# Economic impacts of one-year extension of CARES Act 163(j) COVID relief

**Prepared on behalf of National Association of Manufacturers (NAM) member Anheuser-Busch**

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Building a better working world

# Outline

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- Key results
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- Estimated share of interest expense disallowed with and without CARES Act
- Methodology for estimating macroeconomic impacts
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# Background

| 2018 | 2019-2020 | 2021 | 2022 & after |
|---|---|---|---|
| Deductibility threshold is **30% of EBIDTA** | Deductibility threshold is **50% of 2019 EBITDA** | Deductibility threshold is **30% of EBIDTA** | Deductibility threshold is **30% of EBIT** |
| 163(j) interest expense limitation **made more restrictive** | **CARES Act loosened** 163(j) interest expense limitation threshold | Interest expense deductibility threshold of 30% is **scheduled to return** in 2021 | Under current law, 163(j) interest expense limitation **scheduled to become more restrictive** starting in 2022 |
| Internal Revenue Code generally disallows tax deductions for interest expense exceeding 30% of EBITDA* or operating profit | Threshold to maintain tax deductibility loosened from 30% to 50%; further, allowed use of 2019's EBITDA in the 2020 calculation | Consideration is being given to extending the COVID relief provision for another year | Generally disallows tax deductions for interest expense exceeding 30% of EBIT** |

- This analysis estimates economic impacts of one-year extension of CARES Act 163(j) COVID relief; two approaches are used
  - Fiscal multiplier approach
  - Cost of capital / EY Macroeconomic Model of the US Economy

*EBITDA, an acronym for Earnings Before Interest, Taxes, Depreciation, and Amortization, is a commonly used financial metric which measures operating profit.
**EBIT is an acronym for Earnings Before Interest and Taxes.

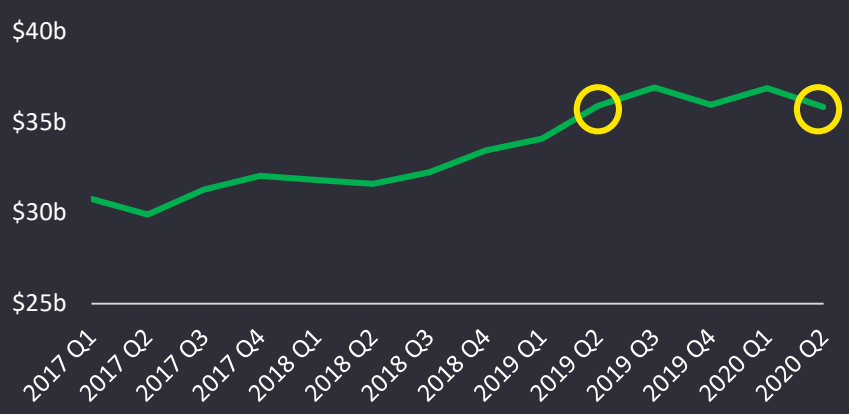
# Key results

- The 163(j) limitation increases taxes on impacted businesses more in bad economic conditions because of lower income and potentially higher interest expense
- Comparing 2020Q2 to 2019Q2 for public nonfinancial companies, quarterly EBITDA declined significantly (34% or $37b) and interest expense was approximately unchanged; however, the impact on certain industries is much more severe
- A one-year 163(j) COVID relief extension is estimated to increase:

