as owners sold
D) Homeownership at a record high as renters finally bought in

2. About what share of mortgages carried rates below 4% at the end of 2025?

A) A tenth
B) About 90%
C) About two-thirds, the share at the peak
D) About half

3. In the worked example, how much does moving from 3% to 7.40% raise the payment?

A) By about 10%, or $125
B) By 64%, or $812 more a month
C) By half, or $630 a month
D) Not at all: same house

4. Where are prices falling fastest?

A) In the Northeast, where little has been built
B) In the Midwest, where homes are cheapest
C) Parts of the South and West
D) Evenly in every region of the country

5. What happened to delinquency on FHA loans by mid-2026?

A) It rose to 11.79%
B) It fell to 1%
C) It matched other loans at about 4%
D) It was no longer measured by the MBA

Module 5 — The Mortgage Machine

The Financing That Shapes the American Market

Recommended Reading / Reference

Book: Bethany McLean, *Shaky Ground: The Strange Saga of the U.S. Mortgage Giants* (2015)

Reference: FHFA's reports on Fannie Mae and Freddie Mac, including its annual report on guarantee fees; the Urban Institute's *Housing Finance at a Glance* (monthly); Ginnie Mae's *Global Market Analysis* (monthly)

5a. The Chain

Link	What it does	Size or share, 2026	Note
The borrower	Takes a loan, usually fixed for thirty years (5b)	About 53 million homes carry a mortgage; household mortgage debt about $14 trillion	Most loans in other countries reset every few years
The originator	A bank or a non-bank lender (Rocket, United Wholesale Mortgage) makes the loan and usually sells it within weeks	Non-banks make about two-thirds of mortgages	It keeps the fee and often the servicing, not the risk
Fannie Mae and Freddie Mac	Buy loans up to the conforming limit, pool them, and guarantee the bonds against default for a fee	Limit $832,750 in 2026 ($1,249,125 in high-cost areas); about $6.5 trillion of bonds guaranteed	In federal conservatorship (5b)
The FHA, the Department of Veterans Affairs (VA), and Ginnie Mae	The FHA insures loans with 3.5% down and the VA loans with none; Ginnie Mae guarantees the bonds backed by them	Ginnie Mae's bonds are 29% of agency single-family mortgage bonds	The government's direct hand, and its newest borrowers (Module 4)
The mortgage-backed security (MBS)	Pooled loans sold to investors	Agency single-family bonds $9.23 trillion (February 2026); private-label $546 billion	The Fed holds $1.9 trillion and lets it run off, reinvesting the repayments in Treasury bills
The servicer	Collects payments and handles defaults	Non-banks service most loans	Must advance payments on delinquent loans, the weak link in a stress

FHFA; Ginnie Mae (March 2026); Inside Mortgage Finance; the Federal Reserve (October 7, 2026). The count of mortgaged homes is derived from the Census Bureau's survey of owner-occupied homes.

5b. The Thirty-Year Fixed Loan and the Guarantee

The thirty-year fixed-rate mortgage that can be repaid at any time without penalty is a loan few private lenders would offer on their own. It gives the borrower a one-way bet on interest rates: if rates rise, the borrower keeps the low rate for decades, and if they fall, the borrower refinances. The lender or bondholder holds the losing side of both. Outside the United States, only Denmark offers such loans at scale, funded by covered bonds.

It exists because the federal government built the institutions that carry it, from the FHA (Module 2) to Fannie Mae and Freddie Mac, and because it has stood behind them since September 2008, when the Treasury put both into conservatorship and committed capital that came to about $191.5 billion. Investors

take the rate risk, Fannie and Freddie the credit risk, and the taxpayer stands behind them. The result is the market's peculiar shape: mortgage rates that track the bond market rather than the banks, and the lock-in that follows.

Worked example — Where a 7.40% Mortgage Rate Comes From

The setup. On October 15 the average thirty-year rate was 7.40%, and the ten-year Treasury yield, the benchmark it follows, was 5.19% at the previous close. The gap is 2.21 percentage points. **The fees.** Fannie and Freddie charged an average guarantee fee of about 0.65 points in 2024, and servicers keep about 0.25 points a year, so about 0.90 of the gap pays for the guarantee and the collection. **The rest.** The remaining 1.31 points pays the bondholder for the borrower's right to repay early, which costs investors most when rates fall, and the lender for making the loan. **The lesson.** A mortgage rate is a Treasury yield plus the price of the guarantee, the servicing, and the prepayment option. With the spread near its normal range, this autumn's rise in mortgage rates came almost entirely from the rise in Treasury yields, which the Fed sets only at the short end.

5c. The Government's Hand in 2025-26

The administration has used the machine directly. In January 2026 President Trump ordered Fannie and Freddie to buy up to $200 billion of mortgage bonds to push rates down, and the thirty-year rate fell about a tenth of a point, to about 6.06% by late February, before Treasury yields rose. A fifty-year mortgage, floated in November 2025, was dropped in January. Bill Pulte, director of the FHFA, which regulates and controls both companies, and since June 2, 2026 also acting Director of National Intelligence, has proposed selling 2.5-5% of them to the public and has valued them at $500-700 billion. Trump said on June 5 that there was no rush, and as of mid-October nothing had been offered.

5d. Should Fannie Mae and Freddie Mac Leave Government Control?

The case for release

Its advocates, among them the administration and the companies' private shareholders, say eighteen years of conservatorship were meant to be temporary. The companies have rebuilt capital, and a sale would return billions to the Treasury on stakes worth hundreds of billions. Private ownership with capital requirements, they argue, would restore market discipline, and the government's backing of the bonds could continue as now, so mortgage rates need not rise.

The case against

Its critics, among them many housing economists and consumer groups, say release without an explicit, priced guarantee would recreate the arrangement that failed in 2008: private profits on a public guarantee that investors assume but no law provides. If investors doubted the backing, the bonds would trade at wider spreads and mortgage rates would rise; if they did not, the taxpayer would carry the risk for shareholders' benefit. They argue the companies remain short of the capital their own regulator requires.

The evidence

The Treasury holds senior preferred stock and warrants for almost 80% of their common shares. They have retained their earnings since 2019. No explicit guarantee has been proposed; the President said in May 2025 that the implied backing would stay, and the FHFA's director said in November 2025 that the companies would stay under federal control. The plan on the table is the minority sale in 5c.

The course's reading

The question that matters is the guarantee, not the share register. A minority sale under continued federal control changes little for borrowers and keeps the taxpayer's exposure, now with shareholders beside it. A full release would change mortgage rates only through what it does to the guarantee, explicit and priced, implicit, or gone, and none of the proposals so far has settled that.

Module 5 Key Points

The Mortgage Machine

• The chain: borrower, originator, Fannie Mae or Freddie Mac or Ginnie Mae, the bondholder, and the servicer.

• The prepayable thirty-year fixed loan exists at scale only in the United States and Denmark, and depends on the federal guarantee.

• A mortgage rate is the Treasury yield plus guarantee, servicing, and the prepayment option: 7.40% against 5.19%.

• In 2026 the government ordered $200 billion of mortgage-bond buying and proposed selling 2.5-5% of the two companies.

• The course's reading: what matters in a release is the guarantee's form, which no proposal has yet settled.

Module 5 Quiz

Check Your Understanding

1. Where does the prepayable thirty-year fixed-rate mortgage exist at scale?

A) In every rich country with a mortgage market
B) Only in Britain and Canada, on the old model
C) Nowhere since the 2008 crisis ended it
D) Only in the United States and Denmark

2. What do Fannie Mae and Freddie Mac do?

A) Buy loans, pool them, and guarantee the bonds against default
B) Lend directly to borrowers through their own branches
C) Set the mortgage rate each week for the whole market
D) Insure homes against fire and flood for their owners

3. In the worked example, about how much of the 2.21-point gap pays for the guarantee and servicing?

A) All of it
B) Only 0.10 points
C) About 0.90 points
D) About 2 points, nearly all

4. What did President Trump order in January 2026?

A) An end to the thirty-year mortgage
B) $200 billion of mortgage-bond purchases
C) A cut in the conforming loan limit for 2026
D) The full sale of both companies to private investors

5. On the course's reading, what matters most in releasing Fannie and Freddie?

A) The share price at the sale
B) The form of the guarantee
C) Where their offices are
D) Who chairs their boards

Module 6 — Rent and the Renter Nation

The Third of Households That Rent

Recommended Reading / Reference

Book: Matthew Desmond, *Evicted: Poverty and Profit in the American City* (2016)

