

Economic contribution of the like-kind exchange rules to the US economy in 2021

Prepared on behalf of the Section 1031 Like-Kind Exchange Coalition¹

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Executive summary

EY partnered with the Section 1031 Like-Kind Exchange Coalition to estimate the current economic activity supported by the like-kind exchange rules within the US economy in 2021.² These rules allow tax on capital gains on exchanged property to be deferred rather than paid when the exchange occurs.

Like-kind exchanges reduce the cost of capital and, consequently, increase the amount of investment in the US economy. This investment, in turn, supports jobs, labor income, and value added in the US economy. This report presents estimates of the jobs, labor income and value added supported by the like-kind exchange rules.

A like-kind exchange is “the exchange of real property held for productive use in a trade or business or for investment if such property is exchanged solely for property of like kind which is to be held either for productive use in a trade or business or for investment,” (Internal Revenue Code Section 1031). A taxpayer that structures a divestment and acquisition of qualifying property as a Section 1031 exchange is not required to recognize a taxable gain or loss at the time of the exchange. Rather, recognition of gain and payment of taxes are deferred, similar to other tax deferral provisions governing transfers of continuing investments to corporations and partnerships.

Rationales for deferring tax on gains and losses realized in like-kind exchanges include:

- ▶ Imposing a tax on continuing investment would discourage and slow the velocity of investment, resulting in market illiquidity and increased cost of capital, with impacts on asset values and rents.
- ▶ Tax deferral permits a business to expand opportunities to relocate, consolidate or acquire better, more efficient assets that meet current and prospective needs.
- ▶ Reducing impediments to the transfer of property improves the overall allocation of capital and encourages the highest and best use of real property.
- ▶ A like-kind exchange preserves cash flow and avoids liquidation of other assets or increased reliance on debt financing due to tax considerations.

In addition, tax deferral may have a smaller cost to the Treasury than seems immediately apparent because that tax benefit is subsequently offset by a reduction in future depreciation deductions or a greater tax on gain when the replacement asset is eventually sold.

This analysis of the economic activity supported by the like-kind exchange rules relies on the most recent data available. This analysis uses 2019 as a proxy for the 2021 US economy. This proxy is used because economic forecasters generally expect the pre-COVID level of US GDP to be reached as early as the end of 2021. However, the COVID-19 pandemic may result in the repurposing of significant amounts of real estate and, thus, this report may understate the amount of like-kind exchanges over the next several years.

Key findings include:

Economic activity of the businesses (including business entities, pass-through entities, sole proprietorships, and individual investors) that make use of like-kind exchange rules

- ▶ **Investment at businesses that make use of like-kind exchange rules.** Like-kind exchange rules support \$4.4 billion investment in 2021 at businesses that make use of the like-kind exchange rules.
- ▶ **Employment and wage contribution.** Overall, in 2021, at the businesses that make use of the like-kind exchange rules, 260,000 workers earning \$11 billion in wages and benefits would be supported directly by the like-kind exchange rules.
- ▶ **Share of US economic activity.** Like-kind exchange rules would directly generate \$22.4 billion in value added in the United States in 2021 at businesses that make use of the like-kind exchange rules. Value added measures a sector's or industry's contribution to the production of final goods and services produced in the United States or US gross domestic product (GDP).

Economic activity related to the businesses that make use of the like-kind exchange rules

- ▶ **Suppliers to the businesses that make use of the like-kind exchange rules and related consumer spending.** Suppliers to the businesses that make use of the like-kind exchange rules would employ an additional 308,000 workers throughout the US economy in 2021 earning \$16.5 billion in wages and benefits, which would contribute to generating \$32.9 billion of US value added in 2021.

Total economic activity of, and related to, the businesses that make use of the like-kind exchange rules

In total, like-kind exchange rules would support \$4.4 billion of investment at businesses that make use of the like-kind exchange rules, which together with their US suppliers, and the related US consumer spending, would employ an estimated 568,000 workers earning \$27.5 billion in wages and benefits and would contribute to generating \$55.3 billion in US value added in 2021.

Table E-1. Economic activity supported by the like-kind investment at businesses that make use of the like-kind exchange rules in 2021

	Businesses that make use of the like-kind exchange rules	Suppliers and related consumer spending	Total
Employment	260,000	308,000	568,000
Labor Income	\$11 billion	\$16.5 billion	\$27.5 billion
Value Added	\$22.4 billion	\$32.9 billion	\$55.3 billion

Note: All estimates are for economic activity in the United States and are relative to the US economy in 2021. Labor income is a component of value added. Figures are rounded.

Source: EY analysis.

These estimates indicate the economic activity supported by the like-kind exchange rules in 2021. The rules may support more or less activity in later years depending on differences in the level of like-kind exchange transactions.

Figure E-1. Economic activity supported by the like-kind exchange rules in 2021

568k Total jobs supported by like-kind exchange rules



\$27.5b Total labor income supported by like-kind exchange rules



\$55.3b Total value added supported by like-kind exchange rules



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Economic contribution of the like-kind exchange rules to the US economy in 2021

I. Introduction

Like-kind exchange rules under Internal Revenue Code Section 1031 (the “like-kind exchange rules”) allow a deferral of tax that is routinely used in the real estate industry to facilitate transactions and reduce business costs. Like-kind exchanges reduce the cost of capital and, consequently, increase the amount of investment in the US economy. This investment, in turn, supports jobs, labor income, and value added in the US economy.

These rules benefit businesses by expanding their opportunities to relocate to better locations, increasing their ability to exchange older and sometimes inefficient assets for more efficient properties, and otherwise better align business assets with current and future business needs. From the perspective of the overall economy, the rules’ reduction in tax impediments to the transfer of property helps improve the overall allocation of capital by making it easier to assign assets to their most productive uses. This report estimates the economic activity supported – the jobs, labor income and value added – by the like-kind exchange rules to the US economy in 2021. The rules may support more or less activity in later years depending on differences in the level of like-kind exchange transactions.

