# Economic contribution of REITs in the United States

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## Executive summary

EY was commissioned by Nareit® to estimate the current economic contribution of all US Real Estate Investment Trusts (REITs) (including public listed, public non-listed, and private REITs) in the United States. This report summarizes the estimates of the economic contribution of REITs to the US economy for 2017.

Key findings of the economic contribution of US REITs to the US economy for 2017 are presented below and summarized in Table E-1:

- **The total economic contribution of US REITs in 2017 was an estimated 2.3 million full-time equivalent (FTE) jobs and $140.4 billion of labor income.** The total economic contribution, or "footprint," of REITs consists of the direct operations of REITs and related businesses in the United States, as well as the impacts from dividend and interest payments by REITs and REIT property improvement and construction investments.
- **REITs directly employed approximately 265,000 FTE employees who earned $15.2 billion of labor income in the United States.** REIT supplier purchases and spending by REIT and related employees supported an additional 601,000 FTE jobs and $37.7 billion of earnings in the United States. In total, the economic footprint of US REIT operations comprised 866,000 FTE jobs and $53.0 billion in labor income in 2017.
- **REIT activities also resulted in the payment of an estimated $53.1 billion of interest income and the distribution of $106.2 billion of dividend income by REITs in 2017.** This dividend and interest income supported 445,000 FTE jobs earning $25.4 billion of labor income through the induced contribution of re-spending by REIT bondholders and shareholders. $65.8 billion of dividends and interest was paid by REITs to the retirement accounts of US residents, where it is available for future consumption spending.
- **REITs invested $65.5 billion in new construction and routine capital expenditures to maintain existing property in 2017.** REITs invested $5.5 billion in new construction and $60.0 billion in routine capital expenditures to maintain existing property. The related construction activity supported 488,000 FTE construction jobs that earned $29.5 billion in labor income. Purchases of goods from suppliers and consumer spending by construction and supplier employees contributed an estimated 520,000 FTE jobs and $32.6 billion in labor income in 2017.
- **REITs directly supported nearly $19 billion in property taxes in 2017.** Property tax on REIT properties amounted to nearly $19 billion in 2017. This does not include the additional property tax supported by REITs through their indirect and induced economic contribution.

**Table E-1. Total economic contribution of all REIT operations, dividend distributions, interest payments, and construction activities, 2017**
*Billions of dollars; thousands of full-time equivalent employees*

| | Direct | Indirect & induced | Total |
|---|---|---|---|
| **Operations** | | | |
| Labor income | $15.2 | $37.7 | $53.0 |
| Employment | 265 | 601 | 866 |
| **Construction** | | | |
| Labor income | $29.5 | $32.6 | $62.1 |
| Employment | 488 | 520 | 1,008 |
| **Dividend and interest payments** | | | |
| Labor income | $0.0 | $25.4 | $25.4 |
| Employment | 0 | 445 | 445 |
| **Total** | | | |
| Labor income | $44.7 | $95.7 | $140.4 |
| Employment | 752 | 1,566 | 2,319 |

Note: Includes public listed, public non-listed, and private REITs. Operations exclude the economic contribution of REIT dividend distributions and REIT interest payments. The above table does not include the economic contribution of the tenants of REIT-owned properties. Figures may not sum due to rounding.
Source: EY analysis.

## Contents

# Economic contribution of REITs in the United States

## I. Introduction

EY has been commissioned by Nareit to estimate the current economic contribution of US Real Estate Investment Trusts (REITs). This report summarizes the estimates of the economic contribution of REITs to the US economy in 2017.

As described in this report, REITs and related companies provide employment and earnings for hundreds of thousands of employees and contribute jobs in other sectors of the economy that support REIT operations. Dividend distributions and interest payments by REITs to shareholders and bondholders contribute to spending in the United States. Capital investments undertaken by REITs or related to new buildings purchased by REITs also contribute hundreds of thousands of jobs to the US economy. Overall, REITs directly employed approximately 265,000 FTE employees who earned $15.2 billion of labor income in the United States. The total economic contribution of US REITs in 2017 was an estimated 2.3 million full-time equivalent (FTE) jobs and $140.4 billion of labor income.

### Overview of US REITs

REITs are real estate companies first authorized in the United States in 1960 as a way to make equity and mortgage debt investment in diversified and professionally managed portfolios of large-scale, income-producing real estate accessible to all Americans in the same way they typically invest in the stocks and bonds of most other companies. Modeled after mutual funds, REITs provide all investors with access to the investment attributes of commercial real estate, including reliable dividend income, potential long-term capital appreciation, and portfolio diversification.

Today, 36 countries have adopted various forms of the US REIT model in an effort to provide their economies and capital markets with the benefits of a listed, REIT-based approach to real estate investment. Every G-7 nation and a majority of the members of the Organization for Economic Co-operation and Development have adopted a model for REIT-based real estate investment.

REITs in the United States today comprise a diverse industry. A REIT may be a *public* company with its shares registered with the Securities and Exchange Commission (SEC), or it may be a *private* company. In addition, a *public* REIT's shares may be *listed* and publicly traded on an established stock exchange such as the New York Stock Exchange, or its shares may be *non-listed* and sold directly to investors through a broker-dealer or an investment advisor.

REITs generally specialize in either owning or financing real estate. *Equity* REITs primarily own, and in most cases operate, income-producing real estate, including apartments, data centers, offices, industrial facilities, shopping centers, health care facilities, telecommunications towers, hotels, self-storage facilities, and other properties. Mortgage REITs (mREITs) primarily invest in mortgages and mortgage-backed securities, providing financing for residential and commercial properties. By purchasing mortgage loans from banks and other originators, mREITs provide capital that can be used to extend further loans to homebuyers and businesses. Further, commercial mREITs engage in a number of other activities that support commercial real estate financing, including originating, servicing, and securitizing loans.