Reference: JCHS, *The State of the Nation's Housing 2026* (June 2026); the Census Bureau's Housing Vacancy Survey; Zillow's and Apartment List's monthly rent reports

6a. The Numbers

Measure	Figure	Note
Who rents	Most householders under 35 (Module 1); 55% of Black and 52% of Hispanic householders	Higher than for all households (Module 1)
Asking rents, September 2026	$1,932 a month on Zillow's index, up 2.7% on the year; $1,388 on Apartment List's, down 0.4%	Nearly flat; concessions on 40% of Zillow's listings
Rents since 2020	Professionally managed apartments 29% higher in early 2026	Most of the rise came in 2021-22
Cost-burdened renters	A record 22.7 million households, 49% of renters, paid more than 30% of income in 2024	The burden has spread up the income scale
Low-cost rentals	Units renting for under $1,000 fell from 8.3 million in 2014 to 5.8 million in 2024	The cheap end of the stock is disappearing
Rental vacancy by region	South 9.5%, Midwest 6.9%, Northeast 5.9%, West 5.3% (second quarter)	Highest where the apartment wave landed
Who owns the rentals	Individuals own about three-quarters of rental properties but under half of rental units	Firms own most larger buildings
Built to rent	11% of new single-family homes in 2025	Nearly three times the historical average

Census Bureau (second quarter of 2026); Zillow (October 6, 2026); Apartment List (October 12, 2026); JCHS (June 2026); the Census Bureau's Rental Housing Finance Survey, as analyzed by JCHS.

6b. The Apartment Wave and Its End

The one part of the market that built heavily in the 2020s was apartments. Financed at the low rates of 2020-21 and finished in 2023-25, the wave peaked in 2024, when about 600,000 units in buildings of five or more were completed, the most since 1974. It was the clearest supply experiment in the record. Where it landed, rents fell: in the year to September 2026 they were down 5.1% in San Antonio, 3.4% in Denver, and 2.9% in Phoenix and Austin on Apartment List's measure. Where little was built, they rose, by 11.0% in San Francisco and 7.9% in San Jose.

The wave is now ending. Completions in large buildings fell to an annual rate of 302,000 in August 2026, down 36% from a year earlier, as the projects started before rates rose were finished. Starts of large buildings rose 9.7% in the first eight months of 2026, so a smaller second wave may follow, but the relief from new supply is fading just as cost burdens reach records.

6c. Rent Regulation in 2026

New York City has the country's largest regulated stock, nearly a million rent-stabilized apartments. On June 25, 2026 its Rent Guidelines Board, most of whose members had been appointed by Mayor Zohran Mamdani, voted 7-1 to freeze rents on both one-year and two-year leases beginning between October 1, 2026 and September 30, 2027, the first freeze ever on two-year leases. Owners had pointed to a 5.3% rise in their operating costs; in July a group of landlords sued to overturn the vote.

Elsewhere, statewide caps limit yearly rises rather than freezing them: Oregon's cap is 9.5% for 2026, and California and Washington cap rises at 5% and 7% plus inflation, with a ceiling of 10%. On June 23 Massachusetts' highest court removed a proposed statewide cap from the November ballot. Economists' studies generally find that rent regulation protects the tenants who hold regulated units and, over time, reduces the supply of rentals as owners convert or neglect them; supporters answer that stability for sitting tenants is the purpose.

6d. Large Investors and the New Federal Rules

Firms that own thousands of single-family homes, such as Invitation Homes and American Homes 4 Rent, began buying foreclosed houses after 2008. They own a few hundred thousand homes, a small share of single-family rentals and well under 1% of all homes, concentrated in Sun Belt metros such as Atlanta, Charlotte, Phoenix, and Tampa.

In 2026 both branches of government acted against them. Executive Order 14376, 'Stopping Wall Street From Competing With Main Street Homebuyers', signed January 20, told federal agencies and Fannie and Freddie to stop financing or easing large investors' purchases of homes that families could buy, with an exception for homes built to rent, and ordered antitrust reviews. Then the 21st Century ROAD to Housing Act passed the Senate 85-5 on June 22 and the House 358-32 on June 23, and became law on July 11 without the President's signature, which he had withheld to press for a voting bill. From January 7, 2027, a for-profit investor that controls 350 or more single-family homes may not buy more, with homes built to rent and ten other categories exempt, on penalty of up to $1 million or three times the price.

The case that large investors make homes dearer

Its advocates, from tenant groups to both parties' populists and the administration, say firms with cheap capital outbid families for starter homes in the metros where they cluster, raise rents through scale and pricing software, and file evictions more often than small landlords. A family that loses a bidding war to a fund loses its main route to wealth, and the homes that firms buy are the cheaper ones the young most need.

The case that they do not

Its critics, from the industry to many housing economists, say the firms own too small a share to move national prices, bought when no one else would after 2008, and now add supply by building homes to rent. Renters who cannot buy still need houses to rent. The shortage predates the firms, and a ban on one kind of buyer adds no homes.

The evidence

Large firms' holdings are small nationally and large in a few neighborhoods. Researchers at the Atlanta Fed found that big corporate landlords in Fulton County, Georgia filed eviction notices far more often than small ones. Building to rent has grown fastest of all (6a).

The course's reading

Large investors are a local force on prices in a handful of metros and a national symbol of a market that excludes the young. Neither the order nor the law adds a home. The measure of their effect will be whether the excluded purchases pass to families or to the exempt build-to-rent channel, and whether prices in the investors' metros change at all.

Module 6 Key Points

Rent and the Renter Nation

• Renters pay record burdens: 22.7 million households, 49% of renters, spent over 30% of income on rent in 2024.

• The apartment wave peaked in 2024; where it landed rents fell, and where little was built they rose up to 11%.

• New York froze stabilized rents on one- and two-year leases from October 2026, the first two-year freeze.

• From January 2027 investors controlling 350 or more single-family homes may not buy more.

• The course's reading: large investors are a local force and a national symbol; neither new rule adds a home.

Module 6 Quiz

Check Your Understanding

1. How many renter households were cost-burdened in 2024, by JCHS's count?

A) 22.7 million, 49% of renters
B) About 10% of renters
C) About a quarter of all renters, mostly young
D) Nearly all renters on the coasts

2. What did the apartment wave of 2023-25 show?

A) Supply has no effect on rents
B) Rents rose everywhere alike
C) New buildings stood empty
D) Where supply landed, rents fell

3. What did New York's Rent Guidelines Board vote in June 2026?

A) A rise of 3% and 4.5%
B) An end to rent stabilization
C) A freeze at 0%
D) A cap of 9.5% for 2026

4. What does the ROAD to Housing Act do about large investors?

A) Forces them to sell every home within a year
B) Caps the rents they may charge at 5% a year
C) Bans them from owning any home after 2027
D) Bars those with 350 or more homes from buying more

5. Which purchases do both 2026 federal measures exempt?

A) Condominiums in cities
B) Homes built to rent
C) Homes bought for cash
D) Vacation homes on coasts

Module 7 — Why There Aren't Enough Homes

Diagnosing the Shortage

Recommended Reading / Reference

Book: Katherine Levine Einstein, David M. Glick, and Maxwell Palmer, *Neighborhood Defenders: Participatory Politics and America's Housing Crisis* (2020)

Reference: The National Association of Home Builders' (NAHB) studies of construction costs and of regulation's share of a home's price; the Census Bureau's *New Residential Construction* (monthly)

7a. The Causes

Cause	How it limits building	Evidence
Zoning	Most residential land allows only a detached house, often on a large lot with parking; anything denser needs a rezoning that neighbors can block	Building anything but a detached single-family house was illegal on 75% of the residential land in many American cities (The New York Times, June 2019)
Process	Discretionary approvals, environmental review such as the California Environmental Quality Act (CEQA), impact fees, and hearings at which any project can be delayed	Regulation accounted for about $132,000, or 26.4%, of the price of a new single-family home in 2026 and 40.6% of the cost of developing apartments in 2022 (NAHB)
Construction costs	Materials, labor, and land; the fixed costs of land and approval push builders toward large, expensive houses	Building costs were 64.4% of a new home's sale price in NAHB's 2024 survey and the finished lot 13.7%, the rest financing, overhead, sales costs, and profit
Tariffs	Duties on Canadian lumber and national-security tariffs on wood products and metals (7b)	Raise the cost of every home built, and apply to imports from allies as well as rivals
Labor	Builders compete for workers, many of them immigrants, with the boom in data centers and factories (7b)	Immigrants are 26.3% of construction workers, about a third of tradespeople, and more than half of drywall installers, plasterers, roofers, and painters (NAHB, 2024 data)
Finance	Small builders depend on bank construction loans priced above the prime rate, 7.00% since September 16	Starts in January-August 2026 were 1.0% below a year earlier, with single-family starts down and apartment starts up (Module 6)
The underbuilding decade	Building stayed below household formation for most of the decade after 2008 (Module 2)	Estimates of the gap differ by what they count (7b)

The New York Times (June 18, 2019); NAHB (June 2022, January 2025, April 2026, and June 2026); Census Bureau (September 17, 2026).