| | |
|---|---|
| GDP | $9b |
| Job equivalents | 85,000 |

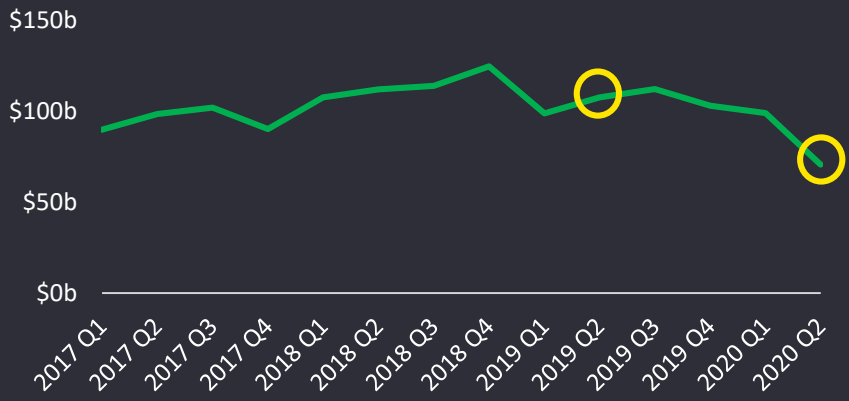
**Interest Expense (Quarterly)**

Interest expense of public nonfinancial companies




**Cash flow (Quarterly)**

Total EBITDA of public nonfinancial companies



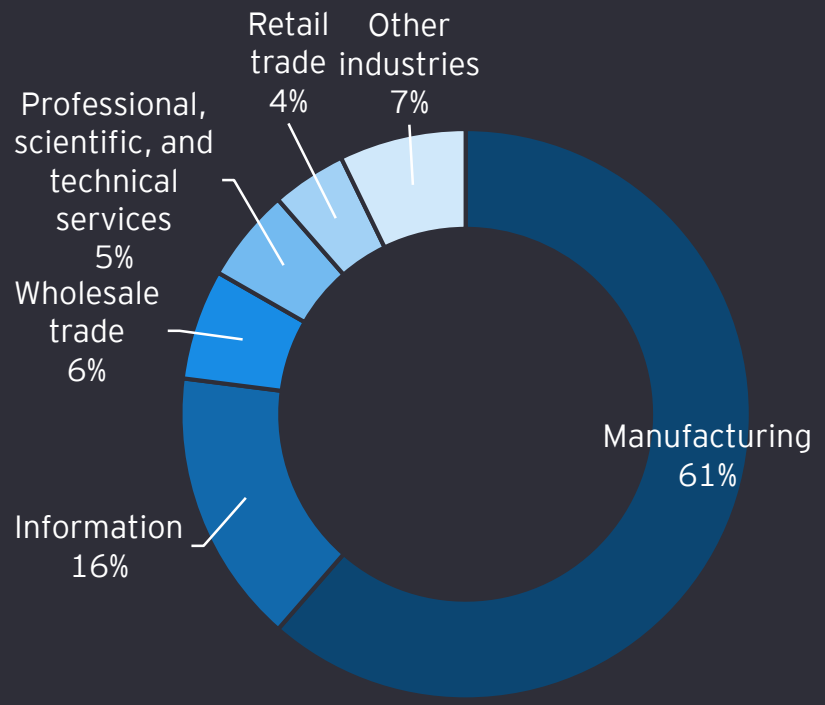

Source: Company financial statement data from S&P Capital IQ/EY analysis.

# Disallowed interest expense deductibility under the 30% of EBITDA limitation in the pre-COVID economy

- EY analysis finds non-deductible interest expense is approximately 5% of total interest expense in the pre-COVID economy
- Non-deductible interest expense varies by industry; more than three-quarters of non-deductible interest expense is in the manufacturing (61%) and information (16%) industries