Today, REITs in the United States own more than $3 trillion of gross real estate assets. Public listed REITs have seen their combined equity market capitalization grow from the end of 1990 at an approximately 20% compound annual rate, from $9 billion to more than $1 trillion at the end of 2017.

Public listed equity REITs constitute the bulk of today's REIT market. As of year-end 2017, equity REITs accounted for approximately 69% of all US public listed REIT gross assets and nearly 95% of the more than $1 trillion of equity market capitalization. Public listed equity REIT portfolios included more than 500,000 properties at year-end 2017. The portfolios included:[1]

- More than 3,000 office buildings
- Nearly 500 regional malls; more than 3,400 shopping centers; more than 5,800 restaurant locations; and more than 13,000 other retail properties
- Nearly 5,500 industrial facilities
- Over 3,700 multi-family rental properties, with over 1 million units
- More than 2,200 hotels
- Approximately 8,800 medical facilities comprised of more than 2,200 medical office buildings, nearly 2,400 assisted living facilities, over 2,400 skilled nursing facilities, and over 1,800 other health care facilities
- Nearly 5,600 self-storage facilities
- More than 300 data centers
- Nearly 95,000 telecommunications towers
- Nearly 150,000 single-family home rental properties
- Over 210,000 billboards and outdoor advertising units
- Over 16 million acres of timberland

To be eligible to operate and be taxed as a REIT with respect to the Internal Revenue Code, REITs are required to be in the real estate business and to invest primarily in qualified real estate assets. Specifically, at least 75% of a REIT's total assets must be invested in real estate and at least 75% of a REIT's gross income must be derived from real estate sources, such as rents from real property, interest from mortgages on real property, or sales of real estate investments. REITs are also required to distribute nearly all of their taxable income — at least 90% — annually to their shareholders as dividends. Most REITs today pay out 100% of their taxable income as dividends.

Companies operating as REITs may claim a dividends paid deduction for federal income tax purposes if the income distribution, organizational, and ownership requirements are satisfied.[2] As noted, Federal tax law requires that REITs distribute at least 90% of their taxable income each year as dividends. However, until 2018 these dividends were subject to the non-qualified dividend tax rate. In 2017, the top non-qualified dividend tax rate was 43.4%.[3] REITs often operate taxable REIT subsidiaries (TRSs). As taxable subsidiaries, TRSs are allowed to engage in a broader range of activities than are their REIT parents. TRS activities are typically complementary to the REIT business model, for example providing services to the tenants of its parent REIT.

In addition to the employees working either directly for internally-managed REITs, the managers of externally-managed REITs, and REIT TRSs, millions of individuals work for the businesses that occupy REIT-owned properties. The economic contributions of these REIT tenants are not included in this analysis.

**Direct REIT employment**

As shown in Table 1, REITs directly employed approximately 265,000 full-time equivalent (FTE) workers in 2017.[4] The vast majority of these workers were employed by equity REITs.

As noted above, equity REITs own and manage a broad variety of commercial and residential properties. Each of these property types requires specialized employees to support their operation. In addition to employees who operate these properties, REITs directly employ workers through TRSs. TRSs provide services to tenants and undertake other activities that support the operation and financing of REIT-owned properties. For this report, employees at a TRS are considered part of the direct employment contribution of REITs. mREITs employed an estimated 10,900 FTE workers in 2017.

**Table 1. Direct employment of all US REITs by FTSE Nareit sector, 2017**
*Employment is shown in terms of total full-time equivalent employees*

| FTSE Nareit sector | Total REIT employment | As % of total |
|---|---|---|
| Residential | 43,400 | 16% |
| Storage | 43,100 | 16% |
| Specialty | 40,200 | 15% |
| Data center | 22,800 | 9% |
| Retail | 20,700 | 8% |
| Industrial | 20,100 | 8% |
| Office | 16,200 | 6% |
| Infrastructure and telecommunications towers | 15,700 | 6% |
| Timberland | 14,400 | 5% |
| Diversified | 10,600 | 4% |
| Health care | 3,300 | 1% |
| Lodging | 3,200 | 1% |
| **Total, equity REITs** | **253,700** | **96%** |
| mREITS | 10,900 | 4% |
| **Total direct REIT employment** | **264,600** | **100%** |

Note: Includes public listed, public non-listed, and private REITs. Employment shown above includes that of TRSs. These are companies that provide services to REIT tenants such as landscaping, cleaning, or concierge services. “Property type” and “Property subtype” data reported by companies and captured in S&P Global are mapped to property sectors that generally align with those used in the FTSE Nareit All REITs Index. Figures may not sum due to rounding.
Source: Internal Revenue Service, S&P Global, and EY analysis.

## II. The economic contribution of REIT operations

The US economic contribution of REITs extends beyond the direct operations of REITs and includes the indirect contributions of their suppliers and the induced contributions of businesses supported by the spending of REIT employees, bondholders, and shareholders. The US economic contribution also includes the direct, indirect, and induced contributions of capital expenditures on building construction and routine maintenance related to REITs.

The economic contributions described in this study include the following economic contribution metrics:

- **Employment.** Employment is measured as the number of FTE employees. In estimating the direct employment contribution of REITs, a full-time worker is counted as one FTE and a part-time worker is counted as one-half of a FTE.[5]

- **Labor income.** Labor income includes employee compensation (wages and benefits) and proprietor income.[6]

The overall economic contribution of REITs is measured as the sum of direct, indirect, and induced economic contributions, described below and summarized in Figure 1.

