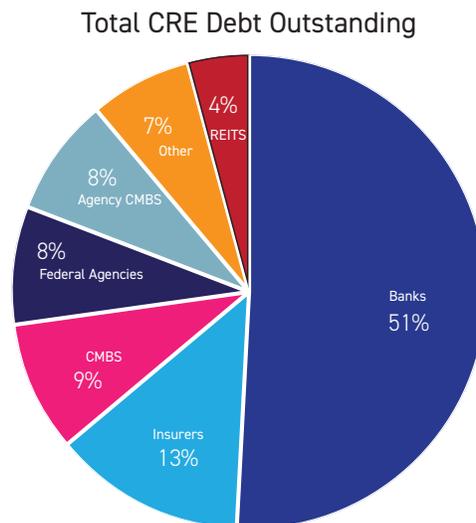


Commercial Real Estate by the Numbers

CRE Market Value and Leverage

- **\$14.4 trillion - \$17 trillion: total value of America's commercial real estate** (at end of 2018) (includes multifamily residential).¹
 - » To put that in perspective, the value of U.S. commercial real estate is more than half of the market capitalization of all U.S. publicly traded companies.²
 - » Roughly two-thirds of commercial real estate debt relates to non-residential property with the remainder financing multifamily residential rental property (five or more units).
- **\$4.7 trillion: Amount of mortgage debt that finances U.S. commercial real estate** (at end of Q2 2020).³
 - » U.S. commercial real estate is conservatively leveraged with 71% equity and 29% debt (assumes aggregate value of \$16 trillion).
 - » Largest holders of CRE debt are banks (51%), followed by government-sponsored enterprises and GSE-backed mortgage pools (16%), life insurance companies and pension funds (13%), commercial mortgage-backed securities (9%), and REITs (4%).



Real Estate's Contribution to GDP

- **\$1.728 trillion: Aggregate contribution of CRE (office, retail, industrial warehouse, apartments, hotels) to overall GDP.**
 - » Operations of existing retail, office, and industrial/warehouse buildings, combined with new commercial construction, contributed an estimated \$1.14 trillion to GDP and \$396 billion in personal earnings in 2019.⁴

¹ Nareit®, Estimating the Size of the Commercial Real Estate Market (July 2019) (ground-up estimate using CoStar data). Approximately one-third of CRE value is located in the seven "gateway" markets, half is in the next largest 47 markets, and the balance is in other markets.

² The total market capitalization of U.S.-based public companies traded on the NYSE, NASDAQ, and OTC markets was \$30.1 trillion at the end of 2018. Sibilis Research Limited (2020), available here.

³ Federal Reserve, Financial Accounts of the United States (June 2020) (Table L.217 Total Mortgages; addition of Line 3 ("Multifamily residential") plus Line 4 ("Commercial")).

⁴ Stephen Fuller, Ph.D., Economic Impacts of Commercial Real Estate (NAIOP Research Foundation 2020).

Commercial Real Estate by the Numbers

Real Estate's Contribution to GDP (Continued)

- » The multifamily industry, which provides shelter to 44 million residential renters⁵, contributes an additional \$400 billion to GDP through apartment construction, improvements, and operational expenditures.⁶
- » The operation of America's hotels, along with hotel construction and capital investment, generate an additional \$314 billion in direct economic output.⁷
- » These numbers do not include the enormous indirect benefits that flow from real estate activity such as the revenue generated by retail tenants and further induced guest, employee, and supplier spending in the case of hotels.

Real Estate, Jobs, and the Workforce

- **13.6 million: U.S. jobs directly supported by real estate.**
 - » These include jobs in construction, planning, architecture, building maintenance, hotel operations, management, leasing, brokerage, cleaning, security, and other activities.⁸
 - » In addition, real estate employs millions more indirectly in fields such as mortgage lending, accounting, legal services, investment advising, and environmental consulting.
- **Real Estate Depends Heavily on Foreign-Born Labor.⁹**
 - » Over 2.5 million workers in "construction and extraction" jobs are foreign-born (9.1% of the U.S. foreign-born workforce)
 - » Almost 2.1 million workers in "building and grounds cleaning and maintenance" jobs are foreign-born (6.7% of the U.S. foreign-born workforce)
 - » Immigrants account for 30% of all workers in construction trades (carpenters, laborers, painters, plumbers, roofers, drywall installers, floor installers, etc.)¹⁰
 - » Immigrants account for 1 in 3 workers in the U.S. hotel and accommodation industry.¹¹

Real Estate's Contribution to the Tax Base

- **\$547 billion: Property taxes paid to state and local governments.¹²**
 - » 31% of state and local government tax revenue derives from property taxes.

