



## Key Highlights

- In FY22, ~56% of revenue accrued to international markets, whereas that of domestic markets arrived at 44%
- The Animal Nutrition vertical was the revenue leader contributing ~68% of the top line
- The SciTech acquisition in 2021 has propelled the company to foray into specialized manufacturing
- It witnessed a YoY decline in EBITDA for the first time in the previous five years
- The company has consistently spent ~4% of revenue towards building R&D capabilities which reinstate its R&D focus. It believes in leveraging innovation across product segments

Key Factors		FY22	FY21
Market Price (Average)	↑	₹370	₹261
Earnings Per Share (EPS)	↓	10.68	13.07
Return on Equity (ROE)	↓	12%	17%
Operating Margin	↓	38%	46%
Net Profit Margin	↓	20%	25%

Source: Leveraged Growth

## The Global Enzyme Industry

- Valued at \$11.47 billion in 2021
- Prominent global players include Novozymes, DuPont Danisco, Amano Enzyme, and Novus International
- Industry verticals cater to varied segments of enzyme application, including human healthcare, feed enzymes, and specialty enzyme markets
- The global probiotics market, valued at \$1,05,050 million in 2021, and is estimated to grow at a CAGR of 9.7% by 2025
- The industry has recently gained attention owing to its extensive application and rising consumer awareness

## Decades in the Enzymes Industry

Advanced Enzyme Technologies Limited (NSE: ADVENZYMES), with over three decades of experience, is a leading manufacturer of enzymes and probiotics with global acclaim. Having pioneered enzyme production in India, the company has established itself among the largest producers, marketing over 400 proprietary products developed using over 65 indigenous enzymes & probiotics.

With established expertise across the value chain, it provides eco-safe solutions to various industries, including human and animal health care and nutrition, dairy processing, fruit and vegetable processing, detergents and cleaning aids, specialty applications, textile processing, etc. It uses environment-friendly biotechnology processes to manufacture enzymes using natural resources such as plants, fungal, bacterial, and animal sources. It offers these products to customers across 45 countries worldwide. The manufacturing footprint includes 9 production facilities in India and the US and 7 R&D laboratories in India and Germany.

## Journey

Although incorporated later in 1989, the journey of Advanced Enzymes began in 1957 with Late L. C. Rathi, founder, initiating the extraction of papain, an enzyme complex derived from papaya fruit having utility in pharmaceutical and medical purposes. It started with producing, researching, marketing, and branding enzymes and progressed to including probiotics. Today, the company that established the country's foremost enzyme manufacturing plant in 1958 is the largest enzyme producer in Central Asia.

Mr. V L Rathi and Mr. C L Rathi founded Advanced Enzyme in 1989 as Advanced Biochemicals Pvt. Ltd., which was later renamed in 2005. In 2012, the company received its first U.S. patent and consolidated its U.S. presence owing to the takeover of Advanced Supplementary Technologies Corporation as a step-down subsidiary. Later, in 2016 the company got listed on the stock exchanges. The acquisitions of the German-based company Evoxx technologies GmbH; and SciTech Specialties Private Limited in 2017 and 2021, respectively, reinstate the company's inorganic growth stance. The recent 51% acquisition of SciTech Specialties Pvt. Ltd. in 2021 establishes a specialized manufacturing segment as an addition to the company's revenue streams leveraging synergies and strengthening the B2C segment.

## The Enzyme Industry

### Global Scenario

Enzymes, biocatalysts that produce desired results in a biological reaction altering the reaction time, have recently gained attention owing to their extensive application. Their utility lies in diverse sectors, including food, animal feed, textiles, detergents, pharmaceutical research, manufacturing, leather processing, and agriculture. Application in manufacturing processes has propelled cost streamlining and reduced energy consumption. The Global market space is dominated by giants, including Novozymes, DuPont Danisco, Amano Enzyme, and Novus International.

The global enzyme market size is expected to grow by 4.6% to \$11,630 million in 2026 from \$8,896.5 million in 2020. Advanced Enzymes caters to varied segments of enzyme application, including human healthcare, feed enzymes, and specialty enzyme markets.

**Human Healthcare Market:** Digestive enzymes are expected to register a CAGR of 8.35%, reaching an estimated valuation of \$1,245.92 million by 2026. The market is segmented based on type, origin, and region. The growing prevalence of chronic gastrointestinal diseases and the rapidly aging population has expanded the market size.

**Feed Enzymes Market:** Global feed enzymes are estimated to reach \$2,300 million in 2027 from \$1,500 million in 2021, growing at a CAGR of 8.2%. Enzymes aid the digestion process of animals that cannot

effectively break down food themselves. It also improves feed ingredients' nutritional value, reducing the cost of establishing sustainable animal production.