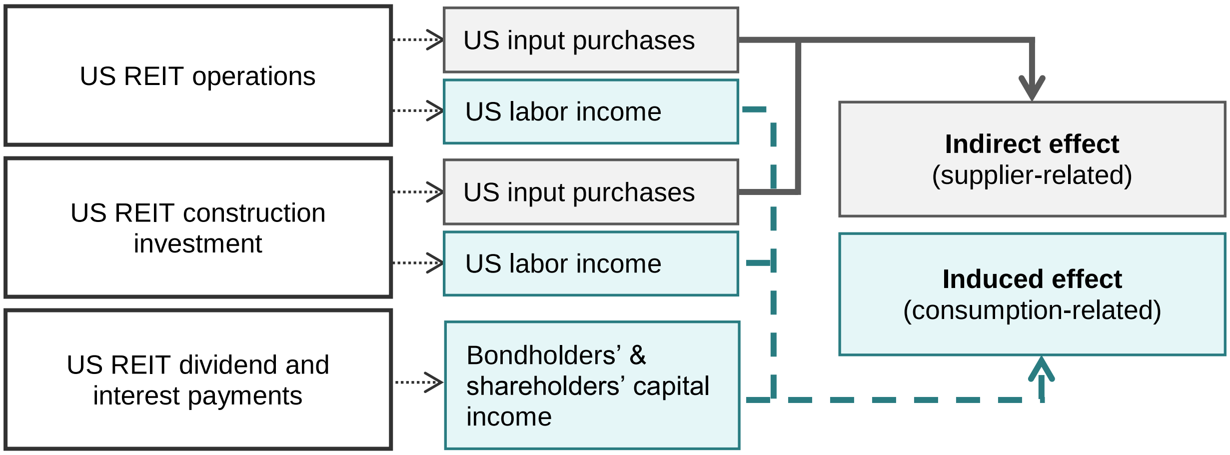
- **Direct contribution.** The estimated direct economic contribution consists of direct employment by REITs and the labor income earned by REIT employees. The direct contribution also includes regular capital expenditures for existing structures and investment in new structures and the associated temporary construction employment. Direct contribution estimates rely on available information from the Internal Revenue Service (IRS) and SEC-filed financial statements.

- **Indirect contribution.** REITs purchase goods and services from other US businesses, supporting employment and income at these supplier businesses. REIT expenditures on utilities, telecommunications, landscaping, cleaning, and security, among other goods and services, support sales and employment in these US industries. Demand for these products and services by REITs leads to additional rounds of economic activity as REIT suppliers purchase operating inputs from their own suppliers. These additional rounds of economic activity throughout supply chains are known as “spillover” or “multiplier” effects. Goods and services imported from abroad are not included in estimates of US economic contributions.

- **Induced contribution.** The induced economic contribution reflects the additional economic activity that results from consumer re-spending of income earned from REITs and related activities, including the dividend-funded spending of REIT shareholders and the spending of interest income by REIT bondholders and other creditors. When REIT employees, REIT bondholders, REIT shareholders, and employees of businesses indirectly supported by REITs spend their earnings at US businesses (e.g., grocery stores, retailers, movie theaters), they support economic activity in those sectors. The earnings that employees, bondholders, and shareholders spend on food at a restaurant, for example, creates jobs at the restaurant and at farms, transportation companies, and other industries that are involved in the restaurant industry's supply chain.

The composition of REITs' contribution to the US economy is illustrated in Figure 1.

**Figure 1. Overview of the US economic contribution of REITs**




Note: Construction activities include renovations of existing structures.

The magnitude of the economic contribution of REITs is determined by several factors, including supplier relationships among businesses in the United States. This contribution can be expressed in terms of "economic multipliers" equal to the total economic contribution per unit of direct contribution. This analysis uses the 2016 Impacts for Planning (IMPLAN) input-output model of the United States to estimate the economic contributions of REITs in the United States in 2017. The model, which describes US economic linkages as they existed in 2016, was scaled to the size of the 2017 US economy to estimate the economic contributions of REITs. Unlike other economic models, IMPLAN includes the interaction of more than 500 industry sectors, thus identifying the interaction of specific industries that benefit from REIT operations, dividend and interest payments, and construction activity. See the Appendix for further details.

## Employment and labor income resulting from REIT employment

REITs directly employed approximately 265,000 FTE workers in 2017. Employees of equity REITs that own and manage properties such as retail establishments, offices, factories, and residential properties are allocated to either the management of real estate or the provision of services—such as maintenance and other support services—to properties.

For REITs that own and manage specialized types of property, such as data centers, wireless telecommunications towers, and timberland REITs, employees of these companies are categorized into property-specific employment activities.[7] For example, data center REIT employees are assumed to conduct computer facilities management activities, wireless telecommunication tower REIT employees are assumed to conduct telecommunications infrastructure activities, and timberland REIT employees contribute to the economy through commercial logging activities. Tying highly specialized REITs to specific employment activities in this way offers more accurate estimates of the economic contribution of REITs to the US economy. mREIT employees are assumed to engage in mREIT management activities.

As shown in Table 2, workers conducting building services, computer facilities management activities, and facilities support services comprised approximately two-thirds of total direct REIT employment in 2017. Other REIT employment activities include the operation of telecommunications infrastructure and warehousing and storage facilities.

**Table 2. Distribution of direct employment of all US REITs by employment activity, 2017**
*Employment is shown in terms of total full-time equivalent employees*

| Employment activity | Total REIT employment | As % of total |
|---|---|---|
| Services to buildings | 100,600 | 38% |
| Computer facilities management services | 46,800 | 18% |
| Facilities support services | 31,400 | 12% |
| Warehousing and storage | 19,100 | 7% |
| Equity REIT management | 18,600 | 7% |
| Telecommunications infrastructure | 15,200 | 6% |
| Commercial logging | 14,400 | 5% |
| mREIT management | 10,900 | 4% |
| Advertising | 7,600 | 3% |
| **Total** | **264,600** | **100%** |

Note: Includes public listed, public non-listed, and private REITs. Figures may not sum due to rounding.
Source: EY analysis.