Overview of the like-kind exchange rules

A like-kind exchange is “the exchange of real property held for productive use in a trade or business or for investment if such property is exchanged solely for property of like kind which is to be held either for productive use in a trade or business or for investment.”³ The taxpayer that structures such a divestment and replacement acquisition as a Section 1031 exchange is not required to recognize a taxable gain or loss at the time of the exchange. Rather, recognition and payment of tax is deferred. There are several rationales for deferring tax on gains and losses realized in like-kind exchanges:

- ▶ No profit or cash is taken in a fully deferred like-kind exchange. Thus, a taxpayer would have to divert cash from other uses or possibly liquidate assets to pay the tax. Note that any receipt of cash or non-like-kind property is subject to immediate recognition of gain. The taxpayer receiving cash, called “boot,” as part of an exchange must recognize gain to the extent of cash received.
- ▶ The taxpayer involved in a like-kind exchange has continuity of investment in the same type of investment or business asset. That is, they are not “cashing out” as all equity and profits are reinvested in the business activity. Imposing a tax on a continuing investment would discourage investment.
- ▶ Like-kind exchanges increase the velocity of reinvestment, the rate at which businesses convert assets to better match their business needs.

Deferring tax on like-kind exchanges may promote economic efficiency. Under current law, businesses do not have to consider immediate tax consequences when exchanging like-kind

property. This reduces the “lock-in” effect associated with transaction-based or realization-based taxes whereby a business is discouraged from disposing of an asset or acquiring a new one due to the tax consequences. In addition, the tax cost to the Treasury from deferral may be smaller than immediately apparent. Taxpayers may continue to depreciate their initial investment in business property as if the original property was not exchanged, but with a reduced tax basis in the replacement property. In contrast, had gain been realized, the taxpayer would be entitled to take a full cost basis in the replacement property and accordingly take larger tax deductions for depreciation, ultimately reducing the non-exchanging taxpayer’s annual income tax. Consequently, the exchanging taxpayer’s overall depreciation deductions are lower than they would have been without the deferral (and in fact remain the same over the life of the investment in the business property, regardless of whether old property is held or exchanged for new property). The resulting reduced depreciation deductions incrementally increase the exchanging taxpayer’s future annual income tax, providing additional revenue, at ordinary income tax rates, to the US Treasury. Additionally, the tax deferred at the time of the exchange is offset by higher taxes later because of a lower basis upon sale, which would increase the size of the recognized gain and of its associated tax. Moreover, to the extent the like-kind exchange resulted in an increase of value to the owner of the property exchanged, there would be more tax due when the property is ultimately disposed of in a taxable sale.

The exchange of one real estate asset for another generally qualifies as a like-kind exchange. Notably, US-based real estate assets cannot be exchanged for foreign real estate assets. Like-kind exchange treatment is not allowed for exchanges of inventory, stocks, bonds, notes, securities, personal property or other non-real property assets.

Rules providing for tax-deferred like-kind exchanges extend nearly back to the inception of the US federal income tax. In 1913, the 16th Amendment to the US Constitution authorized the US Congress to establish an income tax. Only five years later, Treasury regulations construed for the first time that a transaction was not taxable unless the property received was “essentially different from the property disposed of.”⁴ By 1921, an alternative tax was applied to capital gains and like-kind exchanges were explicitly excepted from capital gain recognition.⁵ Like-kind exchange rules evolved over the remainder of the 20th century to exclude exchanges of stock from like-kind exchange treatment, to allow deferred taxation of non-simultaneous exchanges,⁶ and to limit tax-deferred exchanges between related parties.⁷ The Tax Cuts and Jobs Act of 2017 limited the use of the like-kind exchange rules to only real property, eliminating the taxpayer’s ability to defer gains on personal property, instead expanding the applicability of immediate expensing as the tax deferral mechanism for personal property assets.

II. Illustration of the like-kind exchange rules

The amount of tax recognized in the year a like-kind exchange occurs depends on the value and tax basis of the assets involved. Consider an example in which Real Estate LLC exchanges a building (“Relinquished Building”) for a like-kind building (“Replacement Building”) owned by Dealer LLC as displayed in Table 1. The transaction is structured as a non-simultaneous exchange under Section 1031, using a Qualified Intermediary. The Relinquished Building has a fair market value of \$10 million and is exchanged for like-kind Replacement Building with a fair market value of \$9 million and cash valued at \$1 million. The cash is non-like-kind property and is considered boot. Real Estate LLC’s Relinquished Building has a current tax basis of \$4 million due to depreciation deductions previously taken. Real Estate LLC is taxed as a pass-through entity.

Under the like-kind exchange rules, the taxpayer doing the exchange recognizes a taxable gain equal to the lesser of the value of boot received or gain realized. This recognized gain is subject to tax in the year of the exchange. In this example, Real Estate LLC realizes a gain of \$6 million (i.e., the \$10 million fair market value less \$4 million tax basis) and receives boot of \$1 million. It must recognize a taxable gain of the lesser of these two amounts, in this case, the \$1 million boot. That is, the \$1 million gain is subject to Real Estate LLC’s owners’ 25% depreciation recapture tax rate and Real Estate LLC’s owners owe tax of \$250,000 ($\$1 \text{ million} \times 25\%$) in the year of the exchange. After recognizing a gain of \$1 million on the boot, Real Estate LLC defers gain of \$5 million and forgoes the same \$5 million of future depreciation deductions on Replacement Building, to which it would have been entitled had the gain been recognized.

Dealer LLC is a dealer and is giving up \$9 million of inventory that does not qualify for like-kind exchange treatment. It pays current-year tax on its profits from the sale.

The tax consequences of the exchange for Real Estate LLC with and without the like-kind exchange rules are summarized in Table 1. The exchange can be understood as two separate, but interrelated, transactions. First, Real Estate LLC sells its Relinquished Building for \$10 million. Second, Real Estate LLC acquires Replacement Building from Dealer LLC for \$9 million in cash. Real Estate LLC retains the \$1 million of cash not spent on qualifying replacement property, i.e., retains \$1 million in boot. The \$1 million boot is not additional income to Real Estate LLC. It is the difference in value between the asset relinquished and the replacement asset received.

Without the benefit of the like-kind exchange rules, Real Estate LLC must recognize the entire \$6 million gain in the year of the exchange. No tax on the gain would be deferred. The total federal income tax (including long-term capital gain, depreciation recapture, and net investment income tax) paid by Real Estate LLC’s owners in the current year without the like-kind exchange rules would be \$1,628,000.