**Industrial Enzymes:** The industrial enzyme market is expected to register a ~6% CAGR growing to \$6,000 million by 2027. Industrial enzymes have demand in industrial processes where they are involved in catalyzing chemical reactions. Over a third of the industrial enzymes market is engulfed by the food processing industry, backed by the flourishing demand for improved food quality and processing; and better nutritional value.

**Specialty Enzymes Market:** It is estimated that specialty enzymes could grow at a CAGR of 7.5%, reaching \$6,600 million by 2025, backed by potential applications across pharmaceuticals, biotechnology research, and diagnostics. Increasing urbanization, along with changing consumer preferences, would contribute to an increased demand for specialty enzymes in the foreseeable future.

The global probiotics market, estimated to be valued at \$1,05,050 million in 2021, is expected to register a CAGR of 9.7%, reaching \$1,51,970 million by 2025. Demand tailwinds include widening consumer awareness regarding the health benefits associated with probiotic-fortified food and the multi-functionality of probiotics. Adding probiotics to one's diet improves intestinal health, reduces calorie intake, and boosts immunity. The most common implementation of probiotics, yogurt, has pushed the demand for liquid probiotics. Market growth in the Asia-Pacific region is expected to propel further, driven by heightened awareness of new technologies, media coverage, and consumer demand.

## The Indian Enzyme Industry

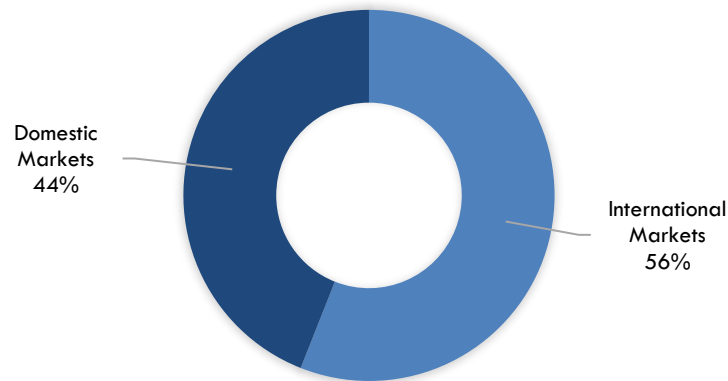
The Indian enzymes market, valued at \$390.68 million in 2022, is expected to grow at a CAGR of 8.67% by 2028. Advancements in food technology in the country and expanding customer awareness regarding the benefits of enzymes are driving the market. Additionally, the rising demand for a nutrient-rich diet and the commercial use of proteases in the detergent industry are key tailwinds.

The Indian probiotics market, valued at ₹2,600 million in 2021, is set to reach ₹7,700 million in 2027, registering a CAGR of 20.5%. Some standard probiotic products include curd, yogurt, drink, dietary supplements, etc. Apart from the rising awareness, the growing geriatric population, which has a greater risk of chronic gastrointestinal disorders, is a significant growth driver. Apart from this, the market has witnessed a gradual pivot towards functional food and beverages.

## Business Model

Advanced Enzyme Technologies has established itself as a fully integrated company with a presence across the enzyme value chain, from R&D to scale manufacturing and marketing of enzyme products and customized enzyme solutions. This enables it to meet its clients' unique and specialized needs and create value-added solutions, enhancing the company's profile and strengthening client relationships. Over the last five years, the company has consistently spent ~4% of its sales on research and development. International markets contributed to ~56% of the revenue of operations in FY22, whereas 44% accrued to the domestic market.

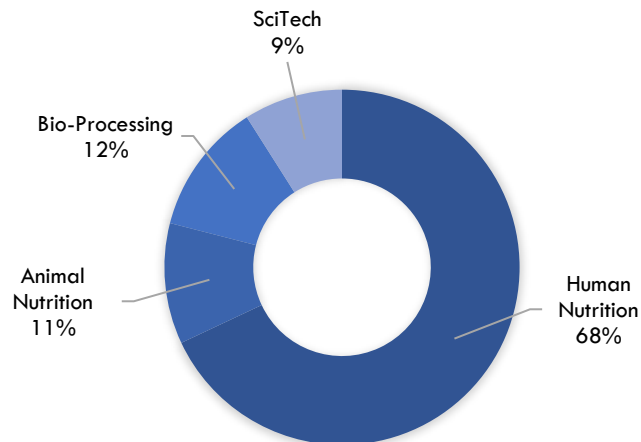
### Revenue Breakup



Source: Leveraged Growth

It caters to diversified verticals, including human and animal nutrition and bio-processing. Human nutrition was the primary revenue driver contributing ~68% of the topline in FY22, followed by animal nutrition and bio-processing, contributing 11% and 12%, respectively, and the relatively new subsidiary SciTech contributed 9%.