**Share of disallowed interest expense**

*30% of EBITDA, pre-COVID economy*

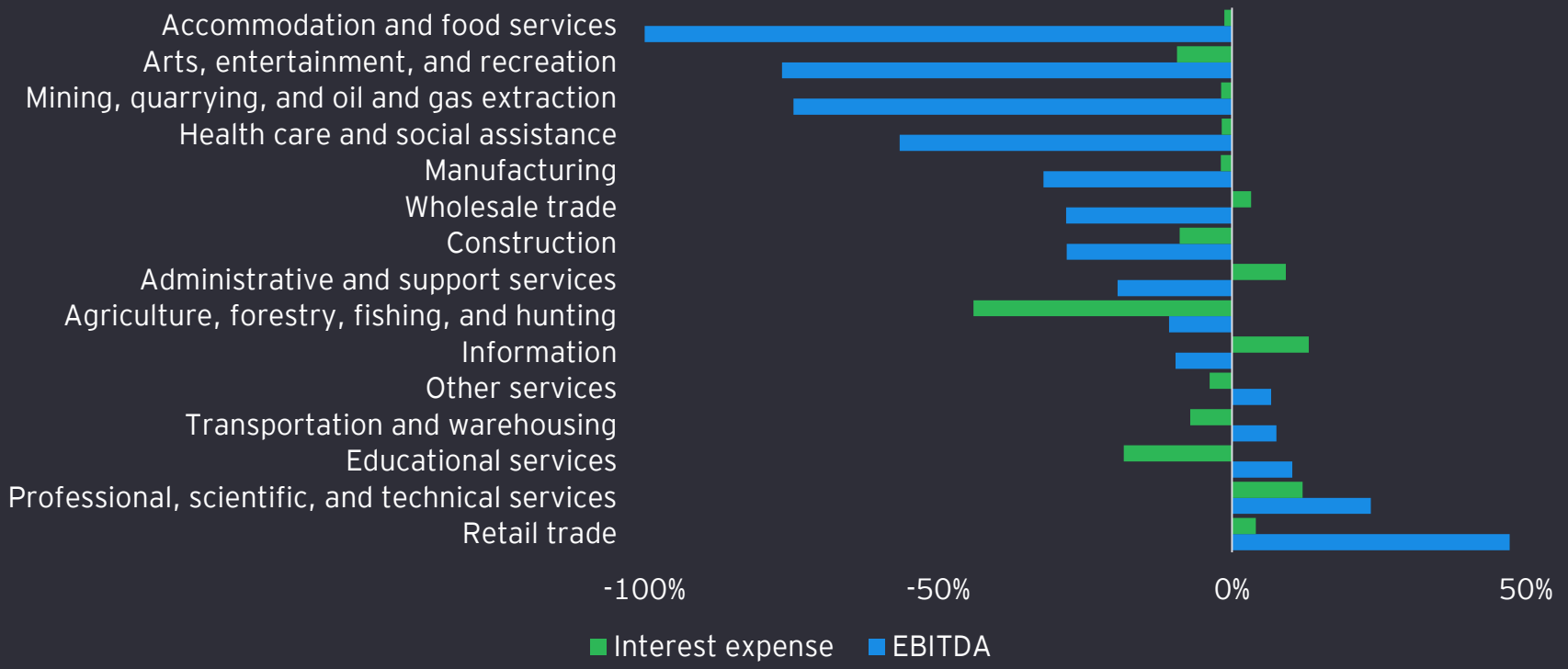



Note: Industry definitions follow the North American Industry Classification System (NAICS). Figures are rounded.
Source: EY analysis.

# What does the financial statement data show: COVID-19

## Comparison of EBITDA and interest expense in 2020Q2 relative to 2019Q2

- However, when looking at the impact on particular industries, the COVID economy decreased EBITDA as much as 100% and increased interest expense as much as 13%, depending on the industry




Note: For all industries combined, EBITDA is estimated to decrease 34% and interest expense is estimated to be approximately unchanged. Retail trade includes a broad range of companies, including traditional brick and mortar retailers and online retailers, and retailers impacted differently by COVID. Industry definitions follow North American Industry Classification System (NAICS). Analysis includes approximately 5,000 companies with publicly reported 2019Q2 and 2020Q2 EBITDA and interest expense limitation. EBITDA and net interest expense follow book definitions, not tax definitions.
Source: S&P Capital IQ; EY analysis.

# Numerical example
## Disallowed interest expense

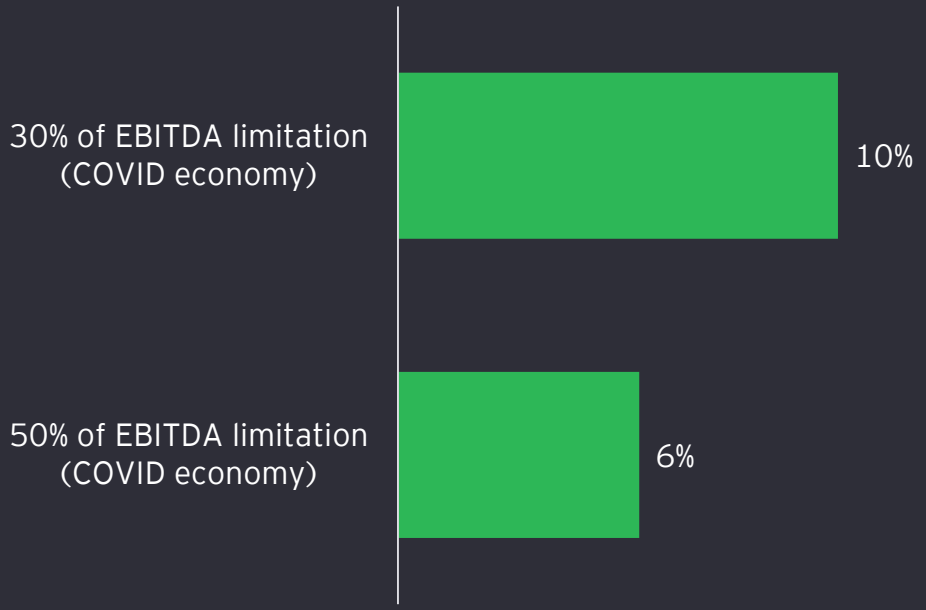
- Illustrative business assumed to have no disallowed interest expense in a pre-COVID economy, but to have declining profits (-10%) and increasing interest expense (+10%) due to COVID
- Because of the worsening economic conditions under COVID this illustrative business faces a tax increase from the 163(j) interest expense limitation; this is ameliorated through a loosened deductibility threshold (i.e., from 30% to 50%)

