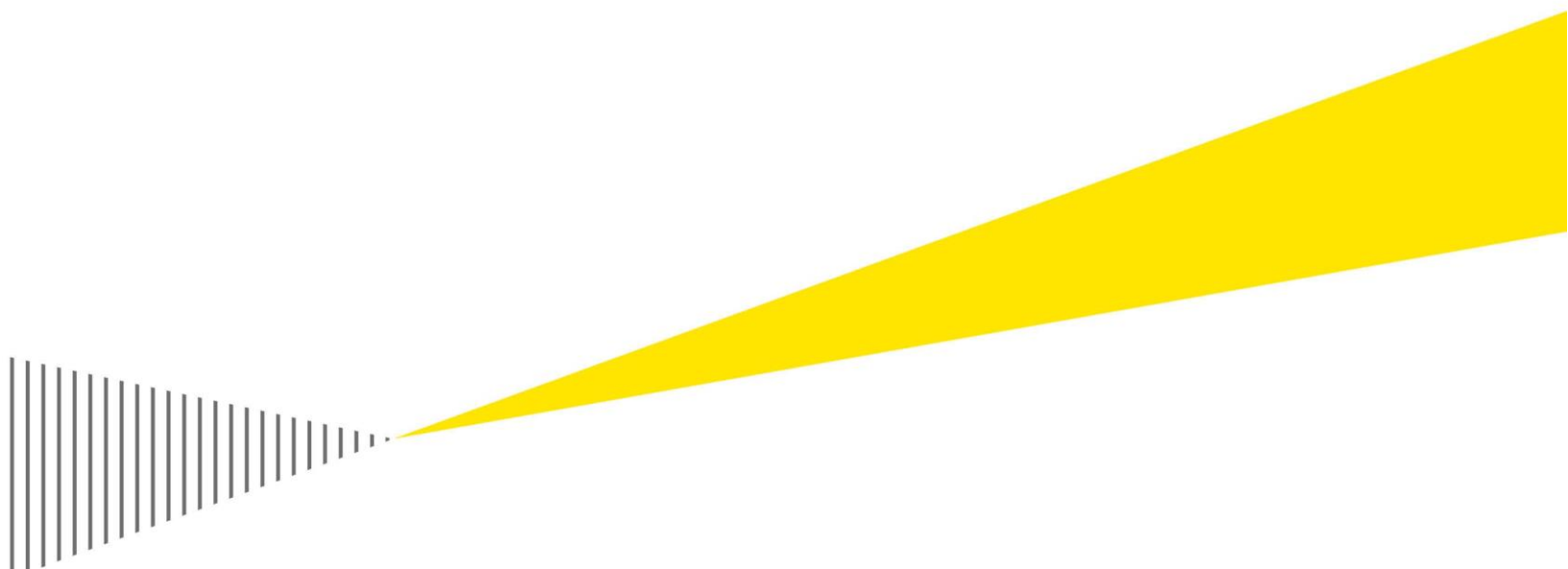


Economic contribution of REITs in the United States in 2022

Prepared for Nareit

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Executive summary

EY was commissioned by Nareit to estimate the current economic contribution, or “footprint,” of Real Estate Investment Trusts (REITs) in the United States. This report summarizes the estimates of the economic contribution, or footprint, of REITs to the U.S. economy for 2022.

REITs are defined in this report to include public listed, public non-listed, and private REITs. Additionally, REITs often operate taxable REIT subsidiaries (TRSs) that 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 (e.g., a TRS might provide services to the tenants of its parent REIT). The economic contributions of REIT tenants are not included in this analysis.

Key findings are presented below and summarized in Table E-1:

- ▶ **The total economic contribution¹ of U.S. REITs and related businesses in 2022 was an estimated 3.4 million full-time equivalent (FTE) jobs that generated \$262.9 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 induced or indirect flows from dividend and interest payments by REITs and REIT property improvement and construction investments.
- ▶ **REIT operations directly employed approximately 330,500 FTE employees who earned \$27.3 billion of labor income in the United States.** REIT supplier purchases and spending by REIT and related employees supported an additional 995,000 FTE jobs that generated \$78.0 billion of earnings in the United States. In total, the economic footprint of U.S. REIT operations comprised 1.3 million FTE jobs earning \$105.3 billion in labor income in 2022.
- ▶ **REIT dividend and interest payments supported 398,000 FTE jobs earning \$29.4 billion of labor income through the induced contribution of re-spending by REIT shareholders and bondholders.** In particular, REITs supported \$109.9 billion of dividend income and \$58.7 billion of interest income in 2022. \$40.5 billion of these dividends and interest were paid by REITs to the retirement accounts of U.S. residents, where it is available for future consumption spending and will support future economic activity.
- ▶ **REIT-supported construction activities supported nearly 1.7 million jobs that generated \$128.2 billion of labor income in 2022.** REITs invested \$23.2 billion in new construction and \$96.9 billion in routine capital expenditures to maintain existing property. The related construction activity supported 874,000 FTE construction jobs that earned \$63.0 billion in labor income. Purchases of goods from suppliers and consumer spending by construction and supplier employees contributed an estimated 836,000 FTE jobs and \$65.2 billion in labor income in 2022.