7b. Costs, Workers, and the Size of the Gap

Tariffs raised the cost of materials. Since October 14, 2025 most Canadian softwood lumber has paid about 45%: anti-dumping and countervailing duties of 35.16% and a 10% tariff on all imported lumber under Section 232 of the Trade Expansion Act of 1962, which lets the President impose tariffs for national security. On October 14, 2026 the Commerce Department issued review results that cut the duties for most mills to 24.75%, effective when published in the Federal Register. Kitchen cabinets and bathroom vanities have paid 25% since October 14, 2025, and a rise to 50% has been put off to January 1, 2027.

Labor became a binding constraint in 2026. Associated Builders and Contractors (ABC) estimates that the industry must attract about 349,000 more workers this year. In a survey by the Associated General

Contractors of America (AGC), released September 3, 29% of firms reported effects of immigration enforcement in the previous six months, and 12% had workers leave or stop coming. Construction workers' hourly earnings rose 4.3% in the year to September, against 3.3% across private industry. Yet housing is losing workers to other building: residential construction employment fell in the year while nonresidential construction, data centers among it, grew 2.9%.

How large the shortage is depends on what is counted. Freddie Mac has put the country about 1.5 million homes short of a balanced market. Realtor.com's estimate of 4 million at the end of 2025 also counts 1.82 million households that young adults would have formed had homes been affordable. The estimates differ on the size of the gap, not on its direction.

7c. Do Supply Limits Explain High Prices?

The case that they do

Its advocates, from the 'Yes in My Backyard' (YIMBY) movement to most urban economists and reformers in both parties, say that prices in the costliest metros far exceed the cost of building, and that the gap is the price of permission. Where building is easy, as in Houston, which has no zoning code and allows homes on small lots, prices stay near costs as people arrive. Where it is hard, demand from new jobs goes into prices rather than into homes. The remedy is to legalize building where people want to live.

The case that they explain less than claimed

Its proponents, among them the economists Schuyler Louie, John Mondragon, and Johannes Wieland, argue that local supply limits do not explain which cities' prices rose fastest. In a paper they found that from 2000 to 2020 prices and the number of homes grew together in the cities whose incomes grew fastest, whatever their rules. On that view demand sets prices, and zoning reform would lower them less than its advocates promise. Skeptics add that the 2020-22 surge reached cities that build freely, such as Austin and Boise, because credit was cheap and remote work moved demand.

The evidence

The paper by Louie, Mondragon, and Wieland was published by the National Bureau of Economic Research (NBER) and the San Francisco Fed in March 2025. In a 2026 working paper, Anthony Murphy and Maddie Shaheen of the Dallas Fed reran its models with six measures of supply constraints, population weights, and yearly permit data. They found the constraints significant in most of their tests and concluded that the original findings did not survive these changes. Natural experiments point the same way: the apartment wave lowered rents where it landed (Module 6), and the reforms in 7d show the same pattern.

The course's reading

Supply limits are the main reason prices stand so far above incomes in the costliest metros, and the newest evidence supports that reading. They are not the whole story, since rates and incomes move prices everywhere, and a reform adds homes slowly, lot by lot. The test of the supply view is local and takes years, so the reforms below say more than national averages do.

7d. The Reforms and What They Did

Place	Reform	Result
Minneapolis	Its 2040 plan, approved in 2018 and in force from 2020, allowed up to three homes on every residential lot; the city ended parking minimums in 2021	Rents rose 1% from 2017 to 2022, against 14% in the rest of Minnesota (Pew, January 2024)
Austin	Allowed three homes on a single-family lot (December 2023), then cut the minimum lot size from 5,750 to 1,800 square feet and ended parking minimums (May 2024)	With heavy apartment building, rents have fallen (Module 6)
California	Accessory dwelling units, small homes beside or behind a house, legalized by right (2016-20); duplexes and lot splits on single-family lots (Senate Bill 9, 2021); infill housing freed from much environmental review (June 30, 2025); apartments by right near major transit (Senate Bill 79, in force July 1, 2026)	Accessory units were about a fifth of the homes California produced by 2022 (California YIMBY, from state data); Senate Bill 9 produced few, as cities' rules and fees blunted it; Senate Bill 79 is too new to judge
Texas	2025 laws cutting minimum lot sizes in new subdivisions in large cities and allowing homes on land zoned for commercial use	Too new to measure
The federal government	The ROAD to Housing Act (Module 6): lighter environmental review for small and infill projects funded by HUD, the end of the rule that manufactured homes sit on a permanent chassis, higher FHA loan limits for apartments, and an Innovation Fund authorized at $200 million a year in 2027-31 for places that add homes	Modest beside the shortage; the fund's money depends on appropriations
Tokyo, for comparison	National zoning with a few broad use categories set by the national government, and approval by right for any project that meets them	Rents in the central wards have risen for twelve straight quarters, by 5.2% in the year to the second quarter of 2026, as inflation returned to Japan (Savills)

Pew Charitable Trusts (January 2024); City of Austin; California YIMBY (2024), from the Department of Housing and Community Development's data; Savills, via Real Estate Asia (July 28, 2026).

Worked example — A Zoning Change's Arithmetic

The setup. A suburb has 30,000 single-family lots, each with one house, and has been permitting about 100 new homes a year. Detached houses there sell for about $700,000, and an older, smaller one for about $500,000. The state requires it to allow four homes on every lot by right. **One lot.** A builder buys an older house for $500,000, tears it down, and spends $1.2 million building four townhouses at $300,000 each, a total cost of $1.7 million. Selling them at $550,000 each brings $2.2 million, a profit of $500,000, or 29% of cost, enough to draw builders to the lots whose owners will sell. **The town.** If 1% of lots, 300, are redeveloped each year, the town gains 1,200 homes and loses 300: 900 more a year, against the 100 it had been permitting. Over a decade that is 9,000 more homes, a 30% larger stock, built on 3,000 lots, a tenth of the total, so nine lots in ten are unchanged. **The buyer.** With 20% down at 7.40%, a $550,000 townhouse costs $3,046 a month in principal and interest, against $3,877 for a $700,000 house; at 28% of income the townhouse needs about $131,000 a year and the house about $166,000. **The lesson.** The homes were missing because building them was illegal where the demand is. The reform costs the public nothing, and what the neighbors give up is their veto.

Module 7 Key Points

Why There Aren't Enough Homes

• Zoning is the largest cause: anything but a detached house was illegal on 75% of residential land in many cities.

• Regulation accounted for about $132,000 of a new home's price in 2026 and 40.6% of apartment development costs in 2022.

• Most Canadian lumber has paid about 45% since October 2025, and immigrants are 26.3% of construction workers.

• Whether supply limits explain prices is contested; a 2026 Dallas Fed paper found that they do in most tests.

• Minneapolis allowed three homes per lot, and its rents rose 1% in 2017-22 against 14% elsewhere in Minnesota.

• Worked example: allowing four homes per lot adds 30% to a suburb's housing in a decade, on a tenth of its lots.

Module 7 Quiz

Check Your Understanding

1. On a 2019 analysis by The New York Times, on how much residential land in many cities was anything but a detached house illegal?

A) About a tenth
B) About a third
C) About three-quarters of it
D) Nearly all of it, in every city

2. What did rents in Minneapolis do from 2017 to 2022, on Pew's count?

A) Rose 1%, against 14% elsewhere in Minnesota
B) Rose 14%, as across the state
C) Fell by a fifth as apartments flooded the market
D) Rose faster than in any other city in the state

3. What did the Dallas Fed's 2026 working paper find about supply constraints?

A) That they matter in most tests
B) That they explain nothing
C) That only interest rates explain house prices
D) That zoning lowers prices by protecting neighborhoods

4. Since October 14, 2025, about what rate has most Canadian softwood lumber paid?

A) About 10%, the tariff on all imported lumber
B) About 45%
C) About 24.75%, the duty set in October 2026
D) About 35%, the duties alone without the tariff

5. In the worked example, what does allowing four homes per lot do to the suburb's housing in a decade?

A) Adds 3%
B) Doubles it
C) Adds 30% on a tenth of the lots
D) Adds 10%, one new home per redeveloped lot

Module 8 — The World's Housing Crises

The Rich World's Markets Compared

Recommended Reading / Reference

Book: Josh Ryan-Collins, Toby Lloyd, and Laurie Macfarlane, *Rethinking the Economics of Land and Housing* (2017)

Reference: Demographia, *International Housing Affordability*, 2026 edition; the Organisation for Economic Co-operation and Development's Affordable Housing Database; the Bank for International Settlements' residential property price series

8a. The Price of a Home Against Income

The simplest comparison across countries is the median multiple (Module 1). Demographia's annual survey applies it to about 95 markets in eight countries, Australia, Canada, China's Hong Kong, Ireland, New Zealand, Singapore, Britain, and the United States, and grades them from affordable to impossibly unaffordable.