⁵Renter statistic through 2019, from Harvard University, Joint Center for Housing Studies, State of the Nation's Housing 2020 at p. 29).

⁶Hoyt Advisory Services, The Contribution of Multifamily Housing to the U.S. Economy (National Apartment Association and the National Multifamily Housing Council, 2019).

⁷Oxford Economics, Economic Impact of the U.S. Hotel Industry (Aug. 2019).

⁸Real estate-related "occupation codes" selected from U.S. Bureau of Labor Statistics, National Occupational Employment and Wage Estimates (May 2019). Estimate for self-employed real estate agents provided by National Association of REALTORS® monthly membership report, available at: <https://www.nar.realtor/membership/monthly-report>. See Appendix for full jobs analysis.

⁹Bureau of Labor Statistics, Foreign-Born Workers: Labor Force Characteristics - 2019, Table 4 (May 15, 2020).

¹⁰Natalia Siniavskaja, Immigrant Workers in the Construction Labor Force, National Assn of Home Builders Economic and Housing Policy Group, (March 3, 2020).

¹¹New American Economy Research Fund, Immigrant Workers in the Hardest-Hit Industries (Aug. 20, 2020).

¹²U.S. Census Bureau, Annual State and Local Government Finances Summary: 2018 (Oct. 1, 2020)

Commercial Real Estate by the Numbers

Real Estate's Contribution to the Tax Base (Continued)

- **\$509 billion: Property taxes paid to local governments.**¹³
 - » 72% of local government tax revenue derives from property taxes.
 - » Local property taxes provide more than a third of all money used to finance public education.¹⁴
- **\$297 billion: State and local property taxes paid by businesses.**¹⁵
 - » An average commercial property pays 1.724 times more in taxes compared to taxes associated with a home.¹⁶
 - » A typical large U.S. city imposes an average annual tax of 1.92% on the value of commercial properties (land and building, combined).¹⁷

Real Estate's Contribution to Americans' Retirement Savings

- **\$800 billion: Amount invested by pension funds, educational endowments, and charitable foundations in real estate.**¹⁸
 - » Real estate investments can be found in 87 percent of all public and 73 percent of all private sector pension funds.¹⁹
 - » An estimated 68 percent of insurance companies -- another critical source of retirement savings and survivor benefits -- are actively invested in real estate.
- **\$600 billion: Amount of pension investments managed by America's building trades unions.**²⁰
 - » \$16 billion: Funding in more than 500 real estate projects provided by the Union Labor Life Insurance Company (Ullico), organized labor's group insurance provider, since its inception in 1977.²¹

Physical Characteristics of U.S. Commercial Real Estate Infrastructure²²

- **5.9 million: Number of nonresidential buildings in the U.S. Includes:**
 - » 1 million warehouse and storage buildings
 - » 972,000 office buildings
 - » 518,000 retail buildings (malls plus non-malls)
 - » 214,000 hotels and commercial lodging buildings
 - » 137,000 health care buildings (inpatient plus outpatient)

¹³Tax Policy Center, Urban Inst. and Brookings Inst., Local General Revenue, by Source (2017 data) (April, 27, 2020)

¹⁴Lincoln Institute of Land Policy, The Future of U.S Public School Revenue from the Property Tax (July 2017).

¹⁵Ernst & Young LLP, Total State and Local Business Taxes: State-by-State Estimates for FY18 at p. 10 (Oct. 2019)

¹⁶Tax Foundation, State and Local Property Taxes Target Commercial and Industrial Property (Nov. 21, 2012).