In contrast, if recognition of gain and tax can be deferred under the like-kind exchange rules, then in the year of the exchange, Real Estate LLC’s owners would pay tax only on the \$1 million in boot, permitting them to fully reinvest all of the proceeds, except the portion that they chose to pull out of the investment. The boot would be taxed as depreciation recapture and the owners would pay tax of \$288,000. However, the \$5 million of deferred gain reduces Real Estate LLC’s tax basis in the replacement property dollar for dollar, resulting in a \$4 million tax basis available for depreciation in the replacement property. Without a like-kind exchange, Real Estate LLC would

be eligible to take depreciation deductions of \$9 million over the tax-life of the replacement property, more than double the value of annual deductions available with an exchange. The reduction of depreciation deductions results in incrementally higher annual income taxes to Real Estate LLC.

Table 1. Illustrative example: Current-year taxation of Real Estate LLC for a like-kind exchange with and without the like-kind exchange rules

Dollars in thousands

Relinquished Building		
Fair market value of Relinquished Building		\$10,000
Non-like-kind "boot"		+\$0
Total value of Relinquished Building		<u>\$10,000</u>
Property received in exchange		
Fair Market value of like-kind Replacement Building		\$9,000
Non-like-kind "boot" (cash not reinvested)		+\$1,000
Total value of all property received		<u>\$10,000</u>
Accumulated depreciation and tax basis		
Original cost of Relinquished Building		\$8,000
Depreciation claimed on Relinquished Building		-\$4,000
Tax basis of Relinquished Building		<u>\$4,000</u>
Gain realized		
Fair market value of Relinquished Building		\$10,000
Tax basis of Relinquished Building		-\$4,000
Realized gain on disposal of Relinquished Building		<u>\$6,000</u>
	With the like-kind exchange rules	Without the like-kind exchange rules
Tax treatment		
Amount of gain recognized	Lesser of realized gain and boot received	Entire realized gain
Realized gain	\$6,000	\$6,000
Boot received	\$1,000	\$1,000
Recognized gain	\$1,000	\$6,000
Tax		
Current-year taxable income	\$1,000	\$6,000
Subject to long-term capital gains at 20% rate	0	\$2,000
Subject to depreciation recapture at 25% rate	\$1,000	\$4,000
Subject to Net Investment Income Tax at 3.8%	\$1,000	\$6,000
Total tax	\$288	\$1,628
Gain deferred	\$5,000	\$0

Source: EY analysis.

III. Modeling approach

Like-kind exchanges reduce the cost of capital and, consequently, increase the amount of investment in the US economy. This report estimates the amount of investment, jobs, labor income, and value added supported in the United States by the like-kind exchange rules. This report does not quantify the additional benefits related to the more efficient allocation of capital made possible by the use of the like-kind exchange rules. This report also does not quantify the potential uses by the federal government of the revenue deferred due to the like-kind exchange rules or the impact on the economy of those potential uses.

The results presented in this report are estimated as follows. First, the cost of capital is estimated with and without the like-kind exchange rules. An elasticity of investment with respect to the cost of capital, which reflects the responsiveness of investment to its tax treatment from economic research, is then applied to the difference in the cost of capital with and without the like-kind exchange rules. This results in an estimate of investment supported by the like-kind exchange rules. This change in investment is then translated into estimates of the jobs, labor income, and value added supported by the like-kind exchange rules based on the composition of like-kind exchange activity. Finally, the Impacts for Planning (IMPLAN) input-output model of the US economy is used to estimate the supplier purchases and consumer spending related to the economic activity directly supported by the like-kind exchange rules. These steps are discussed in detail below.

Cost of capital

In general, businesses and investors will make new investments as long as they earn a pre-tax return that exceeds what is required to cover taxes and compensate them for the use of their capital. This pre-tax return is referred to as the cost of capital. A business would not make an investment that earns less than this pre-tax return because such an investment would be economically unprofitable. Taxes are an important component of the cost of capital. Taxes raise a business' cost of capital because the business has to earn enough to cover taxes and still pay a competitive return to its investors. Higher taxes discourage investment by raising the cost of capital. The like-kind exchange rules decrease tax liability and, in turn, the cost of capital.⁸

The Congressional Budget Office, Congressional Research Service, Joint Committee on Taxation, and US Treasury Department frequently use the cost of capital framework to quantify the impact of tax policy on investment incentives. The cost of capital framework accounts for the major features of the federal income tax system (e.g., tax depreciation, tax rates, investor-level taxes). The modeling of the cost of capital is described in detail in Appendix B. This analysis assumes a holding period of 8.5 years based on a survey of holding periods, among other considerations, of businesses engaged in like-kind exchanges.⁹ Sensitivity of the estimates with a shorter and longer holding period are presented below.

Economic research typically measures the responsiveness of investment to its tax cost or cost of capital using a measure called an elasticity calculated as the percentage change in investment associated with a 1% change in the cost of capital or tax cost. This analysis uses an elasticity of 0.835, based on a review of an extensive body of empirical research.¹⁰ That is, for every 1%

increase in the cost of capital, investment would be 0.835% lower.¹¹ The consensus range for this elasticity is 0.5 to 1.0.¹²

Estimating economic activity supported by the like-kind exchange rules

In addition to the amount of investment that is supported by the like-kind exchange rules, this report also estimates the jobs, labor income, and value added that is supported by these rules, defined as follows:

- ▶ **Employment.** Employment is measured as the total headcount of workers. For example, a company with three full-time workers and a company with two full-time workers and one part-time worker would both be measured as having three workers.
- ▶ **Labor income.** Labor income includes employee cash compensation and benefits as well as proprietor income.¹³
- ▶ **Value added.** Value added measures the contribution to the production of all final goods and services produced in the United States, or US gross domestic product (GDP).

The economic activity supported by the like-kind exchange rules is divided into three parts:

- ▶ **Economic activity at businesses that make use of like-kind exchanges.** This consists of jobs, labor income, and value added supported at businesses that make use of the like-kind exchange rules.
- ▶ **Suppliers to the businesses that make use of the like-kind exchange rules.** The economic activity supported at businesses making use of the like-kind exchange rules supports purchases of goods and services from other businesses, which supports jobs, labor income, and value added at these supplier businesses. For example, the expenditure on construction, financial services, utilities, telecommunications, building material manufacturers and suppliers, landscaping, cleaning, and security, among other goods and services, supports sales and employment in these related supplier industries. Specific examples of jobs regularly supported by real estate exchanges include qualified intermediaries, real estate brokers, title insurers, escrow companies, settlement agents, attorneys, accountants, property and systems inspectors, lenders/financial services, surveyors, appraisers, property insurers, contractors, skilled tradespeople, laborers, landscapers, architects, designers, building material suppliers, FF&E suppliers, movers, cleaning, and security. Moreover, demand for these goods and services leads to additional rounds of economic activity as suppliers to the businesses purchase operating inputs from their own suppliers.
- ▶ **Related consumer spending.** This refers to the consumer spending supported by workers at the businesses that make use of like-kind exchanges and their suppliers. When these workers spend their earnings at US businesses (e.g., grocery stores, retailers, movie theaters) they support economic activity in those sectors. The earnings that these workers 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's supply chain.