Each of these employment activities has a different impact on the US economy, based on the US supply chain (operating inputs purchased from domestic businesses) required to support these activities, as well as the average wage levels of workers conducting these activities. Activities that produce a higher output per worker (e.g., more capital-intensive tasks, such as the operation of telecommunications infrastructure) generally have higher employment multipliers due to the higher amount of supplier spending they require. The more a business spends on supplier spending, the higher its indirect economic contribution. A higher average wage level also leads to a larger economic contribution—workers with greater disposable income spend more on consumption, which leads to a higher induced economic contribution.

The average multiplier across all types of economic activity in which REIT employees engage is 3.3. That is, for every 10 direct jobs at a REIT an additional 23 jobs elsewhere in the United States were supported for a total employment contribution of 33 jobs.

## REIT dividend and interest payments

Because REITs are required to distribute at least 90% of their taxable income, dividend payments by REITs represent an important part of their contribution to the US economy. Moreover, a complete picture of the investment income resulting from REIT activity requires the inclusion of interest income resulting from REIT interest payments. Dividend and interest payments contribute to the induced economic contribution of REITs that occurs when REIT bondholders and shareholders spend a portion of their dividend and interest income at US businesses. This re-spending contributes to the economic activity of restaurants, retailers, and other establishments that sell to consumers.

In a study examining the effect of such dividend and interest payments on consumption, Baker, Nagel, and Wurgler (2007) finds that dividends generate consistently higher consumption than equivalent amounts of retained earnings that generate capital gains for shareholders.[8] Because REITs are required to pay out 90% of their taxable income as dividends, they have a larger contribution to current US consumption than a similar business that retains its earnings. In particular, the authors find that 72% of dividend payments are used to fund consumption expenditures (i.e., the marginal propensity to consume from dividend income is 72%). When interest income is included in their estimation, this propensity declines to 56%. The IMPLAN model is adjusted to reflect these results to more accurately estimate the economic contribution of dividend and interest income.

REITs paid an estimated $106.2 billion in dividends to shareholders in 2017.[9] A portion of these dividends – approximately 14% – is paid to foreign shareholders and makes no further contribution to US economic activity.[10] The remaining amount of approximately $91.3 billion was paid to US shareholders. It is estimated that 48% of this amount was paid to US shareholders' retirement accounts.[11] These accounts, such as 401(k)s or Individual Retirement Accounts (IRAs), include distribution rules that encourage investors to take distributions only once the investors have reached a certain age. As such, these dividend payments were generally not immediately available for consumption spending in 2017. After adjusting for foreign shareholders and dividends paid to retirement accounts, approximately $47.5 billion was available for consumption or saving in 2017.

REITs paid $53.1 billion of interest to their creditors in 2017.[12] REIT dividends and interest are assumed to have the same investor base. After adjusting REIT interest payments for payments to residents of foreign countries and to US shareholders' retirement accounts, $23.8 billion in interest payments remained for spending in the US economy in 2017. In total, $71.2 billion of investment income received from REITs was available for spending in the US economy in 2017.

### The estimated US economic contribution of REIT operations, dividends, and interest payments

In total, REIT operations, including dividend and interest payments, contributed $78.4 billion in labor income to the US economy and supported over 1.3 million FTE jobs. These estimated economic contributions of US REIT operations are summarized in Table 3. REITs paid $15.2 billion in labor income to their approximately 265,000 FTE employees in 2017.

The indirect and induced economic contribution of REITs and related companies has two components. First, REIT operations (which excludes dividend and interest payments) supported an additional 601,000 FTE jobs and $37.7 billion of labor income in the United States. This indirect and induced activity occurred through the economic activity associated with suppliers and REIT and supplier employee spending.

In addition, dividend and interest payments by REITs to US investors contribute to US employment and earnings when this dividend and interest income is used to purchase consumption goods and services. The $47.5 billion of dividend distributions and $23.8 billion of interest expenses paid to US residents outside of retirement accounts are estimated to support 445,000 FTE workers earning $25.4 billion of labor income as a result of REIT bondholder and REIT shareholder re-spending. This re-spending constitutes the “induced” contribution of REIT dividend and interest payments.

**Table 3. Total economic contribution of REIT operations, dividends, and interest payments, 2017**

*Billions of dollars; thousands of full-time equivalent employees*

| | Direct | Indirect & induced | Total |
|---|---|---|---|
| **Operations** | | | |
| Labor income | $15.2 | $37.7 | $53.0 |
| Employment | 265 | 601 | 866 |
| **Dividend payments** | | | |
| Labor income | $0.0 | $19.5 | $19.5 |
| Employment | 0 | 343 | 343 |
| **Interest payments** | | | |
| Labor income | $0.0 | $5.8 | $5.8 |
| Employment | 0 | 102 | 102 |
| **Total** | | | |
| Labor income | $15.2 | $63.1 | $78.4 |
| Employment | 265 | 1,046 | 1,311 |

Note: Includes public listed, public non-listed, and private REITs. Operations exclude the economic contribution of REIT interest payments and REIT dividend distributions. The above table does not include the economic contribution of the tenants of REIT-owned properties. Figures may not sum due to rounding.
Source: EY analysis.

## III. The economic contribution of REIT construction activities

In addition to the economic contribution of REITs from their operations, REITs also fund billions of dollars of new building construction and routine capital expenditures on existing structures in each year. In 2017, REITs are estimated to have spent $5.5 billion to construct new buildings. In some cases, REITs fund and manage the construction of a new building, while in other instances buildings are funded and constructed by a developer who sells the building to a REIT. Both of these types of investments in new structures are included in the economic contribution estimates summarized below. However, the purchase or transfer of existing buildings and structures does not create new economic activity and is therefore excluded from the analysis.

Further, REITs are estimated to have spent $60.0 billion on routine capital investments needed for property maintenance and upkeep.[13] REIT construction spending is summarized in Table 4.

**Table 4. REIT construction spending, 2017**
*Billions of dollars*

| | |
|---|---|
| Routine capital expenditures for property maintenance and upkeep | $60.0 |
| Construction of new buildings | $5.5 |
| **Estimated new property investment, all REITs** | **$65.5** |

Note: Includes public listed, public non-listed, and private REITs. Figures may not sum due to rounding.
Source: Internal Revenue Service, S&P Global, and EY analysis.