| | Pre-COVID economy | COVID economy | |
|---|---|---|---|
| Operating profit | $1,000,000 | $900,000 | $900,000 |
| x Deductibility threshold (%) | 30% | 30% | 50% |
| = Deductibility threshold ($) | $300,000 | $270,000 | $450,000 |
| Interest expense | $250,000 | $275,000 | $275,000 |
| - Deductible interest expense | $250,000 | $270,000 | $275,000 |
| = Disallowed interest expense | $0 | $5,000 | $0 |
| Change in taxable income | $0 | $5,000 | $0 |
| x Tax rate | 21% | 21% | 21% |
| = Change in tax liability | $0 | $1,050 | $0 |

Note: The CARES Act both loosened tax deductibility threshold from 30% to 50% and, further, allowed use of 2019's EBITDA in the 2020 calculation. Only the former is illustrated in this numerical example.

# Estimated share of non-deductible interest expense with and without the CARES Act 163(j) COVID relief

- CARES Act 163(j) COVID relief is estimated to reduce the share of interest expense which is disallowed by nearly 50% (i.e., from 10% to 6%)




Note: Detailed discussion of estimate of disallowed interest expenses provided in Appendix B.
Source: EY analysis.

# Methodology for estimating macroeconomic impacts

- Approach 1: The **fiscal multiplier approach** estimates the change in US GDP and jobs based on the budgetary cost or cash impact of the policy on the US economy. This analysis uses fiscal multipliers drawn from Congressional Budget Office (CBO) analyses.

- Approach 2: The **cost of capital/macroeconomic modeling approach** focuses on the impact of the policy on investment incentives and the overall economy. The macroeconomic model used by this analysis is similar to those used by the Joint Committee on Taxation, the CBO, and the US Treasury Department. This analysis also reflects the impact of a temporary one-year policy on the incentive to accelerate investment from future years.

- Details of the methodology are provided in Appendix C.

# Macroeconomic impacts
One-year extension of CARES Act 163(j) COVID relief

## Estimated macroeconomic impacts

| | Central estimates |
|---|---|
| GDP | $9b (0.04%) |
| Job equivalents | 85,000 (0.06%) |

## Sensitivity of estimates

| | Low estimates | High estimates |
|---|---|---|
| GDP | $2b (0.01%) | $16b (0.08%) |
| Job equivalents | 15,000 (0.01%) | 155,000 (0.10%) |

Note: Values in parentheses are the percent change relative to US economy aggregates (i.e., US GDP and employment). The low estimates are developed from a fiscal multiplier approach and the revenue impact of the policy. The high estimates are developed from the cost of capital impact and the EY Macroeconomic Model of the US Economy. The central estimates are the average of the high and low estimates. Estimates are relative to 2021 US economy. COVID estimates are relative to 2021 projected by the Congressional Budget Office in July 2020 (i.e., post-COVID). Pre-COVID estimates are relative to 2021 projected by the Congressional Budget Office in January 2019 (i.e., pre-COVID).
Source: EY analysis.