The supplier purchases and consumer spending related to businesses making use of the like-kind exchange rules is translated into jobs, labor income, and value added through use of the 2018 IMPLAN input-output model of the United States. The model, which describes US economic linkages as they existed in 2018, includes the interaction of more than 500 industries, thus identifying the interaction of specific industries that are related to businesses that make use of the like-kind exchange rules. The estimates from the 2018 IMPLAN model are projected to the 2021 US economy.

The direct investment, jobs, labor income, and value added for businesses that make use of the like-kind exchange rules are estimated primarily from capital stock data from the US Bureau of Economic Analysis (BEA) and analysis from Ling and Petrova (2020) that uses real estate data from CoStar.¹⁴ Capital stock data from BEA reports the capital stock owned by each industry by property type (e.g., computers, vehicles, office buildings, industrial buildings). Data from Ling and Petrova (2020) provides estimates for the share of real estate property by type – and in total – that makes use of the like-kind exchange rules. Calibrating the cost of capital model to replicate these Ling and Petrova (2020) shares allows the cost of capital to be estimated by industry with and without the like-kind exchange rules.¹⁵

IV. Economic activity supported by the like-kind exchange rules

Table 2 displays the estimates of jobs, labor income, and value added supported by the tax deferral allowed under like-kind exchange rules. All estimates are for economic activity in the United States and are relative to the US economy in 2021. The rules may support more or less activity in later years depending on differences in the level of like-kind exchange transactions.

Overall level of economic activity supported by the like-kind exchange rules

As shown in Table 2, this report estimates that the like-kind exchange rules directly support approximately 260,000 jobs generating \$22.4 billion of value added annually, including \$11 billion of labor income. In addition, through supplier purchases and related consumer spending, this direct economic activity supports approximately 308,000 jobs elsewhere in the US economy generating \$32.9 billion of value added annually, including \$16.5 billion of labor income. Overall, it is estimated that the like-kind exchange rules and their associated activity support approximately 568,000 jobs generating \$55.3 billion of value added, including \$27.5 billion of labor income, annually.

Table 2. Economic activity supported by the like-kind investment at businesses that make use of the like-kind exchange rules

	Businesses that make use of the like-kind exchange rules	Suppliers and related consumer spending	Total
Employment	260,000	308,000	568,000
Labor Income	\$11 billion	\$16.5 billion	\$27.5 billion
Value Added	\$22.4 billion	\$32.9 billion	\$55.3 billion

Note: All estimates are for economic activity in the United States and are relative to the US economy in 2021. Labor income is a component of value added. Figures are rounded.

Source: EY analysis.

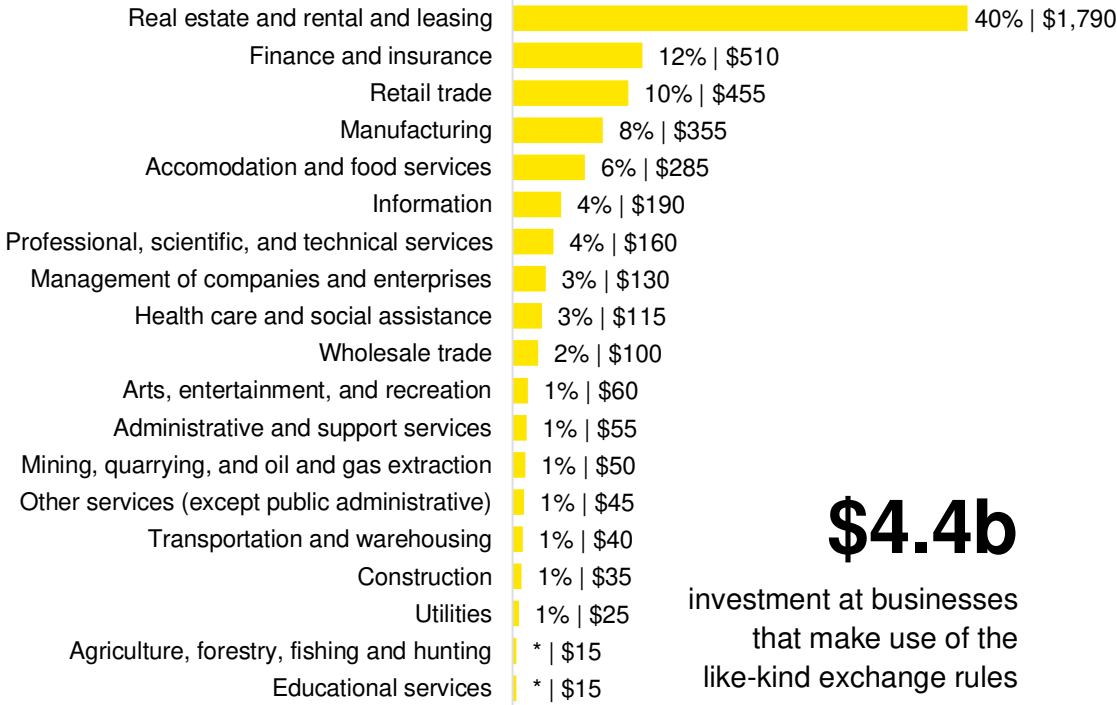
Economic activity supported by the like-kind exchange rules, by industry

As seen in Figure 1, the like-kind exchange rules directly support \$4.4 billion of investment annually at businesses that use the like-kind exchange rules (i.e., investment is higher by \$4.4b because of the like-kind exchange rules without accounting for how tax revenue from the like-kind exchange rules is used). The \$4.4 billion estimate is for investment that is directly supported by those businesses that use the like-kind exchange rules (i.e., it does not include indirect supplier and related consumer spending).