### Revenue Segmentation



Source: Leveraged Growth

#### Human Nutrition:

- a. Enzymes- It offers a wide range of proprietary and customized enzyme solutions to pharmaceutical and nutraceutical companies worldwide, including India, North America, Asia, and Europe. These enzymes are active ingredients in pharmaceutical and nutraceutical formulations.
- b. Probiotics- Probiotics are currently integrated into various digestive treatments while other applications in treatments are being developed. A key focus is to scale technologies for the production of essential enzymes.
- c. Biocatalysis- These enzymes catalyze the transformation of non-natural compounds. Biocatalysts have utility in producing pharmaceutical actives, cosmeceuticals, and other fine chemicals. Advanced Enzymes has made leaps in providing target-specific enzymatic-based solutions.

It is working on introducing more probiotics solutions in the Human Nutrition vertical with a critical focus on immune development, gut health, and several nutraceutical applications.

#### Animal Nutrition:

- a. Enzymes- Under animal nutrition, enzymes propel the digestibility of modern animal feeds, improving nutritional value and strengthening the immune system. Enzymes produced by the company continually deliver quality and effectiveness while maintaining economic value.
- b. Probiotics- It has been developing probiotic formulations in animal healthcare and is consistently working on assessing efficacy. Probiotics have an expansive application in animal nutrition, used to promote growth and function as an antibiotic replacement.

It is continually conducting trials to push new effective solutions that have the potential to improve animal feed efficacy. Apart from this, it is introducing new products in domestic and international markets and expanding its sales team in the U.S., MENA, and Asian markets. It is also focused on launching probiotic solutions in the animal nutrition vertical with a key focus on improving the nutritional value of animal feed and developing immunity.

#### Bio-Processing:

- a. Food Processing: Enzymes aid in developing nutritious food and beverage products with benefits surpassing traditional alternatives. Advanced Enzymes offers proprietary and customized enzyme products and solutions for food processing industries. Their solutions strengthen food quality, reduce waste and overall cost, and help control environmental pollution.
- b. Non-Food Processing: Replacing chemical catalysts, the company provides eco-safe solutions to various industries, including textiles, leather, detergent, and paper. Company solutions improve industrial processes' efficiency by saving energy and raw materials while controlling waste load and helping comply with environmental norms.

In the Bio-Processing division, the focus lies in the baking solutions segment, where it has gotten positive efficacy and performance responses. It intends to develop a value-based approach to expand globally, including Europe and U.S.

Procuring raw materials strictly from reputed manufacturers ensures consistent quality and adherence to delivery timelines. The company has established several application-based laboratories focused on innovation to enhance quality and process efficiency for end customers.

Backing on its thriving B2C model in the U.S., the company recently launched a B2C platform in India ([advancedenzymedirect.com](http://advancedenzymedirect.com)) with a stance of expanding its product suite. Company offerings are also pushed through third-party e-commerce aggregators.

The company believes in leveraging the inorganic growth route and has had a flourishing history of successful acquisitions, the most recent being J.C Biotech (85% stake) and SciTech Specialities Pvt. Ltd. (51% stake).

Advanced Enzymes has registered twice the average industry growth rate in the past five years and believe in continuing to outperform the industry benchmark. The continual cash generation capability has allowed the company to fuel acquisitions using internal accruals, establishing a robust balance sheet position and a negligible debt-to-equity ratio of 0.01. The consistent high cash generation enables the Company to fuel its inorganic growth through its internal accruals.

## Subsidiaries

It has four wholly-owned direct subsidiaries, three subsidiaries with majority stakes, and five step-down wholly-owned subsidiaries in FY22. These subsidiaries are a part of its strategic inorganic growth stance, where it leverages synergies and competencies through acquisitions. These entities are primarily involved in researching and developing varied technologies and marketing the company's offerings. Recently acquired in 2021 (51% stake), SciTech Specialities Private Limited manufactures specialized tablets focusing on animal health and nutraceutical.

## Swot Analysis

### Strengths

**Consistent R&D Investment:** The company follows a research-driven approach, consistently spending ~4% of sales on research and development with significant investments toward various proprietary and customized enzyme solutions. The company also boasts 7 research facilities in India and Germany.

**Robust Manufacturing:** The company has an expansive manufacturing setup comprising 9 plants globally. The Nashik plant is equipped with both surfaced and submerged fermentation systems, whereas Pithampur and Ongole plants have only submerged facilities. SciTech (SSPL) is equipped with advanced effereceuticals products for nutraceutical, pharmaceutical, poultry products, cosmetics, and specialty products.

**Successful Inorganic Expansion:** It has a robust history of growing inorganically through acquisitions. Using internal accruals for 3 successful acquisitions in the previous 3 years, the company has maintained a zero-debt stance. It continually explores potential strategic acquisitions to strengthen its front-end marketing capabilities, geographical reach, product portfolio, and B2C business.