# 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:

- Estimates are limited by available public information. The analysis relies on information reported by federal government agencies (primarily the Bureau of Economic Analysis, the Bureau of Labor Statistics, and the US Census Bureau), company-level financial statement data from S&P Capital IQ, analysis from the JCT, and publicly available individual and industry tax return information (from the Internal Revenue Service). The analysis did not attempt to verify or validate this information using other sources.
- Estimates are based on a stylized depiction of the US economy. The model used for this analysis is, by its very nature, a highly stylized depiction of the US economy intended to capture key details important to analyzing the impact of a potential tax policy change. Additionally, the condition of the US economy in 2021 is uncertain and 2020Q2 is used as a proxy for 2021; the US economy could be in better or worse condition in 2021.
- US industries are responsive to normal returns on investment. The industries comprising the US economy in this model are assumed to be responsive to the normal returns on investment. This contrasts to industries that earn economic profits and thereby have an increased sensitivity to statutory tax rates relative to marginal effective tax rates.
- Full employment model. The EY Macroeconomic Model of the US Economy, like many general equilibrium models, focuses on the longer-term incentive effects of policy changes. It also assumes that all resources throughout the economy are fully employed; that is, there is no slackness in the economy (i.e., a full employment assumption with no involuntary unemployment). Any increase in labor supply is a voluntary response to a change in income or the return to labor that makes households choose to substitute between consumption and leisure. To provide a high-level measure of the potential employment impacts, a job-equivalents measure has been estimated. Job-equivalent impacts are defined as the change in total labor income divided by the baseline average labor income per job.
- Fiscal multiplier model. The estimates from the Fiscal Multiplier Model are depending on multipliers, which are uncertain. This uncertainty is greater during a period of economic uncertainty such as the current COVID-related recession.

# Appendix A
## Comparison of estimated macroeconomic impacts under a COVID and pre-COVID baseline

| COVID economy | Pre-COVID economy |
|---|---|
| **Central estimates:** | |
| ▸ GDP: $9b (0.04%) | ▸ GDP: $6b (0.02%) |
| ▸ Job equivalents: 85,000 (0.06%) | ▸ Job equivalents: 50,000 (0.03%) |
| **Sensitivity:** | |
| **High estimates** | |
| ▸ GDP: $16b (0.08%) | ▸ GDP: $10b (0.04%) |
| ▸ Job equivalents: 155,000 (0.10%) | ▸ Job equivalents: 95,000 (0.06%) |
| **Low estimates** | |
| ▸ GDP: $2 (0.01%) | ▸ GDP: $1b (0.01%) |
| ▸ Job equivalents: 15,000 (0.01%) | ▸ Job equivalents: 10,000 (0.01%) |

Note: Values in parentheses are the percent change relative to US economy aggregates (i.e., US GDP and employment). The low estimates are developed from a fiscal multiplier approach and the revenue impact of the policy. The high estimates are developed from the cost of capital impact and the EY Macroeconomic Model of the US Economy. The central estimates are the average of the high and low estimates. Estimates are relative to 2021 US economy. COVID estimates are relative to 2021 projected by the Congressional Budget Office in July 2020 (i.e., post-COVID). Pre-COVID estimates are relative to 2021 projected by the Congressional Budget Office in January 2019 (i.e., pre-COVID).
Source: EY analysis.

# Appendix B
## Methodology for simulating interest expense disallowed

### 1 Collect best available data

- **Financial statement data at the company level.** Aggregation of EBITDA and net interest expense limitation across companies can mask the impact of the interest expense limitation. Nearly 30,000 observations from 2014 to 2019 collected from S&P Capital IQ.
- **Tax return data at the industry level.** Ideal analysis would use company tax return data. These data, however, are not publicly available. Industry-level tax return data are available from the Internal Revenue Service (IRS). The most recent data available (2017) are used.
- **Joint Committee on Taxation (JCT) analysis.** JCT has access to company tax return data that are ideal for estimating the impact of the interest expense limitation. Results from these analyses are publicly available.