The like-kind exchange rules reduce the cost of capital which results in greater investment that provides workers with more capital to deploy and increases the productive capacity of the US economy. The like-kind exchange rules result in the faster and more efficient redeployment of capital for economic rather than tax reasons. The analysis relies on estimates from Ling and Petrova (2020) to estimate the share of assets that benefit from the LKE rules.¹⁶

The industries with the highest amount of investment directly supported by the like-kind exchange rules are real estate and rental leasing (\$1.790 billion), finance and insurance (\$510 million), retail trade (\$455 million), manufacturing (\$355 million), and accommodation and food services (\$285 million). These five industries together account for more than 75% (\$3.4 billion) of the \$4.4 billion total investment directly supported by the like-kind exchange rules. It is important to emphasize that the estimates displayed in Figure 1 are for investment directly supported by those companies that make use of the like-kind exchange rules. For example, construction companies are not a significant source of direct investment because they themselves do not make frequent use of the like-kind exchange rules. While their direct investment activity is perhaps limited, the construction industry has more far reaching economic contributions through supply chains and consumer related economic activity.

Figure 1. Annual direct investment supported by the like-kind exchange rules, by industry
Share of total direct investment supported; dollar amounts in millions



Note: All estimates are for economic activity in the United States and are relative to the US economy in 2021. Figures are rounded. '**' indicates percentage share <0.5%.
Source: EY analysis.

Table 3 displays the total employment supported by the like-kind exchange rules by industry directly and through suppliers and related consumer spending. In total, the like-kind exchange rules support 568,000 employees across all industries. The industries with the highest number of employees supported are trade, transportation, and utilities (125,800), leisure and hospitality (120,000), professional and business services (89,400), financial activities (72,700), and education and health services (63,200). These five industries together account for almost 83% (471,100) of the total 568,000 employees supported by the like-kind exchange rules.

Table 3. Employment supported by the like-kind exchange rules

NAICS description	Businesses that make use of the like-kind exchange rules	Suppliers and related consumer spending	Total
Leisure and hospitality	84,000	36,000	120,000
Trade, transportation, and utilities	73,100	52,700	125,800
Financial activities	28,700	44,000	72,700
Education and health services	25,200	38,000	63,200
Professional and business services	24,400	65,000	89,400
Manufacturing	10,100	17,400	27,500
Other Services	8,600	34,900	43,500
Construction	3,900	4,900	8,800
Information	1,200	5,600	6,800
Natural resources and mining	900	9,700	10,600
Total	260,000	308,000	568,000

Note: All estimates are for economic activity in the United States and are relative to the US economy in 2021. Figures are rounded.

Source: EY analysis.

V. Sensitivity Analysis

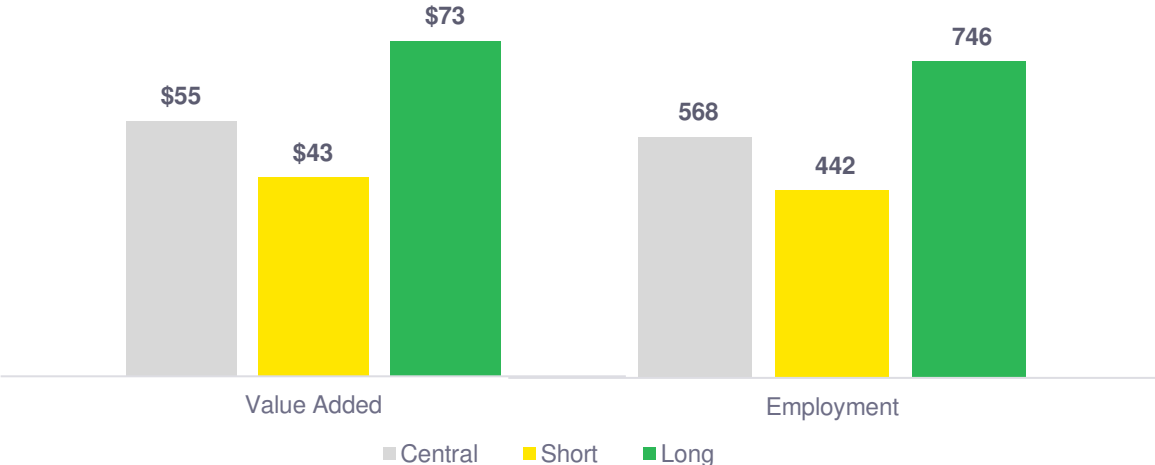
Two key assumptions underlying the estimates are the holding period of real property exchanged for like-kind real property and the share of real property that makes use of the like-kind exchange rules. This section considers the sensitivity of the estimates to alternative assumptions.

Holding period

The holding period of the real property exchanged for a like-kind real property, considering depreciation schedules, can have a significant impact on the economic activity supported by the like-kind exchange. While a “central” holding period of approximately 8.5 years was used above, a result from an EY survey of businesses that make use of the like-kind exchange rules, actual holding periods can vary.

Figure 2 displays estimates using a shorter holding period “short” (i.e., approximately 7 years) and longer holding period “long” (i.e., approximately 12 years). The estimates using the “shorter” and “longer” holding periods suggest that the like-kind exchange rules support \$3.4 billion and \$5.8 billion of investment annually at businesses that make use of like-kind exchange rules, respectively. This translates to 442,000 and 746,000 supported jobs assuming the shorter and longer holding periods, respectively, including both those at businesses making use of the like-kind exchange rules, as well as those supported at suppliers and by related consumer spending.

Figure 2. Sensitivity analysis: Estimated economic contribution by businesses that make use of like-kind exchange rules
Dollars in billions, Employment in thousands



Note: All estimates are for economic activity in the United States and are relative to the US economy in 2021. Labor income is a component of value added. Figures are rounded.
 Source: EY analysis.

Share of real property making use of like-kind exchanges

This report uses data presented by Ling and Petrova (2020) from CoStar on the dollar volume of real estate transactions that make use of like-kind exchange rules. These data indicate that the total dollar volume of real estate transactions that make use of like-kind exchange rules averaged

8% of total commercial real estate transactions over the past three years. This analysis estimates an economy-wide share of 5% after mapping the CoStar-based shares into the US Department of Commerce’s capital stock data by industry and asset type. Ling and Petrova (2020) indicate that the share, based on the number of transactions, may be higher than indicated by the CoStar data when based on several alternative data sources. In recognition of this possibility, Table 4 below displays alternative estimates assuming a 10% rather than 8% share for commercial real estate transactions.

Table 4. Sensitivity analysis: Economic activity supported by the like-kind investment at businesses that make use of the like-kind exchange rules assuming 10% of commercial real estate transactions use like-kind exchanges (by dollar volume)

	Businesses that make use of the like-kind exchange rules	Suppliers and related consumer spending	Total
Employment	325,000	385,000	710,000
Labor Income	\$13.7 billion	\$20.7 billion	\$34.4 billion
Value Added	\$27.9 billion	\$41.1 billion	\$69.1 billion

Note: All estimates are for economic activity in the United States and are relative to the US economy in 2021. Labor income is a component of value added. Figures are rounded.