Table 5 shows the economic contribution of the $65.5 billion of REIT construction spending to the US economy in 2017. REIT construction activities supported an estimated 488,000 direct, one-year, full-time construction jobs in the United States. These construction workers earned $29.5 billion in labor income. Purchases of goods from suppliers and consumer spending by construction and supplier employees contributed an additional 520,000 FTE jobs and $32.6 billion in labor income to the US economy in 2017.

**Table 5. Economic contribution of construction spending by REITs in the United States, 2017**
*Billions of dollars; thousands of full-time equivalent employees*

| | Direct | Indirect & induced | Total |
|---|---|---|---|
| **Construction** | | | |
| Labor income | $29.5 | $32.6 | $62.1 |
| Employment | 488 | 520 | 1,008 |

Note: Includes public listed, public non-listed and private REITs. Construction activities include renovations of existing structures. Figures may not sum due to rounding.
Source: EY analysis.

## IV. The economic contribution of REITs nationally and by state

Table 6 summarizes the estimated total economic contribution of REITs and related companies to the US economy in 2017: over 2.3 million FTE jobs and $140.4 billion of labor income. REIT operations supported 866,000 FTE jobs earning $53.0 billion of income. Annual REIT spending on new building construction and routine property maintenance and upkeep contributed approximately 1.0 million jobs and $62.1 billion in labor income. Dividends and interest paid by REITs to US-resident investors contributed to US consumer spending, supporting an estimated 445,000 induced jobs in 2017 at retailers, restaurants, health care providers, and other businesses supported by consumer spending. These workers earned $25.4 billion of labor income.

**Table 6. Total economic contribution of all REIT operations, dividend distributions, interest payments, and construction activities, 2017**
*Billions of dollars; thousands of full-time equivalent employees*

| | Direct | Indirect & induced | Total |
|---|---|---|---|
| **Operations** | | | |
| Labor income | $15.2 | $37.7 | $53.0 |
| Employment | 265 | 601 | 866 |
| **Construction** | | | |
| Labor income | $29.5 | $32.6 | $62.1 |
| Employment | 488 | 520 | 1,008 |
| **Dividend and interest payments** | | | |
| Labor income | $0.0 | $25.4 | $25.4 |
| Employment | 0 | 445 | 445 |
| **Total** | | | |
| Labor income | $44.7 | $95.7 | $140.4 |
| Employment | 752 | 1,566 | 2,319 |

Note: Includes public listed, public non-listed, and private REITs. Operations exclude the economic contribution of REIT interest payments and REIT dividend distributions. The above table does not include the economic contribution of the tenants of REIT-owned properties. Figures may not sum due to rounding.
Source: EY analysis.

The distribution by state (plus the District of Columbia) of the jobs supported by REITs is displayed in Table 7. The 2.3 million FTE jobs includes the employment supported from REIT operations, dividend distributions, interest payments, and construction activities in 2017. The states with the most employment supported by REITs are estimated to be (1) California (377,000 FTE jobs), (2) Texas (199,000 FTE jobs), (3) New York (194,000 FTE jobs), (4) Florida (151,000 FTE jobs), and (5) Virginia (126,000 FTE jobs).

**Table 7. State distribution of total economic contribution of all REIT operations, dividend distributions, interest payments, and construction activities, 2017**
*Thousands of FTE employees*

| | | | |
|---|---|---|---|
| **United States** | **2,319** | Missouri | 23 |
| Alabama | 24 | Montana | 6 |
| Alaska | 2 | Nebraska | 5 |
| Arizona | 61 | Nevada | 30 |
| Arkansas | 14 | New Hampshire | 6 |
| California | 377 | New Jersey | 80 |
| Colorado | 40 | New Mexico | 11 |
| Connecticut | 29 | New York | 194 |
| Delaware | 3 | North Carolina | 54 |
| District of Columbia | 22 | North Dakota | 3 |
| Florida | 151 | Ohio | 49 |
| Georgia | 95 | Oklahoma | 26 |
| Hawaii | 15 | Oregon | 23 |
| Idaho | 6 | Pennsylvania | 74 |
| Illinois | 101 | Rhode Island | 4 |
| Indiana | 29 | South Carolina | 24 |
| Iowa | 9 | South Dakota | 3 |
| Kansas | 12 | Tennessee | 38 |
| Kentucky | 19 | Texas | 199 |
| Louisiana | 26 | Utah | 9 |
| Maine | 9 | Vermont | 2 |
| Maryland | 44 | Virginia | 126 |
| Massachusetts | 73 | Washington | 55 |
| Michigan | 38 | West Virginia | 7 |
| Minnesota | 27 | Wisconsin | 19 |
| Mississippi | 22 | Wyoming | 3 |

Note: Includes public listed, public non-listed, and private REITs. The above table does not include the economic contribution of the tenants of REIT-owned properties. The economic contribution of REITs is distributed to states (and the District of Columbia) based off of REIT gross asset value by property type except for the contribution of REIT dividend payments, which is distributed based off the distribution of overall non-qualified dividend income as reported by the IRS. Figures may not sum due to rounding.
Source: Nareit and EY analysis.

In addition to employment and labor income, REITs also supported nearly $19 billion in property taxes in 2017. This does not include the additional property tax supported by REITs through their indirect and induced economic contribution. The distribution of property taxes paid or assessed by state is displayed in Table 8. The states with the most property tax supported by REITs are estimated to be (1) New York ($3.0 billion), (2) California ($2.8 billion), (3) Texas ($1.9 billion), (4) Florida ($1.4 billion), and (5) Virginia ($0.9 billion).

