

For the year ended December 31, 2020, the change from an expense from global operations in 2019 to a benefit from global operations in 2020 reflects the lower rate of tax on the disposition of the BioPharma business in 2020 compared to an amount of tax recognized on preparatory steps for the planned disposition in 2019 and a decrease in valuation allowances on non-U.S. deferred tax assets.

A more detailed analysis of differences between the U.S. federal statutory rate and the consolidated effective rate, as well as other information about our income tax provisions, is provided in the Critical Accounting Estimates section and Note 15. The nature of business activities and associated income taxes differ for GE Industrial and for GE Capital; therefore, a separate analysis of each is presented in the paragraphs that follow.

GE INDUSTRIAL EFFECTIVE TAX RATE		2020		2019		2018
GE Industrial ETR		5.3 %		72.7 %		(2.3)%
GE Industrial provision for income taxes	\$	388	\$	1,309	\$	467

For the year ended December 31, 2020, the GE Industrial provision for income taxes decreased primarily due to the decrease in pre-tax income excluding the gain from the sale of our BioPharma business and non-deductible goodwill impairment charges and a decrease in valuation allowances on non-U.S. deferred tax assets partially offset by the increase in tax expense associated with the disposition of the BioPharma business in 2020 compared to the amount recognized on preparatory steps for the planned disposition in 2019 and a decrease in benefit from the completion of the IRS audits.

GE CAPITAL EFFECTIVE TAX RATE		2020		2019		2018
GE Capital ETR		41.1 %		89.3 %		99.7 %
GE Capital provision (benefit) for income taxes	\$	(862)	\$	(582)	\$	(374)

For the year ended December 31, 2020, the GE Capital tax benefit increased primarily due to the decrease in pre-tax income excluding non-deductible goodwill impairment charges and due to larger benefits on global operations including a tax benefit associated with the disposition of the BioPharma business in 2020.

RESEARCH AND DEVELOPMENT. We conduct research and development (R&D) activities to continually enhance our existing products and services, develop new products and services to meet our customers' changing needs and requirements, and address new market opportunities. In addition to funding R&D internally, we also receive funding externally from our customers and partners, which contributes to the overall R&D for the company.

	GE funded			Customer and Partner funded(b)			Total R&D		
	2020	2019	2018	2020	2019	2018	2020	2019	2018
Power	\$ 317	\$ 314	\$ 409	\$ 13	\$ 13	\$ 5	\$ 330	\$ 327	\$ 414
Renewable Energy	466	522	413	19	9	11	485	531	424
Aviation	707	906	950	1,090	911	564	1,797	1,817	1,514
Healthcare	845	994	968	27	25	23	872	1,019	991
Corporate(a)	231	382	675	106	89	48	336	471	722
Total	\$ 2,565	\$ 3,118	\$ 3,415	\$ 1,255	\$ 1,046	\$ 650	\$ 3,820	\$ 4,164	\$ 4,065

(a) Includes Global Research Center and Digital business.

(b) Customer funded is principally U.S. Government funded in our Aviation segment.

DISCONTINUED OPERATIONS. Discontinued operations primarily include certain businesses in our GE Capital segment (our mortgage portfolio in Poland and trailing liabilities associated with the sale of our GE Capital businesses) and our Baker Hughes and Transportation segments. See Notes 2 and 23 for further financial information regarding our businesses in discontinued operations.

The mortgage portfolio in Poland (Bank BPH) comprises floating-rate residential mortgages, 87% of which are indexed to or denominated in foreign currencies (primarily Swiss francs). At December 31, 2020, the total portfolio had a carrying value of \$2.4 billion with a 1.61% 90-day delinquency rate and an average loan to value ratio of approximately 63.0%. The portfolio is recorded at the lower of cost or fair value, less cost to sell, and included a \$0.3 billion impairment, which reflected market yields as well as estimates with respect to ongoing litigation in Poland related to foreign currency-denominated mortgages and other factors. See Note 23 for additional information about this litigation and the potential for further adverse developments to result in further losses related to these loans in future reporting periods.