Source: EY analysis.

VI. Taxes paid by, and related to, the use and users of the like-kind exchange rules

The like-kind exchange rules support tax revenue through the US taxpayers that make direct use of the rules, and their employees. Additionally, tax payments are supported through the suppliers to these businesses and by the related consumer spending.

Table 5 summarizes the federal, state, and local taxes paid by, and related to, the taxpayers that make use of the like-kind exchange rules. The estimates of taxes paid include all major federal, state, and local taxes (e.g., corporate and individual income taxes, sales and excise taxes, property taxes), where applicable. Taxes paid by the businesses that make use of the like-kind exchange rules are displayed separately for those paid by the businesses and those paid by its employees. All estimates are relative to the US economy in 2021. Overall, the federal, state, and local taxes paid by, and related to, the businesses that make use of the like-kind exchange rules would total approximately \$7.8 billion in 2021.

Table 5. Federal, state, and local taxes paid by, and related to, the businesses that make use of the like-kind exchange rules
Dollars in millions

	Businesses that make use of the like-kind exchange rules			Related suppliers	Related consumer spending	Total
	Business taxes	Employee taxes	Total direct			
Federal taxes	\$660	\$1,330	\$1,990	\$1,330	\$1,645	\$4,965
Individual income taxes	\$120	\$890	\$1,010	\$680	\$840	\$2,530
Payroll taxes	\$370	\$370	\$740	\$490	\$610	\$1,840
Corporate income taxes	\$140	\$0	\$140	\$90	\$110	\$340
Excise taxes	\$25	\$35	\$60	\$40	\$50	\$150
Customs duties and fees	\$5	\$35	\$40	\$30	\$35	\$105
State and local taxes	\$440	\$695	\$1,135	\$745	\$925	\$2,805
Property taxes	\$180	\$150	\$330	\$220	\$270	\$820
Sales taxes	\$110	\$150	\$260	\$170	\$210	\$640
Individual income taxes	\$0	\$300	\$300	\$200	\$250	\$750
Excise, license, and other taxes	\$110	\$95	\$205	\$130	\$160	\$495
Corporate income taxes	\$40	\$0	\$40	\$25	\$35	\$100
Total taxes	\$1,100	\$2,025	\$3,125	\$2,075	\$2,570	\$7,770

Note: All estimates are relative to the US economy in 2021. Figures are rounded.
Source: EY analysis.

As seen in Table 5, taxpayers that make *direct use* of the like-kind exchange rules would generate over \$3.1 billion of federal, state, and local taxes in 2021.¹⁷ Approximately two-thirds of these would be federal taxes (\$2 billion) with the remaining taxes being paid to state and local governments (\$1.1 billion). Almost two-thirds of the \$2 billion of federal taxes paid would be

employee taxes (\$1.3 billion). These would primarily be individual income taxes (\$890 million) and payroll taxes (\$370 million). State and local taxes would be more evenly split between major tax types: property taxes (\$330 million), sales taxes (\$260 million), individual income taxes (\$300 million), excise, license, and other taxes (\$205 million), and corporate income taxes (\$40 million).

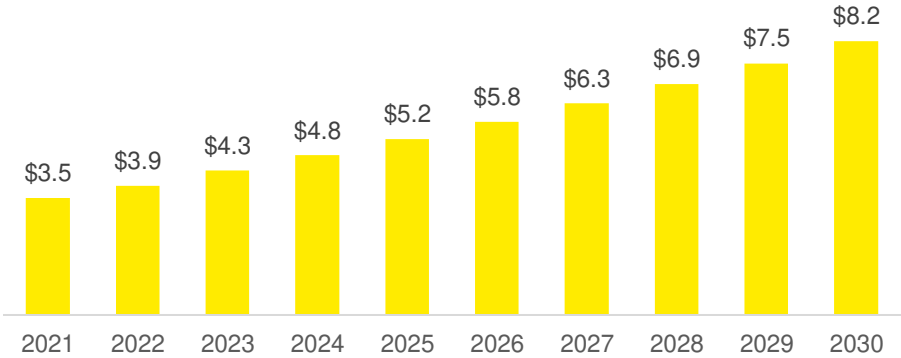
Table 5 also summarizes the federal, state, and local taxes *related to* the economic activity that would be supported by taxpayers that make use of the like-kind exchange rules. Suppliers to these businesses would support more than \$2 billion of total taxes, of which \$1.3 billion would be federal taxes and \$745 million would be state and local taxes. Additionally, consumer spending related to these businesses would support more than \$2.5 billion of taxes, of which \$1.6 billion would be federal taxes and \$925 million would be state and local taxes.

VI. Foregone depreciation from the use of the like-kind exchange rules

While the businesses that make use of the like-kind exchange rules are able to defer capital gains taxes, businesses forgo depreciation deductions that would otherwise be claimed on replacement property under a fully taxable transaction. This is because under a like-kind exchange, the replacement property’s depreciation deductions generally are the same as if the taxpayer still owned the relinquished property. This “offset” or “expense” from a like-kind exchange can be significant.

Figure 3 displays estimates of aggregate revenues associated with foregone depreciation for each year in the 10-year budget window. The revenues associated with foregone depreciation average \$6 billion annually. For comparison purposes, the tax expenditure for the like-kind exchange rules, which is net of foregone depreciation, averages roughly \$9 billion annually.¹⁸

Figure 3. Estimate of federal revenue associated with foregone depreciation offsetting the benefit of tax deferral under the like-kind exchange rules
Dollars in billions



Source: EY analysis.