### 2 Construct synthetic tax return information

- **Use financial statement data as a starting point.** The starting point of the synthetic tax return data is company-level information on EBITDA, interest expense, and interest income data from company financial statements.
- **Adjust financial statement data with tax return data.** The financial statement data are then adjusted, by industry, to replicate industry-level tax return data from the IRS. In particular, the distribution of EBITDA, interest expense, and interest income within the financial statement data is maintained but amounts are adjusted to match IRS industry-level data.
- **Calibrate model to replicate JCT analysis.** Model is calibrated to match the JCT tax expenditure for interest expense limitation.*

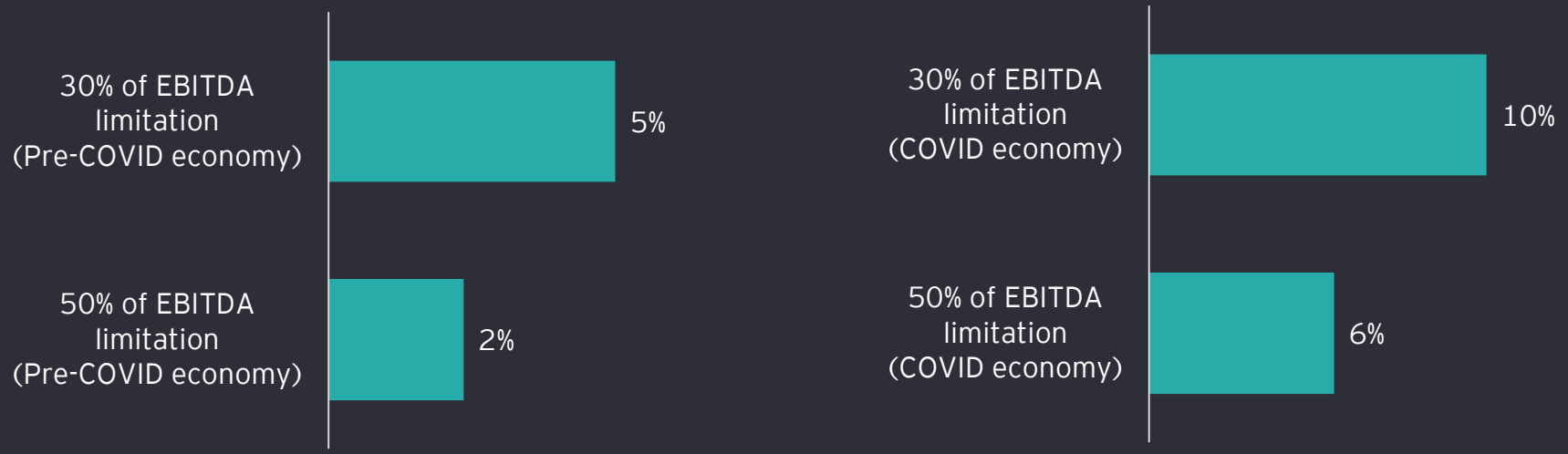
### 3 Simulate interest expense limitation

- **Simulate interest expense limitation impact in pre-COVID economy.** In step 2, the financial statement data is adjusted to match industry tax return data for EBITDA, interest expense, and interest income and calibrated to replicate JCT analysis. These data can then be used to simulate the amount of interest expense disallowed at 30% and 50% of EBITDA.
- **Simulate interest expense limitation in COVID economy.** Analysis of interest expense limitation is re-estimated after adjusting synthetic tax return for COVID by comparing 2019Q2 financial statement information to 2020Q2 financial statement information by industry.

* The JCT estimates that the revenue gain attributable to the 30% of EBITDA interest expense limitation $10.4b in 2020 and $10.6b in 2021. See Joint Committee on Taxation, *Estimates Of Federal Tax Expenditures For Fiscal Years 2019-2023*, December 18, 2019 (JCX-55-19).

# Appendix B
## 30% and 50% interest expense limitation in pre-COVID and COVID economy

- The 30% of EBITDA interest expense limitation is estimated to disallow 5% of interest expense in a pre-COVID economy; this increases to 10% in a COVID economy
- Changing the 30% of EBITDA limitation to 50% decreases the share of interest expense disallowed from 5% to 2% in a pre-COVID economy and from 10% to 6% in a COVID economy




Note: Pre-COVID economy reflects the average effect over the 2014-2019 period. COVID economy reflects these same data adjusted based on a comparison, by industry, of 2019Q2 values to 2020Q2 values. Figures are rounded.
Source: EY analysis.