**Presence Across Enzyme Value Chain:** Having presence across the enzyme value chain, it performs a range of activities comprising R&D, manufacturing, customized enzyme solutions, and marketing enzyme products. This expansive integration of operations propels cost effectiveness while ensuring end-to-end quality control. Moreover, it enables Advanced Enzymes to cater to unique and specific value-added solutions enhancing client relationships.

**Diversified Product Portfolio & Customer Base:** The diversified product portfolio across verticals and industries encompasses over 400 proprietary enzyme products. Apart from this, the company enjoys global diversification of its clientele comprising over 700 customers. With several solutions in the pipeline, the company continually leverages R&D to develop value-adding solutions across industries and end customers.

### Weaknesses

**High Customer Concentration:** On a consolidated basis, the top 10 customers contribute ~35% of total revenue. The significant customer concentration could dampen business prospects if the demand from these customers declines.

**Export Dependence:** The company's revenue segmentation comprises over ~55% accruing to foreign markets, showing increased reliance on exports. Thus, operating countries' economic and political environments and dynamic currency issues could affect profitability. Regulations and compliance requisites hamper strategy implementation.

**High Raw Material Prices:** The company currently holds a substantial gross profit margin of ~80%, which could be affected due to rising raw material prices shared with the inability to pass on the impact to end consumers.

## Opportunities

**Expansive Market Size & Growth:** The global probiotics market is valued at \$48 billion, while the global enzymes market is estimated to be worth ~ \$11.47 billion. Both markets are expected to grow at a healthy CAGR in the foreseeable future, providing an adequate market opportunity to expand operations. Most of the probiotics market is untapped, creating a colossal opportunity for Advanced Enzymes to build its stance globally.

**Future Growth Drivers:** The company expects its state-of-the-art manufacturing and R&D establishments to enable focus on high-return applications where it has strategic advantages. It also intends to maintain its stance of inorganic growth, analyzing potentially lucrative acquisitions and strategic relationships.

## Threats

**Stringent Regulations:** There are stringent regulations required to be followed by the company since it operates in the food and healthcare industry. Also, having a sturdy export front, it must follow varied specifications in domestic and export markets. Significant costs have to be incurred to comply with these regulations. Non-conformance with laws could attract huge fines and dampen reputation.

**Expansive Competition:** Domestic and international competition would increase pricing pressures impacting margins. Novozymes, Danisco, DSM, and BASF, account for ~75% of the global enzyme market. The inability to maintain a competitive lead against these prominent players may impact the company's growth prospects.

## Differentiating Strategies

**Value Chain Integration:** Advanced Enzymes believes in integrating its processes across the value chain encompassing R&D initiatives, manufacturing, and marketing & distribution.

- **R&D:** The company has established a robust R&D setup comprising 7 establishments in India and Germany. Consistent expenditure of 4% of sales towards research and development initiatives reinstates its focus on creating a competitive edge built on continual research and innovation across product suites.
- **Manufacturing:** Advanced Enzymes has built 9 state-of-the-art production facilities with varied specialized capabilities globally to cater to its customers worldwide.
- **Marketing & Distribution:** Its subsidiaries are engaged in promoting and marketing products of advanced enzymes. It is working towards expanding its sales and marketing team in the U.S., MENA, and Asian markets. It intends to expand its geographical reach and distribution network by appointing more distributors in foreign markets.

**Essential Business Strategy:** The company promotes Innovation, Expansion, and Acquisition.

- **Innovation:** The Company continually invests in R&D to identify product gaps and develop new solutions. It also focuses on expanding competencies in enzymes and probiotics.
- **Expansion:** It tries to broaden its geographical presence of manufacturing capabilities and product suite through a continual focus on innovation and focusing on high-return applications with strategic advantages. It also leverages strategic partnerships to focus on key markets.
- **Acquire:** Advanced Enzymes believes in inorganic expansion and has had a successful history of acquiring technologies and foray into new market segments leveraging client relationships in focus markets. It acquired a 51% stake in SciTech Specialities Pvt. Ltd. in 2021, establishing a specialized manufacturing segment.

## Michael Porter 5 Force Analysis

### 1. Barriers to Entry-

- Stringent Compliance Requirements: Enzymes, typically, is a significantly regulated industry with several requisite compliances and specifications. Companies in the industry must spend significant resources to adhere to the dynamic law and compliances in all operating markets.
- Robust R&D: In order to continually pivot towards the dynamic needs of end customers, achieve cost minimization, and innovate new products to surpass competitors, significant capital and recurring investment in R&D initiatives are required to triumph in the market.
- Integration of Value Chain: Prominent players have invested for several years to attain integration across the value chain to propel innovation and cost efficiency. New entrants would have to invest in varied resources for years to attain the same, which resists further participation.