**Table 8. State distribution of REIT property taxes, 2017**
*Millions of dollars*

| | | | |
|---|---|---|---|
| **United States** | **18,955** | Missouri | 150 |
| Alabama | 80 | Montana | 20 |
| Alaska | 10 | Nebraska | 30 |
| Arizona | 340 | Nevada | 180 |
| Arkansas | 40 | New Hampshire | 40 |
| California | 2,820 | New Jersey | 810 |
| Colorado | 310 | New Mexico | 40 |
| Connecticut | 190 | New York | 2,950 |
| Delaware | 10 | North Carolina | 350 |
| District of Columbia | 370 | North Dakota | 20 |
| Florida | 1,350 | Ohio | 310 |
| Georgia | 600 | Oklahoma | 70 |
| Hawaii | 150 | Oregon | 140 |
| Idaho | 30 | Pennsylvania | 550 |
| Illinois | 820 | Rhode Island | 30 |
| Indiana | 220 | South Carolina | 160 |
| Iowa | 60 | South Dakota | 10 |
| Kansas | 70 | Tennessee | 260 |
| Kentucky | 100 | Texas | 1,910 |
| Louisiana | 110 | Utah | 50 |
| Maine | 40 | Vermont | 10 |
| Maryland | 470 | Virginia | 860 |
| Massachusetts | 760 | Washington | 370 |
| Michigan | 230 | West Virginia | 20 |
| Minnesota | 220 | Wisconsin | 130 |
| Mississippi | 80 | Wyoming | 5 |

Note: Data on property taxes paid or assessed by state by REIT were collected via a survey administered by EY. Survey responses were received from 94 REITs representing more than 60% of the gross asset value of public listed REITs. These responses were then used to impute total property taxes paid or assessed in 2017 for total public listed, public non-listed, and private REITs.[14] Property tax amounts do not include the additional property tax supported by REITs through their indirect and induced economic contribution. Figures may not sum due to rounding.
Source: Nareit and EY analysis.

## V. Limitations of the analysis

The estimates of REIT contributions to the US economy presented in this report are based on an input-output model of the US economy and the data and assumptions described elsewhere in the report. Readers should be aware of the following limitations of the modeling approach and limitations specific to this analysis.

- **The results show a snapshot of current economic contributions.** The input-output modeling approach used in this analysis shows the 2017 economic contribution of US REITs based on their relationships with other industries and households in the US economy. The results do not reflect the impacts of an expansion or contraction of the industry.
- **Estimates are limited by available public information.** The analysis relies on information reported by federal government agencies, financial data for SEC-registered public REITs (generally from S&P Global), and aggregate REIT tax return information (from the IRS). The contributions of private REITs are estimated based on the activities of public REITs using aggregate REIT tax return information.
- **Modeling the economic contribution resulting from REIT employment relies on government industry classifications.** This report relates the activities of REIT employees to the operating profiles of various industries to most effectively estimate the economic contribution of REIT employment. REIT employees engaged in these activities are assumed to receive the average wages and to require the level of operating input purchases characteristic of the industries into which they have been categorized (unless otherwise noted). This analysis relies on estimates of the domestically purchased inputs from the IMPLAN economic model, which are estimated using aggregate trade flow data and may vary by industry.
- **Capital expenditures undertaken by developers are attributed to REITs.** REITs construct new buildings, renovate existing buildings, and purchase buildings from developers. These purchases provide developers with the funding needed to undertake additional construction projects. The analysis includes the contribution of construction activities undertaken directly by REITs, as well as construction activities performed by developers that result in a building sold to a REIT.
- **Dividend distributions of REITs fluctuated widely in the years directly following the financial crisis.** From 2008 to 2009 total public and private REIT dividend payments decreased 30%, from $52.5 billion to $36.6 billion. By 2010, REIT dividend payments had rebounded to $51.7 billion. This analysis includes an estimate of 2017 REIT dividend distributions based on the most recently reported amount of dividend distributions for public listed and non-listed REITs (2017) and the assumption that the average ratio of public REIT dividends to private REIT dividends from 2009 to 2013 (five-year average) could also be applied to 2017 REIT dividends.

## VI. Summary

US REITs own and manage billions of square feet of office, industrial, hotel, and other properties that provide space in which US businesses operate. The direct employment of REITs is estimated to be approximately 265,000 FTEs in 2017. Purchases by REITs of goods and services used in their operations and related consumer spending supported 601,000 FTE jobs in the US economy in 2017. Additionally, dividends distributed and interest expenses paid by REITs to US bondholders and shareholders supported US consumer spending, accounting for an estimated 445,000 US FTE jobs. Totaling these effects, the operations and dividend and interest payments of REITs and related companies are estimated to have supported more than 1.3 million FTEs in the US economy in 2017.

REITs' spending on new building construction and the maintenance and upkeep of existing buildings contributed an estimated 488,000 direct construction-related jobs. The construction activity undertaken by REITs also generated an estimated 520,000 jobs from suppliers and consumer spending by construction and supplier employees.

Combining REITs' direct, indirect, and induced economic contributions to employment, the overall contribution of REITs to US employment in 2017 was over 2.3 million FTE jobs. REITs and related companies also supported an estimated $140.4 billion in direct, indirect, and induced labor income earned by US workers in 2017.

# Appendix

### Technical details: Economic contribution model using IMPLAN

This analysis uses an input-output model to estimate the economic contributions of REITs in the United States in 2017. The economic multipliers in this study were estimated using the 2016 Impacts for Planning (IMPLAN) input-output model of the United States. This 2016 model was scaled to the size of the 2017 US economy. IMPLAN is used by more than 500 universities and government agencies. Unlike other economic models, IMPLAN includes the interaction of more than 500 industry sectors, thus identifying the interaction of specific industries that benefit from REIT operations, dividend and interest payments, and construction activity.