¹⁷Lincoln Institute of Land Policy & Minnesota Center for Fiscal Excellence, 50-State Property Tax Comparison Study (June 2020).

¹⁸Meredith Despina, The Role of Real Estate in Pension Funds, Nareit Developments (Aug. 2019).

¹⁹Preqin, Pension Funds Investing in Real Estate, Real Estate Spotlight (Sept. 2016).

²⁰North American Building Trades Unions, NABTU Real Estate Manager Report Card (Jan. 2020).

²¹Ullico Bulletin, J for Jobs Adds Projects in Chicago and New Jersey (2018).

²²Table 1 and slides from U.S. Energy Information Administration, 2018 Commercial Building Energy Consumption Survey (preliminary data released Nov. 18, 2020). Figures do not include multifamily residential.



Commercial Real Estate by the Numbers

Physical Characteristics of U.S. Commercial Real Estate Infrastructure (Continued)

- **97 billion ft²: Total U.S. commercial floorspace**
- **36 years old: Median age of U.S. commercial buildings**
 - » 25% have been built since 2000
 - » 54% were built between 1960 and 1999
 - » 21% were built before 1960
 - » More than 75% of U.S. buildings were built before 2004, the year that the first “modern” commercial building energy standard was published (ASHRAE 90.1 2004).²³
- **Buildings by size:**
 - » Over 500K ft²: 9,000 buildings
 - » 201K ft² to 500K ft²: 40,000 buildings
 - » 100.1K ft² to 200K ft²: 93,000 buildings
 - » 100K ft² or smaller: Over 97% of the U.S. commercial building stock
- **Growth in building size continues to outpace increases in the absolute number of U.S. buildings.**
 - » Since 2012, the number of buildings has grown by 6% and floorspace by 11%
 - » Number of commercial buildings has increased 55% from 1979-2018 (3.8 million buildings to 5.9 million buildings)
 - » Amount of commercial floorspace has increased 90% from 1979-2018 (51 billion ft² to 97 billion ft²)
 - » Buildings larger than 100,000 ft² account for less than 3% of commercial buildings, but 34% of commercial floorspace

U.S. Real Estate and Energy Consumption²⁴

- **28%: Amount of U.S. energy consumption attributable to building owners, tenants, occupants, and guests**
 - » 16% attributed to the residential sector (11.9 quadrillion Btus)
 - » 12% attributable to the commercial sector (9.4 quadrillion Btus)

²³U.S. Department of Energy, Building Energy Codes – An Introduction (May 2010) at slide 9.

²⁴U.S. Energy Information Administration, U.S. Energy Consumption by Source and Sector, 2019. See also explanation on EIA 2018 updated chart.



Commercial Real Estate by the Numbers

U.S. Real Estate and Energy Consumption (Continued)

- *What fuels power U.S. real estate?*

Power Source	Commercial	Residential
Retail Electricity Sales	49%	41%
Natural Gas	39%	44%
Petroleum	9%	8%
Renewable Energy	3%	7%
Coal	<1%	N/A

- *Renewable energy mix for the commercial and residential sectors.*²⁵
 - » 61%: biomass (wood/waste [59%] plus biofuels [2%])
 - » 33%: solar
 - » 6%: geothermal
 - » <1%: wind
 - » <1%: hydropower

Commercial Real Estate and Energy Efficiency²⁶

- **\$150 billion:** Cumulative energy cost savings by U.S. ENERGY STAR certified buildings (since program inception in 1992)
 - » **\$10 billion:** Energy cost savings in 2016 alone
- **36,000:** Number of ENERGY STAR certified buildings
 - » **5,700 buildings:** Number of ENERGY STAR certified buildings in 2019 alone
- **260,000:** Number of buildings that use EPA's Portfolio Manager tool to benchmark, measure and track energy use, water use, and waste and materials
 - » **24 billion ft²:** Amount of commercial floorspace covered by Portfolio Manager (about 25% of all U.S. commercial floorspace)

²⁵U.S. Energy Information Administration, U.S. Primary Renewable Energy Consumption by Source and Sector, 2019

²⁶U.S. Environmental Protection Agency, ENERGY STAR Facts and Stats