Market	Median multiple	Grade	Note
Hong Kong	14.1	Impossibly unaffordable	The least affordable market for a 16th year; 23.2 in the 2022 edition
Sydney	14.0	Impossibly unaffordable	Within a tenth of a point of Hong Kong
San Jose	11.3	Impossibly unaffordable	The least affordable American market
Adelaide	11.2	Impossibly unaffordable	Australia's cheaper cities have caught up with its dearest
Vancouver	10.8	Impossibly unaffordable	Canada's least affordable
Los Angeles	10.7	Impossibly unaffordable	With Honolulu (10.4) and San Francisco (9.4), California and Hawaii fill the American top
Melbourne	9.5	Impossibly unaffordable	Brisbane 9.9
Toronto	7.6	Severely unaffordable	Down from 9.3 in the 2024 edition
New York	7.5	Severely unaffordable	—
London	6.9	Severely unaffordable	On Demographia's household measure; ratios of price to individual earnings run higher
Cleveland	3.1	Moderately unaffordable	With Pittsburgh at 3.2

Demographia, *International Housing Affordability*, 2026 edition, on prices and incomes in the third quarter of 2025. Grades: affordable 3.0 or less; moderately unaffordable 3.1-4.0; seriously unaffordable 4.1-5.0; severely unaffordable 5.1-8.9; impossibly unaffordable 9.0 or more.

The table shows two things. The English-speaking world's big cities and Hong Kong are the extreme cases, with Australia's cities now the dearest as a group. And the United States holds both ends: its coastal metros sit among the world's least affordable, while its industrial interior, where land is cheap and building is allowed, remains the most affordable market surveyed.

8b. The Politics of 2025-26

Country	What happened in 2025-26	The issue
Britain	Andy Burnham became Prime Minister on July 20, 2026, after Keir Starmer resigned; he kept Labour's target of 1.5 million homes in England in this parliament and promised the largest council housebuilding since the postwar years. The Planning and Infrastructure Act became law on December 18, 2025	The Office for Budget Responsibility projects about 240,000 homes a year by 2029-30, well short of the target's pace of 300,000
Canada	Mark Carney's government set a target of 500,000 homes a year and created a federal builder, Build Canada Homes, in 2025	Construction in 2026 is running at well under half the target, mostly apartments
Australia	Treasurer Jim Chalmers's budget of May 12, 2026 limited negative gearing, the deduction of rental losses from other income, to new homes, and replaced the 50% discount on capital gains with an inflation-based discount and a minimum tax of 30% on gains	The government expects about 75,000 more owners over a decade; its Housing Accord aims at 1.2 million homes in the five years to mid-2029
Hong Kong	Prices fell for four years from their 2021 peak, then turned up in 2026	Whether the turn survives the American interest rates that Hong Kong imports through its currency peg
South Korea	Seoul's apartment prices kept rising through mortgage caps of 2025 and the designation of the whole city as a zone where purchases need a permit	Births rose 6.7% in 2025, a second year of recovery from the world's lowest fertility rate
Spain	Mass protests over rents in 2024-25; Barcelona has said it will end its roughly 10,000 tourist-apartment licences by 2028	Short-term rentals against residents in the tourist cities
Germany	Berlin's rent cap was struck down by the Constitutional Court in 2021; the referendum that year to expropriate large landlords passed and has not been carried out	A nation of renters, with rents rising
Japan	Its 2023 survey counted 9.0 million vacant homes, 13.8% of the stock, mostly outside the big cities	A shrinking population leaves homes empty

National governments and statistics offices, Demographia, and press reports, to October 2026.

8c. The Pattern and the Two Models

The rich world's crises share a diagnosis. Cheap credit in the 2010s raised what buyers could pay, while zoning, planning, and the cost of building held back supply in the cities where jobs were. The gains went to those who already owned, and the costs to the young, to renters, and to newcomers. In much of the rich world a family's housing wealth now depends less on its income than on whether its parents bought before about 2010, which is why housing has moved to the center of elections from Britain and Canada to Australia, Spain, and South Korea.

Two cities stand outside the pattern. Singapore's state owns most of the land, and its Housing and Development Board builds flats that about four-fifths of residents live in, sold to citizens on 99-year leases and paid for largely from compulsory savings; homeownership is close to 90%. Vienna has built or financed municipal and nonprofit housing for a century, financed in part by a payroll levy, and about three-fifths of its residents live in it, at rents well below those of other European capitals. Neither transfers easily: Singapore depends on a state that owns the land, and Vienna on a century of building and a politics that never sold the stock. Both point to the lesson the American reforms point to: where a city keeps building, prices follow incomes rather than credit.

Module 8 Key Points

The World's Housing Crises

• On Demographia's measure Hong Kong (14.1) and Sydney (14.0) are the least affordable markets; Cleveland (3.1) is the most affordable.

• America holds both ends: coastal metros above 9, an industrial interior near 3, where land is cheap and building allowed.

• Housing reached the center of politics in 2025-26: Britain's new government, Canada's target, Australia's tax changes, Spain's protests.

• Australia's May 2026 budget limited negative gearing to new homes and replaced the 50% capital-gains discount.

• Singapore's state-built flats and Vienna's century of social housing stand outside the crisis, but neither transfers easily.

Module 8 Quiz

Check Your Understanding

1. Which two markets are the least affordable in Demographia's 2026 edition?

A) London and Toronto
B) New York and Paris
C) Tokyo and Vienna
D) Hong Kong and Sydney

2. On Demographia's scale, what grade does a median multiple of 9.0 or more earn?

A) It is graded affordable.
B) It is graded impossibly unaffordable.
C) It is graded seriously unaffordable.
D) It is graded severely unaffordable, the top grade.

3. What did Australia's May 2026 budget do to negative gearing?

A) Extended it to owner-occupied homes
B) Abolished it outright
C) Limited it to newly built homes only
D) Left it unchanged

4. Who became Britain's Prime Minister in July 2026?

A) Angela Rayner
B) John Healey
C) Kemi Badenoch
D) Andy Burnham

5. What do Singapore and Vienna show, on the module's reading?

A) That building keeps prices near incomes
B) That rent control alone can hold rents below the market
C) That a ban on foreign buyers ends a housing crisis
D) That low interest rates make housing affordable everywhere

Module 9 — China's Property Collapse

A Bust That Has Not Bottomed

Recommended Reading / Reference

Book: Anne Stevenson-Yang, *Wild Ride: A Short History of the Opening and Closing of the Chinese Economy* (2024)

Reference: The National Bureau of Statistics' monthly releases on property investment, sales, and the 70-city price index; the International Monetary Fund's Article IV reports on China

9a. The Numbers

Measure	Peak	Latest	Note
Property investment	14.8 trillion yuan (2021)	8.28 trillion in 2025, down 17.2%; 4.80 trillion in January-August 2026, down 19.9%	On this year's pace about 6.6 trillion, some 55% below the peak
New construction starts	2.27 billion square meters (2019)	299 million in January-August 2026, down 24.8%	About four-fifths below 2019 at this year's pace
Floor area sold	1.79 billion square meters (2021)	881 million in 2025; down a further 12.1% in January-August 2026	About half the peak, and still falling
New-home prices, 70 cities	Mid-2021	Down 3.0% on the year in August	The 38th straight monthly fall
Completed homes for sale	—	753 million square meters at the end of August, 401 million of it housing	Roughly four to five million flats, before counting unfinished projects
Land-sale revenue	8.7 trillion yuan (2021)	Down 27.2% on the year in January-April 2026	Falling with developers' land purchases (9b)

National Bureau of Statistics (January 20 and September 16, 2026); the Ministry of Finance, via The Standard. The pace figures and the count of flats are derived from the releases; the flats assume about 90 square meters each.