The multipliers in the IMPLAN model are based on the Leontief production function, which estimates the total economic requirements for every unit of direct output in a given industry based on detailed inter-industry relationships documented in the input-output model. The input-output framework connects commodity supply from one industry to commodity demand by another. The multipliers estimated using this approach capture all of the upstream economic activity (or backward linkages) related to an industry's production by attaching technical coefficients to expenditures. These output coefficients (dollars of demand) are then translated into dollars of value added and labor income and number of employees based on industry averages.

The multipliers presented in this report include direct, indirect, and induced effects. Direct effects include employment and spending by REITs. Indirect effects are attributable to operating input purchases from US suppliers. Induced effects are attributable to spending by REIT and supplier employees, as well as recipients of REIT dividend and interest payments, based on household spending patterns.

Indirect and induced effects are driven by: (1) input purchases by REITs and their suppliers, (2) the percentage of each type of commodity that is purchased from within the United States, and (3) household consumption profiles of REIT employees and investors, based on their income levels.

Table A-1 below shows the multipliers representing the total direct, indirect, and induced economic activity supported by REITs in the United States.

**Table A-1. Multipliers for economic activity associated with REIT operations, dividend and interest payments, and construction activities in the United States**

| | Total multiplier |
|---|---|
| **Operations** | |
| Labor income | 3.5 |
| Employment | 3.3 |
| **Construction** | |
| Labor income | 2.1 |
| Employment | 2.1 |
| **Dividend and interest payments** | |
| Labor income | n/a |
| Employment | n/a |
| **Total** | |
| Labor income | 3.1 |
| Employment | 3.1 |

Note: A multiplier is calculated as the sum of direct, indirect, and induced activity divided by the level of direct activity. An employment multiplier of 3.0 indicates that the employment of 10 workers at a REIT supports the employment of 20 additional workers elsewhere in the economy. Multipliers cannot be calculated for the effect of REIT dividend and interest payments because the effects of these payments are considered to be induced effects only. These induced effects are, however, included in the calculation of the total labor income and employment multipliers indicated at the bottom of the table. Construction activities include renovations of existing structures.
Source: 2016 IMPLAN model of the US economy.

**Table A-2. Internal Revenue Service data tabulation on REITs for tax year 2013**
*Number of returns; billions of dollars*

| | Equity REITs | mREITs | Total |
|---|---|---|---|
| Number of returns | 2,122 | 350 | 2,472 |
| Total assets | 1,088.2 | 672.2 | 1,760.4 |
| Total income | 115.9 | 28.1 | 144.0 |
| Salaries and wages | 1.9 | 0.1 | 2.1 |
| Interest deduction | 12.6 | 5.7 | 18.2 |
| Dividends paid deduction | 53.3 | 17.7 | 71.0 |

Note: Figures may not sum due to rounding. These are the most recent data available.
Source: Internal Revenue Service.

## Endnotes

[1] Data from S&P Global and Nareit.

[2] At least 75% of a REIT's total assets must be invested in real estate and at least 75% of gross income must be derived from real estate sources. Further, REITs must be widely held, with more than 100 shareholders and no fewer than five individuals owning, directly or indirectly, more than 50% of their stock.

[3] The 43.4% rate includes the top statutory income tax rate on non-qualified dividends (39.6%), the Medicare tax and its application to unearned income (e.g., dividends, capital gains, and interest income) for high-income taxpayers (3.8%).

[4] FTE employment of public listed and public non-listed REITs is reported by REITs in their annual SEC filings. FTE employment reported to the SEC counts a full-time employee as one FTE and a part-time employee as one-half of a FTE. The FTE employment reported in this report for REITs uses the SEC reporting convention for employment.

Public REIT employment was collected from S&P Global and checked against SEC filings to ensure accuracy and fill missing data. FTE employment was imputed for public REITs where employment was not reported in S&P Global or SEC filings. For these REITs employment was imputed using the average number of FTE employees per dollar of assets among REITs classified in the same property sector for which data were available.

Data from SEC filings are available only for public listed and public non-listed REITs. To estimate the amount of employment for all REITs (i.e., including private REITs) employment data were "grossed up" to the level of all REITs. Separate gross-up factors were used for equity REITs and mortgage REITs. The gross-up factor for equity REITs was 0.73, which represents the ratio of total 2013 public REIT assets reported by S&P Global to a special tabulation of total 2013 equity REIT assets prepared by the IRS. Corrections REITs were excluded from this calculation (and were not grossed up) because there are no private corrections REITs. The gross-up factor for mortgage REITs was 0.70, which represents the ratio of total 2013 public mortgage REIT assets reported by S&P Global to a special tabulation of total 2013 mortgage REIT assets prepared by the IRS.

To estimate the number of REIT management employees, 2017 public equity and mortgage REIT assets as reported by S&P Global were grossed up using the gross-up factors described above to estimate the value of all 2017 REIT assets. The resulting asset estimate was then multiplied by the ratio of salaries and wages to assets as reported in 2013 IRS data compiled from Form 1120-REIT filings. Finally, this amount was divided by the average wage of REIT employees as reported for 2007 by the Bureau of Labor Statistics. The result was an estimate of approximately 29,500 REIT management employees.

The use of different years reflects the limited data available regarding all REITs. This is partially because the 2007 NAICS revision reclassified equity REITs into a broader real estate NAICS code and mortgage REITs into a broader finance and insurance NAICS code. In both cases REITs were reclassified into a code with non-REIT entities.

[5] This assumption is made by S&P Global, which compiles data reported by public REITs. For estimated indirect and induced employment, employee headcount is converted to FTE employment using data from

the Bureau of Economic Analysis on the ratio of FTE employees to full- and part-time employees by industry.

[6] Proprietor income includes the payments received by self-employed individuals and unincorporated business owners.