¹ In this report, “total economic contribution” or “footprint” is defined as the employment and labor income supported by REIT operations, dividend and interest payments, and construction.

Table E-1. Total economic contribution of all REIT operations, dividend distributions, interest payments, and construction activities, 2022

Billions of dollars; thousands of full-time equivalent employees

	Direct	Indirect & induced	Total
Operations			
Labor income	\$27.3	\$78.0	\$105.3
Employment	331	995	1,325
Dividend and interest payments			
Labor income	\$0.0	\$29.4	\$29.4
Employment	0	398	398
Construction			
Labor income	\$63.0	\$65.2	\$128.2
Employment	874	836	1,710
Total			
Labor income	\$90.3	\$172.6	\$262.9
Employment	1,204	2,229	3,434

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 are rounded.

Source: EY analysis.

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Economic contribution of REITs in the United States in 2022

I. Introduction

EY was commissioned by Nareit to estimate the current economic contribution, or “footprint,” of Real Estate Investment Trusts (REITs) in the United States. This report summarizes the estimates of the economic contribution, or footprint, of REITs to the U.S. economy for 2022.

As described in this report, REITs and related companies provide employment and earnings for hundreds of thousands of employees and support jobs in other sectors of the economy that support REIT operations. Dividend distributions and interest payments by REITs to shareholders and bondholders contribute to consumer spending in the United States. Capital investments undertaken by REITs or related to new buildings purchased by REITs also support hundreds of thousands of jobs in the U.S. economy.

Overall, REITs and related companies directly employed approximately 330,500 FTE employees who earned \$27.3 billion of labor income in the United States. The total economic contribution of U.S. REITs in 2022 was an estimated 3.4 million full-time equivalent (FTE) jobs and \$262.9 billion of labor income.

Overview of U.S. 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 investors with access to the investment attributes of commercial real estate, including reliable dividend income, potential long-term capital appreciation, and portfolio diversification.

Today, 42 countries and regions (including the United States) have adopted various forms of the REIT model in an effort to provide their economies and capital markets with the benefits of a 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.

The REIT structure is used in the United States across a diverse set of industries. 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.¹ 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. Moreover, 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 \$4 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 16.8% compound annual rate, from \$9 billion to almost \$1.27 trillion at the end of 2022.

Public listed equity REITs constitute the bulk of today's REIT market. As of year-end 2022, equity REITs accounted for approximately 80% of all U.S. public listed REIT gross assets and nearly 96% of the nearly \$1.27 trillion of equity market capitalization. U.S. headquartered public listed equity REIT portfolios included over 575,000 properties at year-end 2022. The portfolios included:²

- ▶ Nearly 2,300 office buildings
- ▶ More than 200 regional malls; over 2,600 shopping centers; more than 1,500 restaurant locations; and nearly 28,000 other retail properties
- ▶ More than 8,500 industrial facilities
- ▶ Over 3,100 multi-family rental properties, with over 800,000 units
- ▶ Nearly 1,700 hotels
- ▶ Approximately 8,000 medical facilities comprised of nearly 2,500 medical office buildings, nearly 2,100 assisted living facilities, over 1,000 skilled nursing facilities, and over 2,400 other health care facilities
- ▶ Approximately 7,500 self-storage facilities
- ▶ More than 200 data centers
- ▶ Nearly 100,000 telecommunications towers
- ▶ Approximately 200,000 single-family home rental properties
- ▶ More than 205,000 billboards and outdoor advertising units
- ▶ Approximately 15 million acres of timberland

To be eligible to operate and be taxed as a REIT under 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 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.³ As noted, Federal tax law requires that REITs distribute at least 90% of their taxable income each year as dividends. 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 (e.g., a TRS might provide services to the tenants of its parent REIT).