9b. How the Boom Was Built and Broken

China's boom was the largest in history because the flat was three things at once. It was households' main store of wealth: capital controls closed the alternatives abroad, the stock market was distrusted, and deposits paid little, so housing made up about three-fifths of urban households' assets in the People's Bank of China's 2019 survey. It was local governments' revenue, since they sold land-use rights to developers. And it was the developers' business model: sell flats before building them, borrow against the presales, buy more land, and repeat.

On an estimate that Kenneth Rogoff and Yuanchen Yang made from 2017 data, property and the industries that supplied it made up 29% of China's economy. The turn was deliberate. In August 2020 the authorities set the 'three red lines', caps on developers' debt against their assets, equity, and cash, to end the model. Developers that could not roll over their debt stopped building, and buyers, afraid that presold flats would never be finished, stopped buying. In 2022 owners of unfinished flats in dozens of cities refused to pay their mortgages, and prices fell for the first time since 2014-15.

9c. The Developers and the Rescue

The private developers fell first. Evergrande, once the world's most indebted developer, received a winding-up order from a Hong Kong court on January 29, 2024 and was delisted on August 25, 2025. Country Garden's restructuring of about $17.7 billion of offshore debt took effect on December 30, 2025, and a petition to liquidate it was dismissed on February 16, 2026.

Vanke, whose largest shareholder is the state-owned Shenzhen Metro, has stayed out of formal default only through extensions and that shareholder's support. Its bondholders rejected one on December 10, 2025, then accepted in January 2026 a plan to repay 40% of a 5.7 billion yuan bond at once and 60% a year later. In the first half of 2026 it lost 14.95 billion yuan, its contracted sales fell 48.2%, and it owed 178.9 billion yuan of interest-bearing debt due within a year against 59 billion of cash.

The rescue has come in rounds. In 2024 a 'white list' steered bank lending to unfinished projects, the central bank offered 300 billion yuan of lending for local state firms to buy unsold homes, rates on existing mortgages were cut, and minimum down payments fell to 15%. Most cities have lifted their limits on purchases, and the five-year loan prime rate, the benchmark for mortgages, has been 3.5% since May 2025. None of it has found a bottom (9a).

The reason lies with households. Prices fall slowly (Module 3), and demand does not return while families whose wealth is in flats save rather than buy. A slump in the asset that holds most of households' wealth becomes a slump in their spending, so China's property market is also its economy's demand problem.

Worked example — A Household's Flat

The setup. A Shanghai couple bought a 90-square-meter flat in mid-2019 for 5.4 million yuan, 60,000 a square meter. They paid 30%, 1.62 million, from their own and their parents' savings, and borrowed 3.78 million for thirty years at 5.4%, a payment of 21,226 yuan a month against a household income of 45,000. In 2021 comparable flats sold for 6.3 million. **Today.** Suppose comparable flats now sell for 30% less than in 2021, or 4.41 million. Had the couple paid 5.4% throughout, they would owe about 3.33 million after 87 payments, so their equity is about 1.08 million, two-thirds of their down payment. **The rate cuts.** Suppose the cuts have brought the couple's rate to 3.1%, below the benchmark in 9c. Over the remaining 273 months, the payment on that balance falls to 17,027 yuan, a relief of about 4,200 a month that leaves the equity untouched. **The lesson.** Rate cuts ease the payment, not the balance sheet. The couple is poorer than when they bought, with their savings tied up in a flat they cannot sell without a loss; multiplied across the households that bought near the peak, that is the weight on China's spending.

Module 9 Key Points

China's Property Collapse

• China's property investment fell 19.9% in January-August 2026 and is on pace to end the year about 55% below 2021.

• New construction is down about four-fifths from 2019, and new-home prices have fallen for 38 straight months.

• The flat was households' savings, local revenue, and developers' business model at once; the 2020 debt caps ended the model.

• Evergrande was delisted in 2025 and Country Garden restructured; Vanke survives on extensions and its state shareholder.

• Rounds of rescue, from bank-lending lists to rate cuts, have not found a bottom: the fall deepened in 2026.

• Worked example: a 2019 buyer's equity is down to two-thirds of the down payment; rate cuts eased only the payment.

Module 9 Quiz

Check Your Understanding

1. On this year's pace, about how far below its 2021 peak will China's property investment be in 2026?

A) About 10%
B) About 55% below
C) About 90%, near zero
D) Back above the peak on new stimulus

2. What did the 'three red lines' of August 2020 do?

A) Capped the prices of new homes in three cities
B) Barred foreign buyers from the largest cities
C) Capped developers' borrowing
D) Set the borders of the new districts that local governments sold to developers on credit

3. How has Vanke avoided a formal default?

A) Through a full government purchase of its bonds
B) By selling its overseas hotels
C) Through a listing in Hong Kong
D) Through extensions and support from its state shareholder

4. Which change did China's rescue of 2024 include?

A) Cuts to existing mortgage rates
B) A ban on presales
C) A national property tax
D) The purchase of every unsold flat by the central government

5. In the worked example, what has happened to the couple's equity?

A) It fell to two-thirds of the down payment
B) It doubled with the rate cuts that eased their payment
C) It turned negative, as the loan exceeds the flat's value
D) It is unchanged, as the flat is worth what they paid in 2019

Module 10 — Commercial Real Estate

The Property That Businesses Use

Recommended Reading / Reference

Reference: Trepp's monthly CMBS delinquency reports; the MBA's quarterly reports on commercial mortgage debt and maturities; Cushman & Wakefield's quarterly office *MarketBeat*; CBRE's *Lending Momentum Index* and cap rate surveys

10a. The Sectors Moving Apart

Sector	Where it stands in 2026	Evidence
Office	Past the worst of its vacancy (10c)	Vacancy 19.8% in the third quarter, from a record 20.1% a year earlier; 15.5 million square feet absorbed in twelve months (Cushman & Wakefield)
Apartments	Absorbing the supply wave (Module 6), with stress in loans made at the peak	Delinquency on apartment loans in mortgage bonds 7.69% in August (Trepp)
Industrial and retail	Steady after little new retail building for years; the tariffs a risk to warehouse demand	Cap rates for industrial and neighborhood retail fell in the first half of 2026 (CBRE)
Hotels	The year's strongest sector on the stock market	Lodging and resort REITs returned 37.6% in 2026 through September (Nareit)
Data centers	The sector with a construction boom, limited by power rather than tenants	Data-center REITs returned 28.0% through September
Cell towers and health care	Hit by the rise in bond yields	Down 8.6% and 3.4% in September alone

Cushman & Wakefield (October 6, 2026); Trepp (September 2026); CBRE's cap rate survey for the first half of 2026 (August 2026); Nareit (October 5, 2026). The REIT figures are total returns of the listed companies in each sector.

Commercial property prices had been recovering from the fall that followed the rate rises of 2022-23. By Green Street's index the recovery stalled this autumn as bond yields climbed, since a higher ten-year yield (Module 5) raises the return that buyers demand of every building.

10b. The Debt and Who Lends It Now

Measure	Figure	Note
Commercial and multifamily mortgage debt	$4.99 trillion at the end of 2025, up 4.5% in the year; past $5 trillion in the first quarter of 2026	Banks hold the largest share; the rest is spread among the federal agencies' apartment programs, life insurers, and mortgage bonds
Maturing in 2026	$875 billion, 17% of the total	9% less than the $957 billion scheduled for 2025; loans made when rates were low must refinance at higher ones
Delinquency on loans in mortgage bonds	8.02% overall in September, the highest since late 2020; office 12.16%	The office record was 12.34% in January 2026, above the 2012 peak of 10.70%
Who makes new non-agency loans	Alternative lenders, including debt funds, 38% in the second quarter (34% a year earlier); banks 30% (24%); life insurers 21%; CMBS conduits 11% (19%)	Banks are lending again, and the funds that filled the gap remain the largest group

Measure	Figure	Note
The terms	An average rate of 5.7%, loans of 59.6% of value, and spreads of 2.04 points over Treasuries for commercial loans and 1.62 for apartments	Lower leverage than lenders accepted before 2008

MBA (February 9, March 26, and June 18, 2026); Trepp (September 2026); CBRE (August 3, 2026). Agency loans are those that Fannie Mae and Freddie Mac buy or guarantee.

10c. The Office and What Replaced It

The office is the one structural break in the commercial market. Hybrid work cut the space that firms need, and vacancy climbed to a record (10a). The market has begun to heal from both ends. Demand turned positive, with sublease space down for ten straight quarters to 89 million square feet, its lowest since the end of 2020, and supply shrank, as 2026 is on track for the fewest completions in more than thirty years.