### 2. Bargaining Power of Suppliers-

- The industry is accompanied by sticky customers who do not prefer switching among suppliers, which gives an advantage to the suppliers who provide quality enzyme solutions. Thus, the bargaining power rests with the suppliers.

### 3. Bargaining Power of Buyers-

- The industry is accompanied by buyers having a sticky nature resisting switching. Also, there are few players providing quality, cost-effective products across sectors. Therefore, the bargaining power of buyers tends to be restricted.

### 4. Rivalry Among Competitors-

- With several domestic and multinational companies battling for market share, the Indian food enzyme market is highly competitive. Increased competition forces companies to spend more on R&D, innovation, and cost efficiency, dampening profitability.

### 5. Threat of Substitutes-

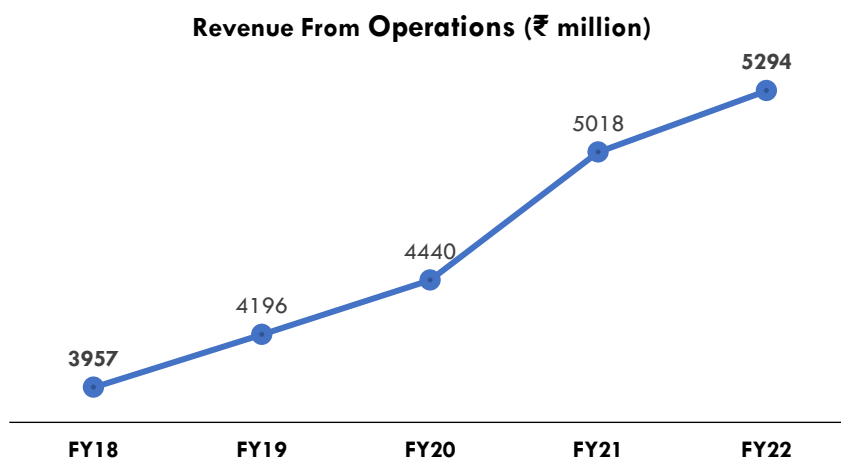
- The company possesses a robust R&D establishment and an expansive product portfolio catering to various global markets and end customers. The company also continually focuses on expanding through both organic and inorganic routes to leverage strategic synergies. Thus, the company undertakes adequate efforts to limit the threat of substitutes which is relatively low in the industry.



## Financial Analysis

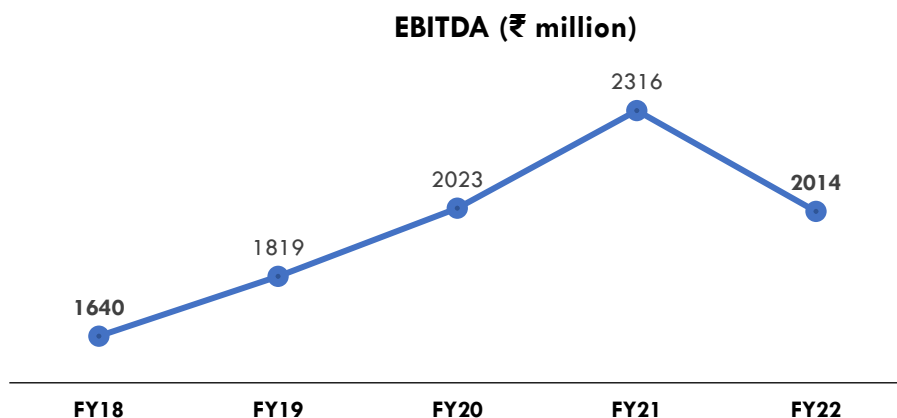
**Steady Revenue Growth:** Operating revenue rose 5.5% % from ₹5,018 million to ₹5,294 million in FY22 on a consolidated basis. The major contributor to the growth was the Animal Nutrition vertical which registered a 11% YoY increase in revenue from ₹475 million to ₹560 million. In FY22, international sales' contribution to total revenue increased to 56% from 54% in FY2021.

Another prominent contributor was the recent acquisition of SciTech Specialities Pvt. Ltd., which now contributes ~9% of the total revenue, increasing from ₹79 million to ₹470 million. SciTech adds a new revenue stream of specialized manufacturing solutions with Nutraceutical, Pharmaceutical, Bakery, Washing solutions, and other Speciality products.