In addition to the employees working 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.⁴

Direct REIT employment

As shown in Table 1, REITs directly employed approximately 330,500 FTE workers in 2022.⁵ 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. 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 16,600 FTE workers in 2022.

Table 1. Direct employment of all U.S. REITs by FTSE Nareit sector, 2022
Employment is shown in terms of total full-time equivalent employees

FTSE Nareit sector	Total REIT employment	As % of total
Data center	73,900	22% 
Residential	53,600	16% 
Industrial	36,500	11% 
Storage	31,500	10% 
Infrastructure and telecommunications towers	25,200	8% 
Timberland	19,600	6% 
Office	18,900	6% 
Diversified	17,700	5% 
Retail	17,200	5% 
Specialty	10,600	3% 
Health care	5,400	2% 
Lodging	3,700	1% 
Total, equity REITs	313,800	95%
mREITS	16,600	5% 
Total direct REIT employment	330,500	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 are rounded. Source: Internal Revenue Service, S&P Global, and EY analysis.

II. The economic contribution of REITs

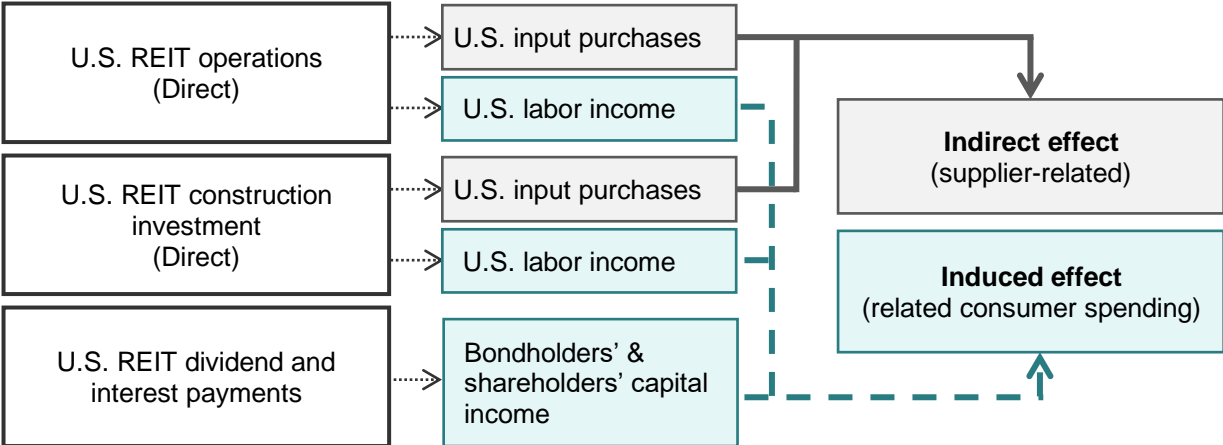
The measures of the economic contribution described in this study are generally limited to employment and labor income generated directly by REITs, indirectly by REIT suppliers and their employees, and by the consumer spending induced in the wider economy.

- ▶ **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 an FTE.⁶
- ▶ **Labor income.** Labor income includes employee compensation (wages and benefits) and proprietor income.⁷

The overall economic contribution of REITs is measured as the sum of direct, indirect, and induced economic contributions, measured as jobs and associated labor income, as defined above. These are 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 (Supplier-related).** REITs purchase goods and services from other U.S. 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 related industries. The indirect economic contribution also includes the employment and income supported by suppliers of REITs, in turn, purchasing goods and services from their suppliers. Goods and services imported from abroad are not included in estimates of U.S. economic contributions reported below.
- ▶ **Induced contribution (Related consumer spending).** REITs also support employment and income via consumer re-spending of income earned from REITs and related supplier businesses, including the dividend-funded spending of REIT shareholders and the spending of interest income by REIT bondholders and other creditors. That is, the induced economic contribution includes the employment and income supported when REIT employees, REIT bondholders, REIT shareholders, and employees of businesses indirectly supported by REITs spend their earnings at U.S. businesses (e.g., grocery stores, retailers, movie theaters). The earnings spent on food at a restaurant, for example, support jobs at the restaurant as well as at farms, transportation companies, and other businesses involved in the restaurant's supply chain.

Figure 1. Overview of the U.S. economic contribution of REITs



Note: Construction activities include both routine capital expenditures for property maintenance and upkeep as well as the construction of new buildings.

As depicted in Figure 1, the economic contribution of REITs is determined by several factors, including supplier relationships among businesses in the United States and the consumption patterns of REIT and supplier-related workers. 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 2021 Impacts for Planning (IMPLAN) input-output model of the United States to estimate the economic contributions of REITs in the United States in 2022. 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 Appendix A for further details.