The stock itself is shrinking: over six quarters the national inventory fell by 42.5 million square feet, about 0.8%, as obsolete buildings were converted to apartments or demolished. Leasing has favored newer buildings. Older towers that no tenant wants and no lender will refinance are the ones handed back to lenders, which is why office loans remain the worst performers in the mortgage-bond market.

The trade that replaced the office in investors' portfolios is the data center, the real estate of the artificial-intelligence build-out. The lesson for the whole commercial market is in the debt table: values were repriced in 2022-24, the maturities force the losses to be taken, and the lender who takes them is more often a fund than a bank.

Module 10 Key Points

Commercial Real Estate

• Office vacancy, 19.8% in the third quarter, has edged down from its record of 20.1% a year earlier.

• The sectors split: lodging REITs returned 37.6% and data centers 28.0% in 2026 through September.

• Commercial mortgage debt passed $5 trillion in early 2026; $875 billion matures this year, less than 2025's $957 billion.

• Office mortgage-bond delinquency was 12.16% in September, below January's record but above the 2012 peak of 10.70%.

• Debt funds and other alternative lenders make 38% of non-agency loans, but banks are back to 30%, from 24%.

Module 10 Quiz

Check Your Understanding

1. What was the national office vacancy rate in the third quarter of 2026, on Cushman & Wakefield's count?

A) About 10%
B) About 35%, double its 2019 level
C) About 50%, as half of all office space has stood empty since the pandemic
D) 19.8%, just below the record

2. How do the commercial mortgages maturing in 2026 compare with 2025's?

A) About $2 trillion, the most on record
B) $875 billion, 9% less than 2025's $957 billion
C) Nearly zero after the refinancings
D) The same as in 2025

3. Where did office delinquency in mortgage bonds stand in September 2026?

A) At 2%, near its long-run low.
B) At 25%, double the 2012 peak.
C) At 12.16%, below January's record and above 2012's peak.
D) At about 7%, the same as every other property type that month.

4. Which group made the largest share of non-agency commercial real estate loans in the second quarter of 2026?

A) Banks, at 30%
B) Life insurers, at 21%
C) CMBS conduits, at 40% as before the crisis
D) Alternative lenders such as debt funds, at 38%

5. Which REIT sector returned the most in 2026 through September?

A) Offices
B) Lodging and resorts
C) Cell towers
D) Health care and senior housing

Module 11 — Real Estate as an Investment

Property Against the Alternatives

Recommended Reading / Reference

Book: David Geltner, Norman G. Miller, Jim Clayton, and Piet Eichholtz, *Commercial Real Estate Analysis and Investments*, third edition (2014)

Reference: Òscar Jordà, Katharina Knoll, Dmitry Kuvshinov, Moritz Schularick, and Alan M. Taylor, 'The Rate of Return on Everything, 1870-2015', *Quarterly Journal of Economics* (2019); Nareit's monthly REIT returns

11a. The Record

Asset	Real return a year, 16 countries, 1870-2015	Note
Housing, rent plus price	7.05%	About half the volatility of equities
Equities	6.89%	The highest of the financial assets
Government bonds	2.50%	The alternative against which property is priced
Treasury bills	0.98%	The return on cash

Jordà, Knoll, Kuvshinov, Schularick, and Taylor (2019). Real returns are after inflation, averaged across the sixteen countries.

The finding surprised economists. Over a century and a half, housing earned about what equities earned, and the reason was the rent rather than the price. A house's price has gained little on inflation over long periods; the steady yield it pays its owner, as a tenant's rent or as the rent an owner does not pay, did most of the work.

11b. Why Property Returns What It Does

Three things add to the rent. The first is leverage, which nearly every homeowner uses and few stock investors would dare: a 3% rise in the price of a house bought with 20% down is a 15% gain on the owner's equity, before the mortgage's interest. The same arithmetic runs in reverse, which is how falling prices wiped out owners' equity in 2008.

The second is the tax code. The budget law of July 4, 2025 made permanent the cap on deductible mortgage interest at loans of $750,000. It raised the cap on deductions for state and local taxes, property tax among them, from $10,000 to $40,000 for 2025 and $40,400 for 2026, phased down for incomes above $500,000 and due to revert to $10,000 in 2030. Up to $250,000 of the gain on a main home, $500,000 for a couple, is still exempt from tax, and the rent an owner saves by living in the house is never taxed as income.

The third is the price paid at the start. A property bought at a high rent yield earns more than one bought at a low one, and the gains of 2012-21 came largely from falling interest rates, which raised what buyers could pay. Investors in commercial property judge this through the cap rate against the bond yield. CBRE's survey for the first half of 2026 put the median across property types near 6.6%, about 1.4 points above the ten-year Treasury yield (Module 5). New York's stabilized apartment buildings, at 5.0-5.5%, offer almost no premium for the risk and the illiquidity, while suburban office towers in Chicago trade at 10-12.5%.

11c. The Ways to Own It

Vehicle	What it is	2026
The owner-occupied home	Consumption and investment at once (Module 1), with the leverage and tax advantages of 11b	Owners' equity is at a record (Module 4), held in place by the lock-in
The small landlord	Individuals owning a few rental units (Module 6)	Squeezed by insurance and property taxes as rents flatten
Listed REITs	Companies that own property and must pay out 90% of their taxable income as dividends	Returned 7.9% in 2026 through September, against 12.3% for the Russell 1000, with a dividend yield of 3.93%
Private funds and non-traded REITs	Pools run by managers such as Blackstone and Brookfield, priced by appraisal rather than daily trading	Blackstone's non-traded REIT limited withdrawals from late 2022 into 2024, the warning about liquidity in appraised vehicles
Mortgage bonds	Lending to property rather than owning it	Residential in Module 5, commercial in Module 10

Nareit (October 5, 2026); CBRE (August 2026); company filings.

Worked example — Owning Against Renting at 7.40%

The setup. Take the median existing home at $417,500 (Module 4), bought with 10% down, $41,750, and a $375,750 loan at 7.40%. **The cost of owning, a year.** Interest on the loan is about 6.66% of the price at the start (90% of the price times 7.40%); the down payment gives up 5.19% a year it could earn in Treasuries (Module 5), 0.52% of the price; property tax an assumed 1%; insurance, at the average premium projected for 2026 (Module 12), 0.73%; and upkeep an assumed 1%. The total is 9.91% of the price, $41,379 a year or $3,448 a month, before any change in the price. **The cost of renting.** At the national gross rent yield of 5.3% (Module 3), the same house rents for $22,128 a year, $1,844 a month. **The break-even.** Owning comes out ahead only if the price rises by more than the 4.61-point gap each year. At the 1.9% rise in the national price index over the latest year (Module 3), owning costs a net $2,787 a month against $1,844 to rent; at 3%, it costs $2,405. **The comparison.** At the 2.65% mortgage rate of January 2021 (Module 2) and a ten-year yield of 1.1%, with today's other costs, owning would cost 5.23% a year, $1,819 a month, less than the rent before any price gain. **The lesson.** The rate decides the question: at 2.65% owning beat renting outright, and at 7.40% it is a bet that prices will rise by more than 4.6% a year.

11d. Is a Home Still a Good Investment?

The case that it is

Its advocates, from the real estate industry to many financial planners, say a home is the one investment most families keep paying into, a forced saving that a rent check never becomes. Leverage multiplies its gains, the tax code shelters them, and a fixed-rate mortgage turns inflation into the owner's ally as rents rise and the payment does not. Over long holding periods the record favors owners, and a family that waits for cheaper money may find prices higher when it arrives.

The case that it is not, at today's prices

Its critics, among them many economists who study household finance, say the arithmetic has turned. At 7.40% and record prices, owning costs far more than renting the same house, and the fall in rates behind the 2010s' gains (11b) cannot repeat from here. A home ties most of a family's wealth to one asset in one

place, costs several percent of its price to buy and sell, and now carries rising insurance premiums. A renter who invests the difference can come out ahead.

The evidence

Over the long record housing returned as much as equities (11a). Real house prices are now falling (Module 3), and the worked example's break-even is more than double the latest year's rise. Owners hold most of the middle class's wealth, but that record mixes the investment with the forced saving and the timing of purchases.

The course's reading

A home has been a good investment when bought at a price near what it would rent for and held for many years. At today's rates and prices it is a weaker investment than at any time in the 2010s: for a household likely to move within a few years renting is cheaper, and for one that stays, owning is a bet that rates fall or prices outrun the gap.