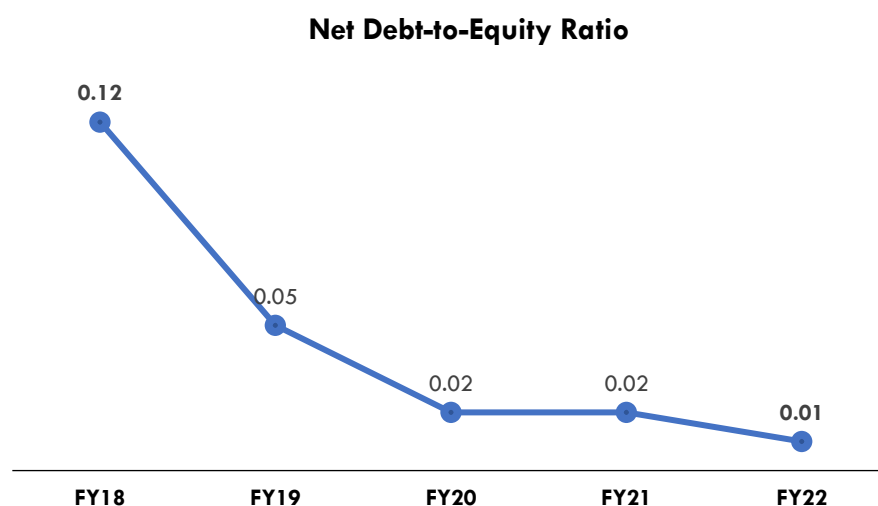
Source: Leveraged Growth

**EBITDA Degrowth:** EBITDA witnessed a decline of 13% to ₹2014 million in FY22 from ₹2316 million in FY2021. This was the foremost YoY decline in EBITDA registered by Advanced Enzymes in the previous five years, owing to increased input costs impacted by rising raw material prices. Operating costs have also recently expanded, adversely affecting the company's EBITDA. Key contributors to this degrowth include increasing employee benefits and power and fuel expenses.



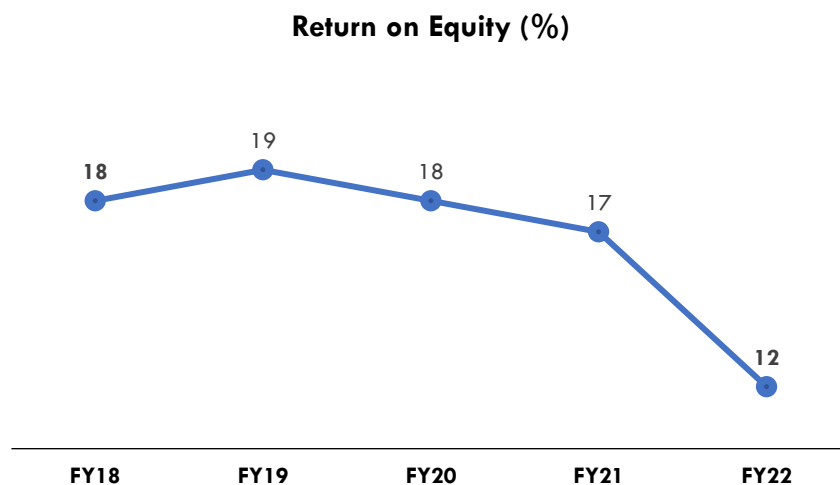
Source: Leveraged Growth

**Negligible Debt to Equity Ratio:** The company boasts a robust balance sheet with a nominal Debt to Equity ratio of 0.01 in FY22 showing a YoY variation of ~82%, indicating that all entity operations are funded using internal accruals. The ratio has witnessed a steady decline in the previous five years from an already healthy ratio of 0.12 in FY18. The company has repaid earlier borrowings, not listed new debt securities, or taken new loans. During the past five years, the company has used internal accruals to fuel three successful acquisitions maintaining a near-zero debt stance. The Company monitors funding options available in the debt and capital markets to preserve financial flexibility.



Source: Leveraged Growth

**Return on Equity:** The Return on Equity had previously maintained stability at 17-19% during 2018-2021 until it plummeted to 12% in FY22. This is primarily because of reduced profit margin, asset turnover, and leverage ratio. The company's fall in the Debt-to-Equity ratio has also impacted declining ROE. Advanced Enzymes' insignificant leverage indicates that the RoE is generated through the efficient use of assets and profitability rather than financial leverage.



Source: Leveraged Growth

## Environmental, Social, and Governance

### Environmental

#### Sustainable Innovation

Advanced Enzymes continually invests in research and development initiatives that lead to developing environment-friendly products and solutions. The company offers a diverse range of biodegradable products, which is the cornerstone of its environment-friendly stance. It is a zero-liquid discharge company invested in replacing harmful chemicals with efficient green solutions.

### Social

#### Community Development

The company emphasizes sustainable livelihood with initiatives including skill development, care of the differently abled, and rural development. It also contributed to constructing premises focused on education and skill development. It provides organic fertilizers to farmers in Nashik and Nagar districts through Laxminarayan Rathi Bahuuddeshiya Seva Sanstha.