III. Economic contribution of REIT operations, dividends, and interest payments

The economic contribution of REIT operations to the U.S. economy includes the thousands of workers directly employed by REITs and billions of dollars of compensation paid to these workers. Additionally, 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 U.S. economy. A complete picture of the investment income resulting from REIT operations also requires the inclusion of interest income resulting from REIT interest payments.

Direct REIT employment

REITs directly employed approximately 330,500 FTE workers in 2022. As shown in Table 2, workers conducting building services, computer facilities management activities, and REIT management comprised approximately three-fourths of total direct REIT employment in 2022. Other REIT employment activities include the operation of warehousing and storage facilities and telecommunications infrastructure.

Table 2. Distribution of direct employment of all U.S. REITs by employment activity, 2022
Employment is shown in terms of total full-time equivalent employees

Employment activity	Total REIT employment	As % of total	
Services to buildings	131,600	40%	
Computer facilities management services	73,900	22%	
REIT management	38,500	12%	
Warehousing and storage	31,500	10%	
Telecommunications infrastructure	24,900	8%	
Commercial logging	19,600	6%	
Advertising	10,400	3%	
Total	330,500	100%	

Note: Includes public listed, public non-listed, and private REITs. Figures are rounded.
Source: EY analysis.

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 are categorized into property-specific employment activities.⁸ Tying highly specialized REITs to specific employment activities in this way offers more accurate estimates of the economic contribution of REITs to the U.S. economy. mREIT employees are allocated to mREIT management activities.

Each of these employment activities has a different impact on the U.S. economy, based on the U.S. 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 domestic 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. Additionally, national multipliers are typically higher than state or other subnational multipliers.

The average national multiplier across all types of economic activity in which REIT employees engage is 4.0. That is, for every 10 direct jobs at a REIT an additional 30 jobs elsewhere in the United States are supported for a total employment contribution of 40 jobs.

REIT dividend and 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 U.S. businesses. This re-spending contributes to the economic activity of restaurants, retailers, and other businesses that sell to consumers.

In a study examining the effect of such dividend and interest payments on consumption, academic research finds that dividends generate consistently higher current consumption than equivalent amounts of retained earnings that generate capital gains for shareholders.⁹ Because REITs are required to pay out 90% of their taxable income as dividends, they have a larger contribution to current U.S. consumption than a similar business that retains its earnings. In particular, academic research finds 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.¹⁰

REITs paid an estimated \$109.9 billion in dividends to shareholders in 2022.¹¹ A portion of these dividends – approximately 35% – is paid to foreign shareholders and makes no further contribution to U.S. economic activity.¹² The remaining amount of approximately \$71.3 billion was paid to U.S. shareholders. It is estimated that 37% of investments are held in retirement accounts.¹³ 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 2022. In total, an estimated \$44.9 billion of dividends were paid to U.S. residents outside of retirement accounts by REITs in 2022. As noted above, shareholders are assumed to use 72% of this income for consumption and save the remainder.

REITs paid \$58.7 billion of interest to their creditors in 2022.¹⁴ This includes payments to domestic and foreign creditors as well as payments into retirement accounts. REIT dividends and interest are assumed to have the same investor base. After removing payments to residents of foreign countries and retirement accounts, \$23.9 billion remains. Combined with the \$44.9 billion of dividends, a total of \$68.8 billion of investment income (i.e., \$44.9 billion of dividends and \$23.9 billion of interest) was paid to U.S. residents outside of retirement accounts by REITs in 2022.

Economic contribution of REIT operations, dividends, and interest payments

In total, REIT operations, including dividend and interest payments, contributed \$134.7 billion in labor income to the U.S. economy and supported more than 1.7 million FTE jobs. These estimated economic contributions of U.S. REIT operations are summarized in Table 3. REITs paid \$27.3 billion in labor income to their approximately 330,500 FTE employees in 2022.

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 995,000 FTE jobs and \$78.0 billion of labor income in the United States. This indirect and induced activity occurred through the economic activity associated with suppliers and related consumer spending supported by REITs and REIT suppliers.