Module 11 Key Points

Real Estate as an Investment

• Across sixteen countries in 1870-2015, housing returned 7.05% a year after inflation and equities 6.89%, housing's mostly from rent.

• Leverage multiplies an owner's return: a 3% price rise on a 20% down payment is 15% on the equity, before interest.

• The 2025 tax law kept the $750,000 cap on mortgage interest and raised the cap on state and local tax deductions to $40,000.

• Commercial cap rates near 6.6% sit about 1.4 points over a 5.19% Treasury; some apartment markets offer almost no premium.

• Worked example: at 7.40% the median home costs 9.91% of its price a year to own, against a 5.3% rent.

• The course's reading: a home pays when bought near its rent and held; at today's rates, owning is a bet on prices.

Module 11 Quiz

Check Your Understanding

1. On the long-run record across sixteen countries, which asset returned the most after inflation?

A) Housing
B) Equities, by far
C) Government bonds
D) Treasury bills

2. Where does most of housing's long-run return come from?

A) Price gains alone
B) Leverage from the mortgage
C) Rent, not price gains
D) Price gains that have beaten inflation by about seven points a year over the whole period

3. In the worked example, why does renting the median home cost less than owning it?

A) Rents are rising faster than house prices this year.
B) The mortgage rate is below the rent yield of 5.3%.
C) Owning costs 9.91% of the price a year against a rent of 5.3%.
D) Property taxes on owned homes have tripled since 2020.

4. How did listed REITs do in 2026 through September?

A) They lost half.
B) They returned 7.9%, behind stocks.
C) They doubled, as rates fell through the year.
D) They matched stocks almost exactly, at about 12%.

5. On the course's reading, when does owning a home pay as an investment?

A) Always, whatever the price
B) Only when bought with cash
C) Only when prices rise faster than incomes for decades
D) When bought near rent and held for years

Module 12 — Insurance, Climate, and the Uninsurable

The Risk That Now Prices the House

Recommended Reading / Reference

Book: Jake Bittle, *The Great Displacement: Climate Change and the Next American Migration* (2023)

Reference: Munich Re's and Swiss Re's natural-catastrophe reports; the Congressional Research Service's reports on the National Flood Insurance Program; the Florida Office of Insurance Regulation and the California Department of Insurance

12a. The Numbers

Measure	Figure	Note
Insured natural-catastrophe losses, world	$108 billion in 2025, of $224 billion overall; $42 billion in the first half of 2026	Above $100 billion for a second straight year; the first half of 2026 was the quietest since 2020, though the second half usually brings most of a year's losses
The Los Angeles fires, January 2025	About $40 billion insured, $53 billion overall	The costliest disaster of 2025; about 16,000 structures destroyed
Home insurance premiums, US	Up 12% in 2025; projected to average $3,057 in 2026	A fifth straight yearly rise
Florida	An average premium of $3,815 including wind (April 2026); premiums fell in 51 of 67 counties in the first half of 2026	The state-backed Citizens Property Insurance shrank to about 255,000 policies by September 18, from a peak of about 1.4 million in September 2023
California's FAIR Plan (Fair Access to Insurance Requirements), the insurer of last resort	663,000 properties (March 2026) and $768 billion of exposure (June 2026); an average rate rise of 29% approved in 2026	Assessed private insurers $1 billion in 2025 against its roughly $4 billion of losses from the fires
The National Flood Insurance Program	Nearly 4.5 million policies and almost $1.3 trillion of coverage; owes the Treasury $22.525 billion, unchanged since February 2025	Authorized only to December 11, 2026; in a lapse it can write no new policies
Hurricane Isaias	Landfall near Destin, Florida on October 9, 2026, with 105 mph winds; insured losses estimated at $1-3 billion	The 2026 season's first hurricane, the latest first hurricane of a season on record, according to the modeling firm Karen Clark & Company

Munich Re (January 13, 2026); Swiss Re, via Artemis (August 11, 2026); Insurify (March 2026); the Insurance Information Institute and Florida's Office of Insurance Regulation, via Insurance Business (September 4, 2026); Morningstar DBRS and Citizens' policy data, via Insurance Business (September 24, 2026); the California FAIR Plan; the Congressional Research Service (March 10 and September 11, 2026); Karen Clark & Company, Cotality, and Verisk (October 2026).

12b. How Insurance Prices the House

For most of the twentieth century insurance was a small line in the cost of a house, required by the lender and priced by regulators who kept it low. The 2020s ended that in the exposed states, and the channel is the mortgage. A lender requires insurance; an insurer that expects large fires or hurricanes every few years prices the policy at the expected loss; and a buyer subtracts the premium from what the house is worth. A home that cannot be insured cannot be mortgaged, so it can be sold only to buyers with cash.

The states have answered differently. Florida's legislature curbed the litigation that had driven up claims costs and let rates rise after 2022, and insurers returned: in 2025 Florida's domestic insurers paid out about 83 cents in claims and costs for every dollar of premium. California held rates down, and from 2023 its largest insurers stopped or limited new policies. Its regulator then allowed catastrophe models and the cost of reinsurance into rates in exchange for more policies in fire zones, and in May 2025 approved an emergency rise of 17% for State Farm.

Behind the insurers stand the reinsurers, whose capital decides how much risk the primary market can take. Their rates rose sharply in 2023 and have eased since. The spread on catastrophe bonds was 6.83% in the third quarter, against 7.23% a year earlier, and the broker Gallagher Re expects Isaias to leave the January 1 renewals unchanged.

Worked example — What a Premium Does to a Price

The setup. Two similar houses differ only in risk: one sits in a fire or flood zone and costs $5,000 a year more to insure. **The monthly cost.** The gap is $417 a month. **The price.** A buyer who spends that $417 on the mortgage instead could carry $60,179 more of a thirty-year loan at 7.40%; with 10% down, that is $66,865 more of price. Treated as a payment that runs forever, the gap is worth $5,000 ÷ 7.40% = $67,568. **The lesson.** Either way, a $5,000 premium takes about $67,000 off what a buyer can pay. The risk is priced into the house the moment it is priced into the insurance, and it falls on whoever owns the house at that moment.

12c. Should Insurance Prices Follow the Risk?

The case that they should

Its advocates, among them insurers, many economists, and Florida's reformers, say a premium that reflects the risk tells people where building is dangerous, rewards owners who harden their homes, and keeps private insurers in the market. Holding rates down, they argue, drives insurers out and loads the risk onto a state plan, whose shortfalls fall on every policyholder through assessments.

The case that they should not, or not alone

Its critics, among them consumer advocates and many legislators, say prices that follow the risk punish owners who bought before the risk was priced, often families whose home is their only wealth. Insurance is not optional for anyone with a mortgage, so a premium that doubles can force a sale at a loss. The risk is rising partly through a changing climate that no owner controls, so it should be pooled widely; Jane Kim, a candidate for California's insurance commissioner, proposes a state-run insurer for wildfire and flood in place of the private market and the FAIR Plan.

The evidence

Florida's premiums and Citizens' rolls are falling (12a), though a quiet 2025 helped. California's FAIR Plan has grown, and the Los Angeles fires showed what that concentration costs (12a). On November 3 Californians choose between Kim and State Senator Ben Allen, who proposes more transparent rate filings, stronger enforcement, and fire-resistant building codes. It is the first time two Democrats have met in the general election for the office.

The course's reading

Prices that follow the risk are what keep insurance available, and the states that held them down ended with fewer insurers and larger public liabilities. The hard question is who pays for owners caught by the repricing. That is a subsidy, better paid openly and aimed at the households that need it than hidden in rates that drive insurers away.

Module 12 Key Points

Insurance, Climate, and the Uninsurable

• Insured catastrophe losses topped $100 billion in 2024 and 2025, $108 billion last year; the first half of 2026 was the quietest since 2020.

• Home insurance premiums rose 12% in 2025 and are projected to average $3,057 in 2026, a fifth straight yearly rise.

• Florida's Citizens shrank from 1.4 million policies to about 255,000, while California's FAIR Plan grew to 663,000.

• Worked example: a $5,000 yearly premium gap takes about $67,000 off what a buyer at 7.40% can pay.

• The course's reading: prices should follow risk, with any help for existing owners paid openly, not through suppressed rates.

Module 12 Quiz

Check Your Understanding

1. How large were the world's insured natural-catastrophe losses in 2025, by Munich Re's count?

A) $108 billion
B) $170 billion, a record
C) $50 billion, as in the 2000s
D) About $500 billion, as the Los Angeles fires alone cost more than every earlier disaster

2. What has happened to Florida's Citizens Property Insurance since 2023?

A) It closed in 2024.
B) It doubled in size.
C) It shrank from 1.4 million policies to about 255,000.
D) It grew to cover most of the homes in the state as private insurers left.

