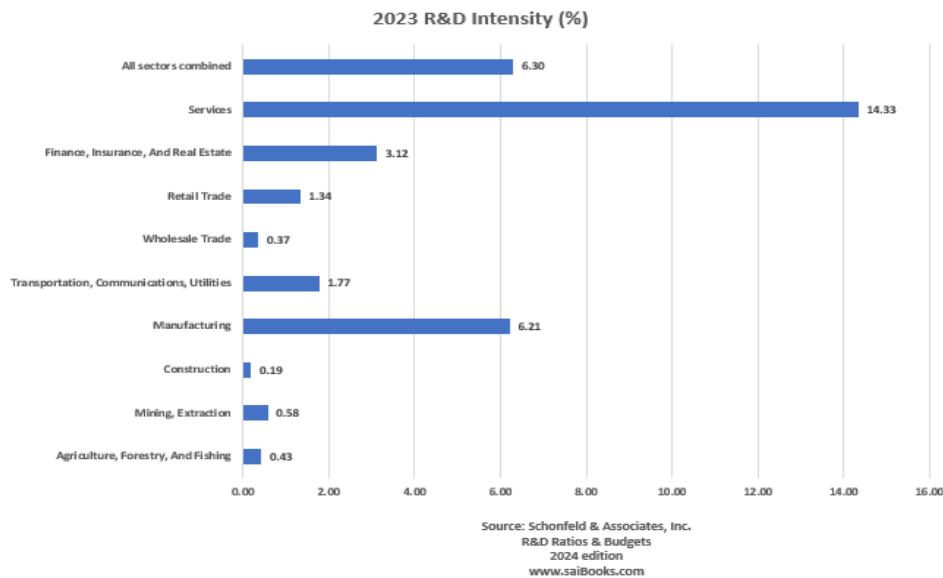


2023 R&D SPENDING AND INTENSITY BENCHMARKS

Schonfeld & Associates, Inc. has released the latest edition of its annual study **R&D Ratios & Budgets**. The new research report covers R&D spending in fiscal 2023 by more than 2,800 individual publicly traded companies within 280 industries. R&D Intensity is the ratio of R&D spending to revenue.

For each company, the study presents information as reported on the 10-K annual report to the U.S. Securities & Exchange Commission. Data includes 2023 revenue, R&D spending in fiscal 2023 and 2022, R&D Intensity ratio for 2023 as well as the lowest and highest intensity ratios during the past five years along with annual growth rates in R&D spending and revenue. For each industry, 2023 and 2022 revenue and R&D spending are reported along with R&D Intensity ratio for 2023 as well as with growth rates in R&D spending and revenue. Each industry requires individualized analysis as R&D investment varies by industry.

The pharmaceutical industry continues to be the biggest R&D investor in fiscal 2023 with budgets of drug companies increasing by over 17% to \$185 billion. Software companies contributed a total of over \$215 billion to this investment pool.

The biggest single R&D investor in 2023 was Alphabet at over \$45 billion, followed by Meta at \$38 billion, and then Merck, Microsoft and Apple at over \$29 billion each. Firms involved with digital content are investing much more heavily than those in more traditional arenas.

Pharmaceutical firms continued significant R&D spending in 2023. Merck, the top spender at \$30 billion, is followed by Johnson & Johnson, Novartis, Astrazeneca, Pfizer, Eli Lilly and Bristol Myers Squibb, each spending over \$9 billion. The biotech industry, led by Gilead, grew R&D by over 10% to over \$39 billion. Electromedical apparatus makers, led by Medtronic, spent a total of over \$3.4 billion, a slight increase of close to one percent.

R&D budgets of semiconductor makers grew to over \$71 billion, an increase of over 7%. Intel had the largest R&D budget, \$16 billion, an 8% decrease from 2022. R&D budgets of the industries that are major suppliers to the infrastructure of the Internet cloud continue robust R&D spending to remain competitive.

The 2023 R&D spending of the automotive industry, led by General Motors, Toyota and Ford each spending over \$8 billion, was up over 5% from the 2022 total with industry revenues up 8%.

R&D Intensity

R&D Intensity, a key performance indicator, expresses a company's investment in research and development relative to its revenue. It illustrates how committed a company is to innovation and technological advancement. It is a strong indicator of future growth prospects in industries experiencing rapid technological change.

The metric is defined as the proportion of a company's revenue reinvested into R&D activities. A high value signifies a focus on innovation to ensure future success and confidence in the firm's ability to efficiently use the investment to produce successful outcomes. However, positive outcomes are not always the result. A company's tolerance for risk and ability to manage the uncertainty that accompanies innovation is also reflected in a high value.

R&D Intensity distinguishes industry leaders and disruptors in industries experiencing rapid technological change, such as Information Technology and Pharmaceuticals. It indicates a potential for long-term growth, as groundbreaking technologies can lead to new revenue streams. In more mature industries, such as Automotive, robust R&D efforts can signal improved operational efficiencies, reducing costs and improving profitability.

R&D Intensity is calculated by dividing total R&D expenditures by total revenues and multiplying the result by 100 to express it as a percentage. This calculation standardizes the comparison of R&D spending across companies of different sizes and industries.

R&D Intensity can influence a company's valuation since markets often reward firms demonstrating a clear commitment to innovation. However, short-term financial health may be impacted. Management must find the optimal level of investment in R&D to support innovation while ensuring financial stability and profitability. By understanding and effectively managing R&D Intensity over time and in relation to other firms in the same industry, companies can secure for themselves a competitive position in the marketplace.

About the Study

R&D Ratios & Budgets is an essential reference presenting R&D spending and Intensity information published annually by Schonfeld & Associates, Inc. The study is based on 10-K annual report information submitted to the U.S. Securities & Exchange Commission.

R&D Ratios & Budgets contains information for each of the over 2,800 individual publicly traded companies. Fiscal year 2023 revenue and R&D spending are listed as well as annual growth rates of each. R&D Intensity for 2023 is presented along with the lowest and highest value for R&D Intensity during the past five years. The range of values gives an insight into the stability of the firm's commitment to funding R&D as well as its direction.

The industry summary section within **R&D Ratios & Budgets** presents for each of 280 industries as defined by SIC code: total fiscal year 2023 revenue and R&D spending as well as annual growth rates of each. The industry R&D Intensity for 2023 is listed so that an individual company's value can be compared to the value for the industry as a whole and to answer the question: Is a company leading or lagging its peers in prioritizing innovation?

To allow for further investigation, two Excel datafiles are available for purchase along with the PDF report that contain five years of revenue, R&D spending and R&D Intensity Ratio information. One file contains company data and the other industry information.

The 2024 edition of the **R&D Ratios & Budgets** PDF study is \$395 and the study along with Excel datafiles is \$495. Contact Schonfeld & Associates, Inc., 1932 Terramar Lane, Virginia Beach, VA 23456. Call for more information or to place an order: 800-205-0030 or visit <https://www.saibooks.com/product/r-d-ratios-budgets-2>