In addition, dividend, and interest payments by REITs to U.S. investors contribute to U.S. employment and earnings when this dividend and interest income is used for consumption. The \$44.9 billion of dividend distributions and \$23.9 billion of interest expenses paid to U.S. residents outside of retirement accounts are estimated to support 398,000 FTE workers earning \$29.4 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, 2022
Billions of dollars; thousands of full-time equivalent employees

	Direct	Indirect & induced	Total
Operations			
Labor income	\$27.3	\$78.0	\$105.3
Employment	331	995	1,325
Dividend payments			
Labor income	\$0.0	\$23.2	\$23.2
Employment	0	314	314
Interest payments			
Labor income	\$0.0	\$6.2	\$6.2
Employment	0	84	84
Total			
Labor income	\$27.3	\$107.4	\$134.7
Employment	331	1,393	1,723

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 are rounded.
Source: EY analysis.

IV. The economic contribution of REIT new construction and maintenance 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 2022, REITs are estimated to have spent \$23.2 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 – other than those recently constructed – do not create new economic activity and is therefore excluded from the analysis.

Further, REITs are estimated to have spent \$96.9 billion on routine capital investments needed for property maintenance and upkeep.¹⁵ REIT construction spending is summarized in Table 4.

Table 4. REIT construction spending, 2022

Billions of dollars

Routine capital expenditures for property maintenance and upkeep	\$96.9
Construction of new buildings	\$23.2
Estimated new property investment, all REITs	\$120.1

Note: Includes public listed, public non-listed, and private REITs. Figures are rounded.
Source: Internal Revenue Service, S&P Global, and EY analysis.

Table 5 shows the economic contribution (the additional jobs and labor income) generated by the \$120.1 billion of REIT construction spending in 2022. REIT construction activities supported an estimated 874,000 direct, one-year, FTE construction jobs in the United States.¹⁶ These construction workers earned \$63.0 billion in labor income. Purchases of goods from suppliers and consumer spending by construction and supplier employees contributed an additional 836,000 FTE jobs and \$65.2 billion in labor income to the U.S. economy in 2022.

Table 5. Economic contribution of construction spending by REITs in the United States, 2022

Billions of dollars; thousands of full-time equivalent employees

	Direct	Indirect & induced	Total
Construction			
Labor income	\$63.0	\$65.2	\$128.2
Employment	874	836	1,710

Note: Includes public listed, public non-listed and private REITs. Construction activities include renovations of existing structures. Figures are rounded.
Source: EY analysis.

V. The economic contribution of REITs nationally and by state

Table 6 summarizes the estimated total economic contribution of REITs and related companies to the U.S. economy in 2022: 3.4 million FTE jobs and \$262.9 billion of labor income. REIT operations supported 1.3 million FTE jobs earning \$105.3 billion of income. Dividends and interest paid by REITs to US-resident investors contributed to U.S. consumer spending, supporting an estimated 398,000 induced jobs in 2022 at retailers, restaurants, health care providers, and other businesses supported by consumer spending. These workers earned \$29.4 billion of labor income. Annual REIT spending on new building construction and routine property maintenance and upkeep contributed approximately 1.7 million jobs and \$128.2 billion in labor income.

Table 6. Total economic contribution of all REIT operations, dividend distributions, interest payments, and construction activities, 2022
Billions of dollars; thousands of full-time equivalent employees

	Direct	Indirect & induced	Total
Operations			
Labor income	\$27.3	\$78.0	\$105.3
Employment	331	995	1,325
Dividend and interest payments			
Labor income	\$0.0	\$29.4	\$29.4
Employment	0	398	398
Construction			
Labor income	\$63.0	\$65.2	\$128.2
Employment	874	836	1,710
Total			
Labor income	\$90.3	\$172.6	\$262.9
Employment	1,204	2,229	3,434

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 are rounded.

Source: EY analysis.

The distribution by state (plus the District of Columbia) of the jobs supported by REITs is displayed in Table 7. The approximately 3.4 million FTE jobs includes the employment supported from REIT operations, dividend distributions, interest payments, and construction activities in 2022. The states with the most employment supported by REITs are estimated to be (1) California (526,000 FTE jobs), (2) Texas (293,000 FTE jobs), (3) New York (251,000 FTE jobs), (4) Virginia (249,000 FTE jobs), and (5) Florida (229,000 FTE jobs).