[7] The economic contributions of the activities of REIT employees were modeled in IMPLAN using the following industries: (1) employees providing services to building were grouped into IMPLAN sector 468 (services to buildings); (2) employees providing computer facilities management services were grouped into IMPLAN sector 430 (data processing, hosting, and related services); (3) facilities support services were grouped into IMPLAN sector 463 (facilities support services); (4) employees operating warehousing and storage facilities were grouped into IMPLAN sector 416 (warehousing and storage); (5) equity REIT management employees were grouped into IMPLAN sector 440 (real estate); (6) employees working in commercial logging were grouped into IMPLAN sector 15 (forestry, forest products, and timber tract production); (7) employees engaging in advertising activities were grouped into IMPLAN sector 457 (advertising, public relations, and related services); (8) employees supporting telecommunications infrastructure were grouped into IMPLAN sector 427 (wired telecommunications carriers); and (9) mortgage REIT management employees were grouped into IMPLAN sector 439 (funds, trusts, and other financial vehicles).

[8] See Baker, Nagel, and Wurgler, (2007), “The Effect of Dividends on Consumption,” *Brookings Papers of Economic Activity*, p. 1.

[9] A gross-up factor of 0.55 comparing public REIT dividends with total REIT dividends was calculated using S&P Global and IRS data from 2009 to 2013 (five-year average). This factor was then applied to S&P Global data indicating $57.9 billion of dividends were paid by public REITs in 2017. This results in an estimated $106.2 billion of dividends paid by all REITs in 2017.

[10] The 14% figure was calculated as the average percent of foreign-owned shares weighted by assets for 43 SEC-registered REITs in 2011. These data was obtained from S&P Global.

[11] See Investment Company Institute, “2012 Investment Company Fact Book,” 2012.

[12] Public REIT interest paid as a percentage of total REIT interest paid was assumed to be equal to public REIT dividends paid as a percentage of total REIT dividends paid. In 2017, it is estimated that public REIT dividends paid were equal to 55% of total REIT dividends paid. Separately, S&P Global data indicate that public REITs paid $28.9 billion of interest in 2017. By grossing up this amount by the 55% ratio it is estimated that REITs paid interest totaling $53.1 billion in 2017.

[13] The estimates of (1) REIT expenditures for the maintenance and upkeep of existing buildings and (2) REIT expenditures supporting the construction of new buildings rely on a November 2015 study by the MIT Center for Real Estate, “Commercial Buildings Capital Consumption in the United States” (“MIT Study”). This study estimated the level of routine capital expenditures needed “on an on-going basis for property maintenance, upkeep, and leasing.” In particular, the study estimated that such spending, on an annual basis, is equal to 3.47% of the value of commercial buildings and 3.36% of residential buildings. It also estimated land value as a share of property value. In particular, land comprises 32% of commercial property value and 18% of residential property value.

The capital expenditure maintenance/upkeep rates are applied to the estimated market value of existing commercial and residential buildings for public listed equity REITs ($1.7 trillion, as reported by Nareit). To remove land, the total estimated market value of existing properties is divided between commercial and residential properties using S&P Global data on the share of gross depreciable assets in each property type for public REITs. Overall, the value of existing commercial and residential structures are estimated at $986 billion and $205 billion, respectively. Applying the estimates from the MIT Study yields an estimate of $41.1 billion of routine maintenance and upkeep spending by public listed REITs. This is then grossed up to all public equity REITs using a gross-up factor, 0.93 (calculated from comparing the gross depreciable assets of listed REITs to all public REITs in 2017). It is then grossed up to account for private REITs using the equity REIT gross-up factor. Overall, capital expenditures on building maintenance and upkeep are estimated to be $60.0 billion in 2017.

Data on public REIT transactions available from S&P Global indicate that public REIT transactions were valued at approximately $30.1 billion in 2017. These transactions include both new properties and existing properties. An analysis of the top 50 transactions (representing 35% of total acquisition value) suggests that approximately 19% of such spending was for new properties. To remove land, the total acquisition value of new properties is divided between commercial and residential properties using S&P Global data on the property type of REIT acquisitions. This yields an estimate of new building construction spending totaling $4.1 billion for public REITs. This amount is then grossed up using the equity REIT gross-up factor. Overall, REIT expenditures supporting the construction of new buildings are estimated to be $5.5 billion in 2017. mREITs are generally not involved in building construction.

[14] In particular, the imputation methodology is as follows. First, the survey data on property taxes paid or assessed by REIT by state was matched with the properties of each respondent in a dataset of properties by state by REIT. In cases where a REIT had more than one property in a state the property taxes were distributed between the properties based on their gross asset value. The resulting estimate of property taxes by property by state by REIT (for those REITs that responded to the survey) was then summed to create an estimate of REIT property taxes by property type by state (for those REITs that responded to the survey). The property types included were: correctional, data center, health care, industrial, lodging, resorts, office, outdoor advertising, residential, retail, single-family rental, specialty, storage, timberland, and tower.

Second, property taxes were estimated for all public-listed REITs. The gross asset value of properties by state by REIT was then summed by property type by state for: (1) all public-listed REITs and (2) all public-listed REITs that responded to the survey. As measured by gross asset value, respondents to the survey represented between approximately one-third and 100% of each property type nationally and between approximately one-third and 100% of public-listed REIT properties by state. For any property type by state with at least 10% of gross asset value included in the survey the property tax amount was grossed up based on the share of gross asset value not included in the survey. For example, if $100 of property tax was reported for a property type in a state and the survey included 80% of the gross asset value of that property type in that state the $100 was grossed up to $125 (=$100/80%). For any property type by state with less than 10% of gross asset value included in the survey the nationwide average of property tax per dollar of gross asset value by property type was used to estimate the property tax amount of gross asset value not included in the survey (to mitigate the potential impact of outliers). The result of this step is an estimate of property taxes of public-listed REITs.

Third, the property tax estimate of public-listed REITs was then grossed up to all public REITs and then to all REITs. In particular, the public-listed REIT amount was then grossed up to all public REITs using a gross-up factor, 0.93 (calculated from comparing the gross depreciable assets of listed REITs to all public REITs in 2017). It was then grossed up to account for private REITs using the equity REIT gross-up factor (0.73).