VII. Caveats and limitations

Any modeling effort is only an approximate depiction of the economic forces it seeks to represent, and the economic model developed for this analysis is no exception. Although various limitations and caveats might be listed, several are particularly noteworthy:

- ▶ Taxpayers making use of the like-kind exchange rules are referred to throughout as “businesses” or “taxpayers,” both of which terms include business entities that are taxed as corporations, as well as pass-through entities, sole proprietorships, and individuals engaged in a business or real estate investment activity.
- ▶ **Results show a static snapshot of economic activity.** The input-output modeling approach used in this analysis shows the 2021 economic activity of businesses that make use of the like-kind exchange rules 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 economic activity.
- ▶ **Amount of like-kind exchange activity in 2021 uncertain.** This analysis of the economic activity supported by the like-kind exchange rules relies on the most recent data available. This analysis uses 2019 as a proxy for the 2021 US economy. This proxy is used because economic forecasters generally expect the pre-COVID level of US GDP to be reached as early as the end of 2021. However, the COVID-19 pandemic may result in the repurposing of significant amounts of real estate and, thus, this report may understate the amount of like-kind exchanges over the next several years.
- ▶ **Estimates are limited by available public information.** The analysis primarily relies on information reported by the US BEA and Ling and Petrova (2020), which relies on data obtained from CoStar. The analysis did not attempt to verify or validate this information using sources other than those described in the report.
- ▶ **Analysis may understate the share of commercial real estate transactions that involve a like-kind exchange.** Estimates used in this analysis of the share of commercial real estate transactions involving a like-kind exchange are from Ling and Petrova (2020). Ling and Petrova (2020) identify like-kind exchange activity in CoStar data when a transaction is flagged in the data set to involve a “1031 exchange sale condition.” This information is only available when it has been disclosed by at least one of the involved parties.
- ▶ **The responsiveness of investment to the cost of capital is uncertain.** A review of the economic literature suggests that a central estimate of the responsiveness of investment to its cost of capital is 0.835 in the long run. The actual elasticity of investment with respect to the cost of capital may differ from this assumption.
- ▶ **Analysis only examines the amount of investment that is supported by the like-kind exchange rules.** In addition to the potential economic activity that is supported by the investment activities themselves, there would be expected benefits related to the more efficient allocation of capital, which are not quantified in this analysis but would be in addition to the impacts presented. Moreover, the like-kind exchange rules affect the amount of revenues raised by the federal government. This change in revenue results in a change in the

federal deficit, government spending or transfers, other taxes, or a combination thereof. These changes in turn, impact the US economy. These impacts on the US economy are not within the scope of this analysis.

- ▶ **Modeling relies on government industry classifications.** The modeling in this report relies on industry average data for the types of property industries make use of (e.g., office buildings, industrial space, retail space) as well as business operating profiles (e.g., output per worker, labor income per worker, supplier purchases per worker). Economic activity at businesses that make use of the like-kind exchange rules may differ from the assumed average industry characteristics. 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.

Appendix A. IMPLAN model of the US economy

This analysis uses an input-output model to estimate the jobs, labor income, and value added associated with the suppliers to the businesses that make use of the like-kind exchange rules and related consumer spending. These were estimated using economic multipliers calculated using the 2018 IMPLAN input-output model of the United States. IMPLAN includes the interaction of more than 500 industries.

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 businesses that make use of the like-kind exchange rules, suppliers to businesses that make use of the like-kind exchange rules, and related consumer spending. Economic activity at suppliers to the businesses that make use of the like-kind exchange rules is attributable to operating input purchases from US suppliers. Economic activity related to consumer spending is attributable to spending by employees of businesses that make use of the like-kind exchange rules and their suppliers based on household spending patterns. The businesses that make use of the like-kind exchange rules are estimated to have an employment multiplier of 2.2, a labor income multiplier of 2.5, and a value added multiplier of 2.5.

Notably, if unadjusted, input-output modeling can include double counting in its estimates. For example, suppliers or suppliers of suppliers to businesses that make use of the like-kind exchange rules could also be making use of the like-kind exchange rules, and consumer re-spending of income supported by businesses that make use of the like-kind exchange rules could be at businesses that also make use of the like-kind exchange rules. This limitation is due to the use of industry averages in estimating supplier- and consumption-related economic activity in input-output modeling. This analysis includes an adjustment to remove double counting by assuming that businesses that make use of the like-kind exchange rules are included in the supplier- and consumption-related economic activity, by industry, proportional to their direct employment share in each industry.

Appendix B. Cost of capital model

The cost of capital for an investment is estimated using the framework first formalized by Hall and Jorgenson (1967) and later refined by Fullerton and King (1984) and described in detail by Gravelle (1994) and Mackie (2002). The cost of capital (net of depreciation) is given by:

$$c = \frac{(r + \delta - \pi)(1 - uz)}{1 - u} - \delta$$

where c denotes the cost of capital, r is the firm's nominal after-tax discount rate, δ is the rate at which the asset depreciates, π is the rate of inflation, u is the corporate income tax rates, and z is the present value of depreciation allowances. The present value of depreciation, z , reflects the discount rate, the tax life of an asset, the depreciation schedules, and other elements of the depreciation system. The values of δ and z vary by type of asset as depreciation allowances for equipment are typically accelerated as compared to their economic lives. This cost of capital concept is frequently used by the Congressional Budget Office, Congressional Research Service, Joint Committee on Taxation, and US Department of the Treasury to quantify the impact of tax changes on investment incentives.

Investor-level taxes and the deductibility of interest are accounted for by assuming that a firm can arbitrage between debt and real capital following Fullerton and Bradford (1981) and Fullerton, Gillette, and Mackie (1987). Investments are frequently financed with both debt and equity financing. Thus, this study calculates the cost of capital for a hypothetical new investment based on a weighted average of debt and equity financing.¹⁹

A further issue involves a firm's marginal source of equity finance; that is, whether the old or new view of dividend taxes applies. This analysis follows Auerbach and Hassett (2003) and assumes that one-half of equity finance operates under the old view, whereby dividend taxes affect investment decisions, and the other half of firms operate under the new view, whereby firms rely on retained earnings as the marginal source of finance and dividend taxes are capitalized into firm value.²⁰

The cost of capital for equity-financed investment includes the investor-level taxes on capital gains and dividends (i.e., the double tax on corporate profits), whereas the cost of capital for debt-financed investment reflects the deductibility of interest at the corporate level and the assumption that approximately one-half of debt holders are either tax-exempt or lightly taxed (e.g., pension assets/foreigners).