Table 7. State distribution of total economic contribution of all REIT operations, dividend distributions, interest payments, and construction activities, 2022
Thousands of FTE employees

United States	3,434	Missouri	35
Alabama	34	Montana	10
Alaska	5	Nebraska	7
Arizona	108	Nevada	74
Arkansas	23	New Hampshire	8
California	526	New Jersey	135
Colorado	63	New Mexico	13
Connecticut	33	New York	251
Delaware	5	North Carolina	79
District of Columbia	28	North Dakota	9
Florida	229	Ohio	70
Georgia	139	Oklahoma	23
Hawaii	24	Oregon	39
Idaho	10	Pennsylvania	96
Illinois	157	Rhode Island	7
Indiana	43	South Carolina	36
Iowa	10	South Dakota	8
Kansas	17	Tennessee	51
Kentucky	26	Texas	293
Louisiana	32	Utah	25
Maine	11	Vermont	3
Maryland	61	Virginia	249
Massachusetts	105	Washington	76
Michigan	43	West Virginia	12
Minnesota	35	Wisconsin	20
Mississippi	30	Wyoming	6

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 generally distributed to states (and the District of Columbia) based on REIT gross asset value by property type except for the contribution of REIT dividend payments, which is distributed based on the distribution of overall non-qualified dividend income as reported by the Internal Revenue Service. Figures are rounded.

Source: Nareit and EY analysis.

VI. Consumer spending supported by REITs

In addition to employment and labor income, REITs also support significant consumer spending in the United States. In particular, when REIT employees, REIT bondholders, REIT shareholders, and employees of businesses indirectly supported by REITs spend their earnings (e.g., at grocery stores, retailers, movie theaters), they support U.S. consumer spending. In total, REITs are estimated to have supported approximately \$197.8 billion of consumer spending in 2022. The distribution of REIT-supported consumer spending is displayed in Table 8. The states with the most consumer spending supported by REITs are estimated to be (1) California (\$28.0 billion), (2) Texas (\$16.9 billion), (3) Virginia (\$15.0 billion), (4) Florida (\$14.2 billion), and (5) New York (\$13.7 billion).

Table 8. State distribution of total consumer spending supported by REIT operations, dividend distributions, interest payments, and construction activities, 2022
Billions of dollars

United States	\$197.8	Missouri	2.2
Alabama	2.1	Montana	0.7
Alaska	0.3	Nebraska	0.4
Arizona	7.0	Nevada	4.2
Arkansas	1.3	New Hampshire	0.5
California	28.0	New Jersey	7.8
Colorado	3.7	New Mexico	0.8
Connecticut	1.8	New York	13.7
Delaware	0.3	North Carolina	4.7
District of Columbia	1.8	North Dakota	0.5
Florida	14.2	Ohio	4.1
Georgia	8.2	Oklahoma	1.3
Hawaii	1.5	Oregon	2.3
Idaho	0.6	Pennsylvania	5.6
Illinois	9.2	Rhode Island	0.4
Indiana	2.5	South Carolina	2.2
Iowa	0.6	South Dakota	0.5
Kansas	0.9	Tennessee	2.9
Kentucky	1.6	Texas	16.9
Louisiana	1.9	Utah	1.5
Maine	0.7	Vermont	0.2
Maryland	3.1	Virginia	15.0
Massachusetts	5.5	Washington	4.1
Michigan	2.6	West Virginia	0.8
Minnesota	1.9	Wisconsin	1.1
Mississippi	1.8	Wyoming	0.3

Note: Includes consumer spending supported by REIT operations, dividend distributions, interest payments, and construction activities for public listed, public non-listed, and private REITs. The above table does not include the economic contribution of the tenants of REIT-owned properties. Consumer spending by state is estimated by applying state-specific marginal propensities to consume to the income supported by REIT operations, dividend distributions, interest payments, and construction activities. Figures are rounded.
Source: Nareit and EY analysis.

VII. Limitations of the analysis

The estimates of REIT contributions to the U.S. economy presented in this report are based on an input-output model of the U.S. 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 2022 economic contribution of U.S. REITs based on their relationships with other industries and households in the U.S. economy. The results do not reflect the impacts of an expansion or contraction of the industry.
- ▶ **Estimates do not reflect the economic impact of REITs.** This analysis does not attempt to estimate or indicate the effect or impact of REITs on the US economy. Rather, the analysis presents estimates of the economic contribution or footprint of REITs. An economic impact analysis might instead analyze the impact on the US economy of a change to or in an industry or sector, perhaps due to a policy change, natural disaster, or some other exogenous factor. An economic impact analysis might attempt to account for the economic dynamics that occur in response to such a change and show the impact net of shifts of economic activity across different parts of the economy (e.g., industries, sectors) as impacts ripple through the economy.¹⁷
- ▶ **There are limitations to input-output modeling.** REIT suppliers or suppliers of suppliers could be REITs and consumer re-spending of income supported by REIT activities could be at REITs or businesses with REIT suppliers. This analysis includes an adjustment to address this issue by assuming REITs are included in the indirect and induced contributions, by industry, proportional to their direct employment share in each industry. Note that the value of intermediate input purchases is reflected only once in the computation of employment, income, and value added but due to the definition and computation of gross economic output may be included multiple times if the input is sourced from within the domestic/regional economy.
- ▶ **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. In particular, the analysis assumes that the difference between total filers of 1120-REIT and public REIT financial statements are private REITs.
- ▶ **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 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 also relies on estimates of the domestically purchased inputs from IMPLAN, 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. The direct economic contribution of these capital expenditures is the activity of contractors to the industry and/or its developers; they are not employees of REITs.