# Appendix C
## Methodology for macroeconomic estimates – Approach 1

- Two approaches are used to estimate macroeconomic impacts of one-year extension of CARES Act 163(j) COVID relief (e.g., increasing the 30% of EBITDA interest expense limitation to 50% for 2021)
  - Fiscal multiplier model
  - Cost of capital / EY Macroeconomic Model of the US Economy

- Approach 1: The fiscal multiplier approach estimates the change in US GDP based on the budgetary cost of a fiscal policy
  - For example, a $100 tax decrease with a fiscal multiplier of 0.75 would suggest an increase in US GDP of $75
  - Estimates of fiscal multipliers vary based on type of fiscal policy, economic conditions, and their impact on expectations
  - The Congressional Budget Office (CBO) estimates that the range of the fiscal multiplier for corporate tax provisions primarily affecting cash flow generally ranges from 0.0 to 0.4*
  - This analysis uses the CBO's central point fiscal multiplier of 0.2

* Charles J. Whalen and Felix Reichling, "The Fiscal Multiplier and Economic Policy Analysis in the United States," Congressional Budget Office Working Paper 2015-02, February 2015.

# Appendix C
Methodology for macroeconomic estimates – Approach 2

## Approach 2: The cost of capital/EY Macroeconomic Model of the US Economy is used in a two step process to estimate the impacts of the one-year extension of the CARES Act 163(j) COVID relief

- This approach estimates the impacts of the policy change on investment incentives by first estimating the change in the policy on the cost of capital
- The change in the cost of capital is then used with EY's macroeconomic model of the US economy to estimate the policy's impacts on GDP and jobs
- An important aspect of this approach is that it captures the extent by which a temporary investment incentive, such as the one-year extension of the CARES Act 163(j) COVID relief, would shift investment from the future to the period in which the investment incentive is in place*

* See, for example, Darrel Cohen, Dorthe-Pernille Hansen, and Kevin Hassett, (2002), "The Effects of Temporary Partial Expensing on Investment Incentives in the United States," *National Tax Journal* 55(3): 457-466.

# Appendix C
Methodology for macroeconomic estimates – Approach 2 (cont.)

## *Step 1: Cost of capital – Impact of CARES Act 163(j) COVID relief on investment incentives*

- The Congressional Budget Office, Congressional Research Service, JCT, and US Treasury Department frequently use the cost of capital framework to quantify the impact of tax changes on investment incentives; this framework accounts for the major features of the federal income tax system (e.g., tax depreciation, tax rates, investor-level taxes)
- 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 on new investment
  - 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
- Therefore, examining the impact of the interest expense limitation on a new, barely profitable investment is a key margin for how much investment occurs in the US economy

# Appendix C
## Methodology for macroeconomic estimates – Approach 2 (cont.)

### *Step 2: EY Macroeconomic Model of the US Economy*

- This analysis uses an overlapping generations (OLG) general equilibrium model to estimate the macroeconomic impacts of the CARES Act 163(j) COVID relief
  - The OLG model used for this analysis is similar to those used by the Congressional Budget Office, JCT, and US Treasury Department.* In this model, tax policy affects the incentives to work, save and invest, and to allocate capital and labor among competing uses. Representative individuals and firms incorporate the after-tax return from work and savings into their decisions on how much to produce, save, and work.
  - The general equilibrium methodology accounts for changes in equilibrium prices in factor (i.e., capital and labor) and goods markets and simultaneously accounts for the behavioral responses of individuals and businesses to changes in taxation. Behavioral changes are estimated in the OLG framework, whereby representative individuals with perfect foresight incorporate changes in current and future prices when deciding how much to consume and save in each period of their life.
  - Government spending in the model can be financed by collecting taxes or borrowing. Borrowing, however, cannot continue indefinitely in this model. Eventually, the debt-to-GDP ratio must stabilize so that the government's fiscal policy is sustainable. This analysis assumes that this one-year change is deficit financed and closed with transfer payments after 50 years. Note that this closing rule becomes relatively unimportant when delayed sufficiently far into the future.**

* See , for example, Jaeger Nelson et. al, (2019), "Macroeconomic Effects of Reducing OASI to Payable Benefits: A Comparison of Seven Overlapping Generations Models," *National Tax Journal* 72(4): 671-692. Key model parameters are generally from JCT, *Macroeconomic Analysis of the Conference Agreement for H.R. 1, The 'Tax Cuts and Jobs Act*,' December 22, 2017 (JCX-69-17).
**See Rachel Moore and Brandon Pecoraro, (2020), "Dynamic Scoring: An Assessment of Fiscal Closing Assumptions," *Public Finance Review* 48(3): 340-353.