Although the standard cost of capital framework typically uses the simplifying assumption that firms do not sell used capital – and, consequently, are not subject to the capital gains taxation on that sale – its modeling is of central importance to an analysis of the like-kind exchange rules. That is, without the like-kind exchange rules the sale of used capital to current capital gains is subject to taxation. Accordingly, this analysis uses the modified cost of capital (net of depreciation) equation incorporating capital gains taxation from the sale of used capital derived in Auerbach (1981) and generalized by Hassett and Viard (2007):

$$c = \frac{r - \pi + \delta}{1 - u} \left[1 - \left(\frac{1 - \delta}{1 + r - \pi} \right) \right]^{-1} \left[1 - uz(T) - (u - \gamma)d(T) - (1 - \gamma) \left(\frac{1 - \delta}{1 + r - \pi} \right)^T - \gamma b(T) \right] - \delta$$

where T is the holding period of the capital, $z(T)$ is the present value of depreciation allowances for a sale in period T , γ is the capital gains tax rate applied to the sale, $d(T)$ is the present value of depreciation recapture for a sale in period T , and $b(T)$ is the present value of the basis deduction allowed for a sale in period T .²¹

Endnotes

¹ The 1031 Like-Kind Exchange Coalition includes the following members: Alternative & Direct Investment Securities Association, American Land Title Association, Federation of Exchange Accommodators, International Council of Shopping Centers, Institute for Portfolio Alternatives, Mortgage Bankers Assn, NAIOP, the Commercial Real Estate Development Association, National Association of Home Builders, Nareit, National Apartment Association, National Association of REALTORS®, National Multifamily Housing Council, and The Real Estate Roundtable.

² This analysis uses 2019 as a proxy for the 2021 US economy. This proxy is used because economic forecasters generally expect the pre-COVID level of US GDP to be reached as early as the end of 2021.

³ Internal Revenue Code § 1031.

⁴ US Department of the Treasury, *The Tax Treatment of Like Kind Exchanges*, 2014.

⁵ US Department of the Treasury, *The Tax Treatment of Like Kind Exchanges*, 2014.

⁶ *Starker vs. United States*, 602 F.2d 1341 (1979).

⁷ Page 440, "Committee Print on Tax Expenditures."

⁸ Formally, the cost of capital is the real before-tax rate of return that a barely profitable new investment needs to earn to both cover taxes over its life and provide investors their required after-tax rate of return. The change in taxation on a new, barely profitable investment is a key margin on which to measure the impact of a policy change. For example, an investment that is profitable prior to a policy change and becomes less so, but still profitable, would likely occur with or without the policy change and, consequently, whether or not it occurs is largely unaffected by the policy change. A barely profitable investment, however, could become unprofitable with a policy change and, consequently, whether or not it occurs can be affected by the policy change.

⁹ An EY survey of businesses that make use of the like-kind exchange rules found that, if not for the like-kind exchange rules, real estate would be held, on average, nearly 12 years instead of approximately 8.5 years.

¹⁰ This is a long-run elasticity.

¹¹ The elasticity estimate used in the analysis is obtained from Djankov, Simeon, et al. "The effect of corporate taxes on investment and entrepreneurship." *American Economic Journal: Macroeconomics* 2.3 (2010): 31-64.

¹² See, for example, Kevin Hassett and R. Glenn Hubbard, 2002, "Tax Policy and Business Investment," in Volume 3 of *Handbook of Public Economics*, eds., Alan Auerbach and Marty Feldstein, 1293-1343, Elsevier and Ruud de Mooij and Sjef Ederveen, 2008, "Corporate tax elasticities: a reader's guide to empirical findings," *Oxford Review of Economic Policy* 24(4), 680-697.

¹³ Proprietor income includes the payments received by self-employed individuals and unincorporated business owners.

¹⁴ The estimates used were published by Ling, David C., and Milena Petrova. "The Tax and Economic Impact of Section 1031 Like-Kind Exchanges in Real Estate." Bergstrom Center for Real Estate Studies Working Paper. Warrington College of Business, University of Florida, Gainesville, FL (2020). The paper uses data which was obtained from CoStar (www.costar.com)

¹⁵ In particular, this analysis assumes the following shares of real estate makes use of the like-kind exchange rules: flex 6.6%; general retail 7.2%; health care 1.0%; hospitality 2.7%; industrial 5.4%; land 2.8%; mixed-use 0.9%; multifamily (< 10 units) 11.0%; multifamily (>= 10 units) 7.9%; office 4.8%; specialty 2.8%; sports & entertainment 1.4%; and total 5.5%. Property type definitions follow those used by CoStar.

¹⁶ *Supra*, note 13. See Table 2 of the Ling and Petrova (2020), which indicates the share to be 7% of sales (based on data from CoStar). The Ling and Petrova data are mapped into the US Department of Commerce, Bureau of Economic Analysis's capital stock/investment data to produce an economy-wide share of 5%. This share is then used with an estimate of the reduction in the cost of capital by assets that make use of the like-kind exchange rules to estimate the investment supported by the like-kind exchange rules (\$4.4 billion). Other measures of economic activity presented in this report are derivative of this estimate.

¹⁷ Estimates of federal, state and local taxes paid by, and related to, businesses that make use of like-kind exchange rules are based on historical relationships between federal, state, and local tax collections (by tax type) to economic activity. To define these historical relationships EY first calculated the effective tax

rates (ETRs) for different types of taxes for each state. EY then applied these ETRs to the measures of economic activity supported by the like-kind exchange rules by state. Mortgage and transfer taxes, which are included in state and local tax amounts displayed in Table 3, are modeled separately using 2019 mortgage and transfer tax rates along with the estimated investment supported by the like-kind exchange rules by state.

¹⁸ This estimate is calculated as the average tax expenditure for the deferral of gain on like-kind exchanges as reported by the Joint Committee on Taxation after extending this series through the 10-year budget window. See Joint Committee on Taxation, *Estimates of Federal Tax Expenditures for Fiscal Years 2020-2024*, (JCX-23-20), November 5, 2020, p.29.

¹⁹ This and many other assumptions are based on James Mackie, (2002), "Unfinished Business of the 1986 Tax Reform Act: An Effective Tax Rate Analysis of Current Issues in the Taxation of Capital Income," *National Tax Journal*, 45(2), pp. 293-337.

²⁰ More recent empirical research suggests that the new view may be more prevalent among firms; see Kevin Hassett and Kathryn Newmark, (2008), "Taxation and Business Behavior: A Review of the Recent Literature," *Fundamental Tax Reform: Issues, Choices and Implications*, MA: MIT Press.

²¹ See Alan Auerbach, "Inflation and the Tax Treatment of Firm Behavior," *American Economic Review*, 71(2), May 1981, pp. 419-423; and, Kevin A. Hassett and Alan D. Viard, "The Taxation of Corporate Gains on Sales of Depreciable Property: An Economic Analysis," *Tax Notes*, June 4, 2007.