Appendix A. Technical details

This analysis uses an input-output model to estimate the economic contributions of REITs in the United States in 2022. The national economic multipliers in this study were estimated using the 2021 Impacts for Planning (IMPLAN) input-output model of the United States. IMPLAN is used by more than 500 universities and government agencies. 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 national 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 U.S. 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 national multipliers representing the total direct, indirect, and induced economic activity supported by REITs in the United States.

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

	Total multiplier
Operations	
Labor income	3.9
Employment	4.0
Dividend and interest payments	
Labor income	n/a
Employment	n/a
Construction	
Labor income	2.0
Employment	2.0
Total	
Labor income	2.9
Employment	2.9

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: 2021 IMPLAN model of the US economy; EY analysis.

Table A-2. Internal Revenue Service data tabulation on REITs for tax years 2012-2020
Number of returns; billions of dollars

Year		Equity REITs	mREITs	Total
2020	Number of returns	3,651	509	4,160
	Total assets	2,136.3	751.7	2,888.0
	Salaries and wages	4.8	0.1	4.9
	Interest deduction	20.4	7.8	28.2
	Dividends paid deduction	69.3	16.7	86.0
2019	Number of returns	3,410	475	3,885
	Total assets	2,037.2	893.9	2,931.1
	Salaries and wages	4.9	0.2	5.1
	Interest deduction	21.4	12.8	34.2
	Dividends paid deduction	79.4	23.4	102.8
2018	Number of returns	3,409	456	3,865
	Total assets	1,864.6	831.4	2,696.0
	Salaries and wages	4.5	0.2	4.7
	Interest deduction	20.8	9.5	30.3
	Dividends paid deduction	93.5	19.6	113.1
2017	Number of returns	3,441	410	3,851
	Total assets	1,651.7	731.7	2,383.5
	Salaries and wages	4.1	0.2	4.3
	Interest deduction	18.4	6.5	25
	Dividends paid deduction	76.5	17.1	93.6
2016	Number of returns	3,054	419	3,474
	Total assets	1,489.0	673.7	2,162.7
	Salaries and wages	4.2	0.2	4.5
	Interest deduction	15.8	6.1	21.9
	Dividends paid deduction	73.9	16.7	90.6
2015	Number of returns	2,729	349	3,078
	Total assets	1,418.7	659.4	2,078.1
	Salaries and wages	4.0	0.2	4.2
	Interest deduction	15.0	5.4	20.4
	Dividends paid deduction	81.7	16.2	97.9
2014	Number of returns	2,407	356	2,763
	Total assets	1,234.7	711.6	1,946.3
	Salaries and wages	3.2	0.2	3.5
	Interest deduction	13.6	5.5	19.1
	Dividends paid deduction	53.0	16.5	69.5
2013	Number of returns	2,122	350	2,472
	Total assets	1,088.2	672.2	1,760.4
	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
2012	Number of returns	1,806	333	2,139
	Total assets	878.1	754.6	1,632.6
	Salaries and wages	1.9	0.2	2.2
	Interest deduction	10.8	5.3	16.0
	Dividends paid deduction	31.5	19.0	50.5

Source: Internal Revenue Service.

Endnotes

¹ Private REITs are neither registered with the SEC nor publicly traded on national stock exchanges.

² Data from S&P Global and Nareit.

³ 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.

⁴ REITs are defined in this report to include public listed, public non-listed, and private REITs as well as TRSs. The economic contributions of REIT tenants are not included in this analysis.

⁵ 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 an 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 0.56, which represents the ratio of total 2019 public REIT assets reported by S&P Global to total 2019 equity REIT assets as reported by the IRS. The gross-up factor for mortgage REITs was 0.66, which represents the ratio of total 2019 public mortgage REIT assets reported by S&P Global to total 2019 mortgage REIT assets as reported by the IRS. The most recent data available from the IRS at the time of the analysis were from 2019.