3. Why can a home that cannot be insured lose most of its buyers?

A) Insurance is a tax.
B) Insurers set the price of every home sold in their states.
C) Buyers must pay every premium for the life of the house in advance.
D) Lenders require insurance for a mortgage.

4. In the worked example, about how much does a $5,000 yearly premium gap take off what a buyer can pay?

A) About $67,000
B) About $150,000
C) About $500,000
D) About $5,000, the premium itself, since a buyer subtracts only one year's cost from the price

5. What does Jane Kim, a candidate for California insurance commissioner, propose?

A) Ending all rate regulation
B) A state-run insurer covering wildfire and flood in place of the private market and the FAIR Plan
C) Abolishing the FAIR Plan alone
D) Letting insurers set any rate they choose in return for writing more policies in fire zones

Module 13 — Where Things Stand, and What to Watch

The Argument on a Page, and the Dates

Recommended Reading / Reference

Reference: NAR's monthly existing-home sales; the Census Bureau's monthly construction and quarterly vacancy releases; the S&P Cotality Case-Shiller indexes; the Federal Reserve's statements and projections

13a. The Argument on a Page

Real estate is the world's largest asset, and three forces set its price: credit, which sets what buyers can pay; law, which sets what may be built; and risk, which sets what can be insured. In the United States in October 2026 all three bind at once. Mortgage rates of 7.40% have frozen a market at near-record prices, the shortage is the product of rules that make building illegal where demand is, and in the exposed states the insurance premium has become part of the price.

The frozen market is the clearest case. Owners with cheap loans do not sell, buyers who cannot afford today's payments do not buy, and the market clears through falling sales rather than falling prices. That protects the owners' record equity and shuts out the young, whose first purchase now comes at a median age of 40, while the renters, half of them cost-burdened, carry the shortage in their rents. Where apartments were built, rents fell, which is the shortage's cure in miniature.

Abroad the pattern repeats with local accents. The costliest markets of the rich world are those where credit was cheap and building was hard, and the cities that kept building stand outside the crisis. China shows what happens when a boom built on credit is ended on purpose: a fall that has not found a bottom in five years. Commercial property has its own repricing, led by the office, and its losses are still being taken as loans mature.

13b. Five Contradictions

- **Near-record prices, and a poor investment.** The median home sells for close to its record, yet real prices are falling and owning it costs 9.91% of its price a year against a 5.3% rent. The asset is dear because its owners will not sell, not because it promises a high return (Modules 4 and 11).
- **A shortage, and falling rents.** The country is short of homes by any estimate, yet rents fell where the apartment wave landed. The shortage is local, and so is its cure (Modules 6 and 7).
- **Rules against investors, with the investors' growth exempt.** Both federal measures of 2026 against large investors exempt homes built to rent, the part of their business that grew fastest. The rules may change who builds and owns the rentals more than how many homes there are (Modules 6 and 7).
- **One arm of government pulling rates down, another pushing them up.** In January the administration ordered $200 billion of mortgage-bond purchases to lower mortgage rates; in September the Fed raised its rate, and the thirty-year rate climbed to 7.40% (Modules 4 and 5).
- **The safest asset, and the uninsurable one.** Families treat the home as their safest holding, yet in the exposed states it is the asset private insurers will not cover. The state plans of last resort grew as private insurers left, until Florida let rates rise and its market recovered (Module 12).

13c. What to Watch

Date	What to watch	Why it matters
October 19, 2026	China's September data, with January-September property investment, the 70-city prices, and third-quarter growth	Whether investment's fall deepens again (Module 9)
October 20	September housing starts and permits (Census Bureau)	Whether apartment starts keep rising as the wave of completions ends (Module 6)
When published	The review of Canadian softwood duties in the Federal Register	Most mills' duties fall, lowering lumber costs (Module 7)
October 27	The Case-Shiller index for August and new-home sales for September	Whether national price growth stays below inflation (Module 3)
October 27-28	The Fed's meeting; futures on October 16 priced about 1 chance in 6 of a rise and about 9 in 10 by December	Another rise would push mortgage rates further from the levels that would free locked-in owners
October 28	The Housing Vacancy Survey for the third quarter	Homeownership and rental vacancy, 7.3% in the second quarter (Module 6)
November 3	The midterms; California's insurance commissioner; housing measures on the ballot in several states	The insurance question of Module 12 put to voters, and the politics of the investor and tariff rules
November 12	Existing-home sales for October (NAR)	Whether sales stay frozen (Module 4)
November 30	The Atlantic hurricane season ends	Whether the season ends without another costly landfall after Isaias (Module 12)
Late November	The 2027 conforming loan limit (FHFA)	The largest loan that Fannie Mae and Freddie Mac may buy (Module 5)
December 8-9	The Fed's last meeting of 2026	The rate that sets the floor under construction and mortgage lending
December 11	The flood insurance program's authorization expires unless Congress extends it	A lapse would stall home sales in flood zones (Module 12)
January 1, 2027	Reinsurance renewals; the tariff on cabinets and vanities is due to rise	The cost of insuring and of building a home (Modules 7 and 12)
January 7, 2027	The ROAD to Housing Act's ban on purchases by large investors takes effect	The test of the investors' effect set out in Module 6
Early 2027	Vanke's second payment on its extended bond	Whether China's state-backed developers stay out of default (Module 9)

Dates as announced by the agencies by October 18, 2026; the conforming limit's date follows last year's November 25 announcement.

13d. The Last Word

Across thirteen modules the throughline is that each force pricing a home is a decision. The frozen market, the shortage, and the insurance crisis were each made, as were the crises abroad and China's bust. What decisions made, decisions can change, and the reforms that added homes where they were allowed, from Minneapolis to the Sun Belt's apartment wave, are the evidence that they can.

Module 13 Key Points

Where Things Stand, and What to Watch

• Credit, law, and risk set the price of property, and in America in 2026 all three bind at once.

• The frozen market clears through falling sales rather than falling prices, protecting owners and shutting out the young.

• Five contradictions, among them a shortage alongside falling rents and a push for lower rates against a Fed raising them.

• Watch the Fed's October 27-28 meeting, the November 3 votes, flood insurance's December 11 deadline, and the January 7 investor ban.

• The last word: each force that prices a home is a decision, and decisions can be changed.

Module 13 Quiz

Check Your Understanding

1. Which three forces does the closing module say set the price of property?

A) Location alone
B) Taxes and rent
C) Supply, demand, and foreign speculation
D) Credit, law, and risk

2. How does the frozen American market clear, on the module's account?

A) Through falling prices, as in every cycle.
B) Through a wave of foreclosures among owners.
C) Through falling sales.
D) Through government purchases of unsold homes.

3. Which policies pulled mortgage rates in opposite directions in 2026?

A) Mortgage-bond buying and the Fed's rise
B) Rent caps and tariffs
C) Zoning reform and the ROAD Act's limits on investors
D) The tax law's cap on mortgage interest and the end of the fifty-year mortgage, both of which raised the rates that buyers pay

4. When does the ROAD to Housing Act's ban on purchases by large investors take effect?

A) On July 11, 2026
B) On January 7, 2027, for investors with 350 or more homes
C) On November 3, 2026
D) Only after the next Congress votes to fund it in 2027

5. What is the closing module's last word on the forces that price a home?

A) Each is set by the market alone, beyond any government's reach
B) Each is a decision
C) They cannot be changed by policy
D) They are fixed by geography

Answer Sheet

Answers to every module's Check Your Understanding quiz.

Module	Answers
Module 1 Quiz	1. B 2. D 3. C 4. A 5. D
Module 2 Quiz	1. B 2. C 3. A 4. A 5. D
Module 3 Quiz	1. C 2. B 3. D 4. A 5. C
Module 4 Quiz	1. B 2. D 3. B 4. C 5. A
Module 5 Quiz	1. D 2. A 3. C 4. B 5. B
Module 6 Quiz	1. A 2. D 3. C 4. D 5. B
Module 7 Quiz	1. C 2. A 3. A 4. B 5. C
Module 8 Quiz	1. D 2. B 3. C 4. D 5. A
Module 9 Quiz	1. B 2. C 3. D 4. A 5. A
Module 10 Quiz	1. D 2. B 3. C 4. D 5. B
Module 11 Quiz	1. A 2. C 3. C 4. B 5. D
Module 12 Quiz	1. A 2. C 3. D 4. A 5. B
Module 13 Quiz	1. D 2. C 3. A 4. B 5. B