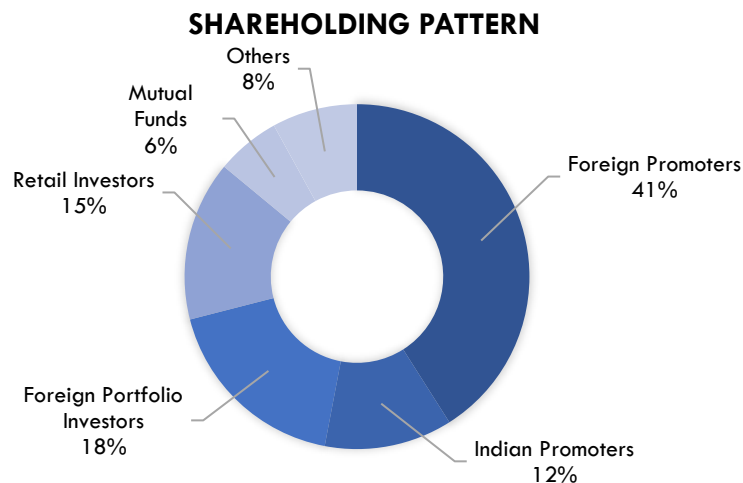
#### Covid assistance

During the pandemic, the company contributed to the PM Cares Fund and extended support by providing ventilators and oxygen concentrators care centers in Nashik.

### Governance

The board's composition complies with the requirements of the SEBI Listing Regulations 2015. As of March 2022, the board comprised nine directors with one executive director and eight non-executive directors, out of which five were independent directors (including one woman independent director).

The shareholding pattern of Advanced Enzymes has witnessed a change in FY22. The Foreign portfolio investor's holding rose to 18.01% from 16.79%. Mutual funds reduced their holdings from 7.29% to 6.46% in FY22. The company declared a final dividend of 50% (₹1/- per Equity Share of face value of ₹2/- each) for FY22, amassing to about ₹111.8 million, an 11% increase in comparison to the previous year.



Source: Leveraged Growth

## Risk Analysis

**Concentration Risk:** In FY22, ~28% of the consolidated revenue is derived from the top 10 customers, which builds a substantial concentration risk. Demand plunges from these customers could adversely impact the topline, hitting the company's financial condition. Widening its customer base to over 700 customers across 45 countries has been a prominent step to de-risk the organization.

**Currency Risk:** With ~56% of revenue from operations accruing to international markets in the latest financial year, the company is exposed to currency risk. Rupee appreciation against foreign currencies depreciates the foreign receivables in rupee terms. The company uses derivative instruments to mitigate such risks. It uses derivative instruments, including forward contracts to hedge against foreign exchange fluctuations. These contracts are not used for speculative motives and are governed by the board.

**Compliance Risk:** Stringent regulations and specifications in domestic and foreign markets are a considerable risk since any violation could result in product recalls, customer cancellations, and legal action. These actions could hurt the company's branding and financial performance.

**Competition Risk:** Sales of the company's offerings are bound to be hit by new entrants providing homogeneous products. New entrants would bring industry-wide pricing pressures, forcing declining margins and increased expenditure toward R&D initiatives, product promotion, and brand building. The company relies on robust product quality and continual innovation to triumph over competitors.

## COVID-19 Impact

COVID-19, the defining event of 2020 with its impact spilling over multiple years, has impacted businesses due to the stringent pandemic restrictions. The resurgence of the crisis post-dampening in the latter half of 2020 added deepened burden on market participants. Regardless of the crisis, the company registered a resilient performance.

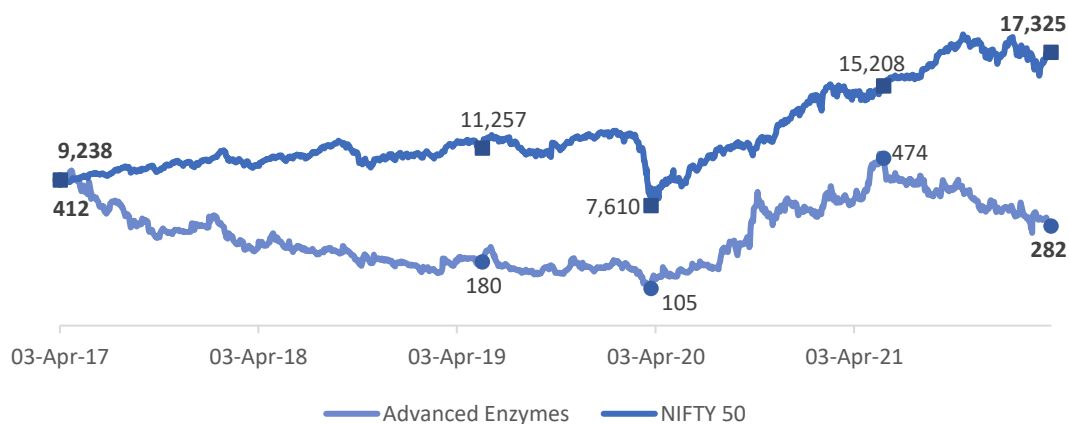
The demand for nutraceuticals & functional foods observed an upward rush owed to immunity-boosting supplements during the pandemic. Additionally, the rising use of digestive and dietary supplements coupled with widening awareness among consumers assisted the company in maintaining its competitive stance in the market. The pandemic was a demand tailwind for the probiotics vertical, witnessing a surge in immunity-enhancing solutions. It highlighted the importance of nutraceuticals as a preventive cure, whose demand is expected to surge in forthcoming years.