To estimate the number of REIT management employees, 2022 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 2022 REIT assets. The resulting asset estimate was then multiplied by the ratio of salaries and wages to assets as reported in 2019 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 and grown to 2022. The result was an estimate of approximately 39,000 REIT management employees.

The use of different years reflects the limited data available for 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.

⁶ 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.

⁷ Proprietor income includes the payments received by self-employed individuals and unincorporated business owners.

⁸ 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 also 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.

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 services to buildings; (2) employees providing computer facilities management services were grouped into data processing, hosting, and related services; (3) employees operating warehousing and storage facilities were grouped into warehousing and storage; (4) equity REIT management employees were grouped into real estate; (5)

employees working in commercial logging were grouped into forestry, forest products, and timber tract production; (6) employees engaging in advertising activities were grouped into advertising, public relations, and related services; (7) employees supporting telecommunications infrastructure were grouped into wireless telecommunications carriers; and (8) mortgage REIT management employees were grouped into funds, trusts, and other financial vehicles.

⁹ See Baker, Nagel, and Wurgler, (2007), “The Effect of Dividends on Consumption,” *Brookings Papers of Economic Activity*, p. 1.

¹⁰ In particular, IMPLAN includes marginal propensities to consume for various household income levels. The amount input into IMPLAN was adjusted so that the marginal propensity to consume dividends and interest matched the estimates of Baker, Nagel, and Wurgler (2007). *Supra*, note 9.

¹¹ A gross-up factor of 0.61 comparing public REIT dividends with total REIT dividends was calculated using S&P Global and IRS data from 2015 to 2019 (five-year average). This factor was then applied to S&P Global data indicating \$67.1 billion of dividends were paid by public REITs in 2022. This results in an estimated \$109.9 billion of dividends paid by all REITs in 2022.

¹² The 35% figure was calculated as the average percent of foreign-owned shares weighted by assets for 41 SEC-registered REITs in 2022. These data were obtained from S&P Global.

¹³ See Steven M. Rosenthal and Lydia S. Austin, (2016), “The Dwindling Taxable Share of U.S. Corporate Stock,” *Tax Notes*, pp. 923-930.

¹⁴ 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 2022, it is estimated that public REIT dividends paid were equal to 61% of total REIT dividends paid. Separately, S&P Global data indicate that public REITs paid \$36.0 billion of interest in 2022. By grossing up this amount by the 61% ratio it is estimated that REITs paid interest totaling \$58.7 billion in 2022.

¹⁵ 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.

The capital expenditure maintenance/upkeep rates are applied to the estimated market value of existing commercial and residential buildings for public listed equity REITs. 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 \$1.3 trillion and over \$250 billion, respectively. Applying the estimates from the MIT Study yields an estimate of \$54.5 billion of routine maintenance and upkeep spending by public listed REITs. This 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 \$96.9 billion in 2022.

Data on public REIT transactions available from S&P Global indicate that public REIT transactions were valued at approximately \$34.0 billion in 2022. These transactions include both new properties and existing properties. An analysis of the top 45 transactions (representing 36% of total acquisition value) suggests that approximately 11% of such spending was for new properties.

Notably, these data on property-level public REIT transactions significantly understate total acquisitions by REITs. Data from S&P Global indicates that public REITs had acquisitions of \$170.7 billion in 2022. Accordingly, this analysis also includes the \$136.7 billion of REIT acquisitions not otherwise captured in the property-level data (i.e., \$170.7 billion less the \$34.0 billion in the property-level transaction data). It is assumed that 11% of the \$170.7 billion 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 is then grossed up to account for private REITs using the equity REIT gross-up factor. This yields an estimate of new building construction spending totaling \$23.2 billion for all REITs in 2022. mREITs are generally not involved in building construction.

¹⁶ Capital expenditures support one-time economic activity. In particular, the direct economic activity supported includes one-year construction employment and the labor income paid to these construction workers. The indirect and induced economic activity includes the related supply chain and consumer spending for this one-time economic activity.

¹⁷ A key point is that an economic impact analysis typically attempts to estimate impacts that net out shifts in economic activity across industries and sectors as the economy moves from its initial equilibrium to its new equilibrium. In contrast, an economic contribution analysis shows the gross amount of economic activity tied to an industry or sector directly, and through its suppliers and related consumer spending. The EY Quantitative Economics and Statistics (QUEST) practice has other modeling frameworks it uses to account for the shifts in economic activity and estimate net impacts.