Although enzyme development is a continuous process, halts were witnessed owing to a lack of clarity on operational guidelines. The pandemic impacted industries dependent on enzyme consumption, adversely affecting Advanced Enzymes.

## Endnote

The business environment is expected to witness easing logistics challenges and input cost inflation. Demand for enzymes and probiotics solutions seems to rise on the grounds of expanding awareness in several countries. The company has over 20 products in the pipeline, which it intends to introduce in the near term across domestic and international markets. The company plans to expand the sales team in the U.S., MENA, and Asian markets and increase promotional expenses. Although the demand for the untapped probiotic market is expected to widen in the foreseeable future, the company's EBITDA declined for the first time in five years. The RoE has also decreased from 17% to 12% in FY22. Thus, given these diverse inferences, will Advanced Enzymes be able to accomplish its expansion strategies and upsurge market share?

### Advanced Enzymes Vs. NIFTY 50



Source: Leveraged Growth

Disclaimer: The report and information contained herein is strictly confidential and meant solely for the selected recipient and may not be altered in any way, transmitted to, copied or distributed, in part or in whole, to any other person or to the media or reproduced in any form, without prior written consent. This report and information herein is solely for informational purpose and may not be used or considered as an offer document or solicitation of offer to buy or sell or subscribe for securities or other financial instruments. Nothing in this report constitutes investment, legal, accounting and tax advice or a representation that any investment or strategy is suitable or appropriate to your specific circumstances. The securities discussed and opinions expressed in this report may not be suitable for all investors, who must make their own investment decisions, based on their own investment objectives, financial positions and needs of specific recipient. This may not be taken in substitution for the exercise of independent judgment by any recipient. Each recipient of this document should make such investigations as it deems necessary to arrive at an independent evaluation of an investment in the securities of companies referred to in this document (including the merits and risks involved), and should consult its own advisors to determine the merits and risks of such an investment. The investment discussed or views expressed may not be suitable for all investors. Certain transactions -including those involving futures, options, another derivative product as well as non-investment grade securities – involve substantial risk and are not suitable for all investors. No representation or warranty, express or implied, is made as to the accuracy, completeness or fairness of the information and opinions contained in this document. The Disclosures of Interest Statement incorporated in this document is provided solely to enhance the transparency and should not be treated as endorsement of the views expressed in the report. This information is subject to change without any prior notice. The company reserves the right to make modifications and alternations to this statement as may be required from time to time without any prior approval. Leveraged growth, its associates, their directors and the employees may from time to time, effect or have affected an own account transaction

in, or deal as principal or agent in or for the securities mentioned in this document. They may perform or seek to perform investment banking or other services for, or solicit investment banking or other business from, any company referred to in this report. Each of these entities functions as a separate, distinct and independent of each other. The recipient should take this into account before interpreting the document. This report has been prepared on the basis of information that is already available in publicly accessible media or developed through analysis of Leveraged Growth. The views expressed are those of the analyst, and the company may or may not subscribe to all the views expressed therein. This document is being supplied to you solely for your information and may not be reproduced, redistributed or passed on, directly or indirectly, to any other person or published, copied, in whole or in part, for any purpose. This report is not directed or intended for distribution to, or use by, any person or entity who is a citizen or resident of or located in any locality, state, Country or other jurisdiction, where such distribution, publication, availability or use would be contrary to law, regulation or which would subject Leveraged Growth to any registration or licensing requirement within such jurisdiction. The securities described herein may or may not be eligible for sale in all jurisdictions or to certain category of investors. Persons in whose possession this document may come are required to inform themselves of and to observe such restriction. Neither the Firm, not its directors, employees, agents or representatives shall be liable for any damages whether direct or indirect, incidental, special or consequential including lost revenue or lost profits that may arise from or in connection with the use of the information. The person accessing this information specifically agrees to exempt Leveraged Growth or any of its affiliates or employees from, any and all responsibility/liability arising from such misuse and agrees not to hold Leveraged Growth or any of its affiliates or employees responsible for any such misuse and further agrees to hold Leveraged Growth or any of its affiliates or employees free and harmless from all losses, costs, damages, expenses that may be suffered by the person accessing this information due to any errors and delays.