Advanced Enzyme Technologies

IPO Note – Potential Priced in

Advanced Enzyme Technologies (AET) is the second largest enzyme company in India and amongst the Top 15 global enzyme companies with a market share of ~0.9%. The company is engaged in research & development, manufacturing and marketing of 400+ proprietary products developed from 60 indigenous enzymes.

Specialized business with high entry barriers: The global enzyme industry is dominated by few players with the top 3 players (Denmark based Novozymes, US based DuPont and Netherlands based DSM) accounting for ~75% of market share. Among them Novozymes is the only company with a pure play approach on enzymes and has an estimated market share of 48%. AET is a marginal player in the global enzyme market with a market share of ~0.9% but we believe it has lots to potential to grow and garner a higher market share.

Robust ROE driven by high margins: While AET posted a CAGR of only 14.4% in sales during FY2012-16, it reported a strong EBITDA CAGR of 22.1% during the same period, thus aiding a net profit CAGR of 23.9%. The performance came on the back of improved fixed asset turnover and improvement in margins. Thus, the company earns a healthy ROE and stable cash flows. For FY2016, the company reported a Return on Net worth (RONW) of 32.1%.

Outlook and Valuation: AET is the second largest player in the Indian enzyme industry. Given the Management experience in the industry and the Indian cost advantage, we believe that the company can post robust growth going forward. AET has reported a strong CAGR of 23.9% in net profit in-spite of the 14.4% CAGR in sales during FY2012-16, helped by high entry barriers, which also enables the company to get high margins. However, we believe that the company's scale of operations is small in comparison to its global peers and its business is dependent on few products. At ₹880-896/share, which is the lower and upper end of the offer price band, the company is available at ~6.1-6.2x it's FY2017E P/BV. We believe the price fully discounts all the positives. Thus, we recommend a neutral view on the issue.

Key Financials

Y/E March (₹ cr)	FY2013	FY2014	FY2015	FY2016
Net Sales	220	240	223	294
% chg	*28.4*	*8.7*	*(6.8)*	*31.7*
Adj. Net Profit	49	74	50	79
% chg	*47.4*	*50.7*	*(32.2)*	*56.4*
EPS (₹)	22.5	33.9	23.0	36.0
EBITDA Margin (%)	40.6	43.3	40.7	47.1
P/E (x)	39.8	26.4	38.9	24.9
RoE (%)	38.1	45.1	26.7	32.1
RoCE (%)	27.9	34.7	28.9	38.1
P/BV (x)	11.8	11.5	9.1	6.9
EV/Sales (x)	9.2	8.3	8.8	6.5
EV/EBITDA (x)	22.7	19.3	21.5	13.8

Source: Company, Angel Research; Note: The valuations are on the higher price band

NEUTRAL

Issue Open: July 20, 2016
Issue Close: July 22, 2016

Issue Details
Face Value: ₹10
Present Eq. Paid up Capital: ₹21.8cr
Issuse details: ₹50cr fresh capital , OFS: up to 4,034,470 shares
Post Eq. Paid up Capital: ₹22.3cr
Market Lot: 16 Shares
Issue (amount): ₹405-411cr
Price Band: ₹880-896
Post-issue implied mkt. cap ₹1,962cr*-1,998cr**

*Note:*at Lower price band and **Upper price band*

Book Building	
QIBs	50%
Non-Institutional	15%
Retail	35%

Post Issue Shareholding Pattern(%)	
Promoters Group	84.6
MF/Banks/Indian FIs/FIIs/Public & Others	15.4

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Company background

Advanced Enzyme Technologies (AET) is the second largest enzyme company in India and amongst the Top 15 global enzyme companies with a market share of ~0.9%. AET is engaged in the research & development, manufacturing and marketing of 400+ proprietary products developed from 60 indigenous enzymes.

The company has fermentation experience of more than two decades in the production of enzymes. It sells these products to more than 700 global customers, spanning 50 countries. The company has the capability to manufacture enzymes using all the four natural origins, viz plant, animal, bacterial and fungal. Its major focus is on developing enzymes through microbial fermentation.

Its Promoters Mr. Chandrakant Laxminarayan Rathi and Mr. Vasant Laxminarayan Rathi have a cumulative experience of more than seven decades in the global enzyme industry.

The company is operating in two primary business verticals-Healthcare & Nutrition (human and animal) (88% of FY2016 sales) and Bio-Processing (food and non-food) (12% of FY2016 sales). The company supplies value-added and eco-safe enzyme products to diverse end-user industries like human healthcare & nutrition, animal nutrition, food processing, baking, dairy & cheese processing, fruit & vegetable processing, cereal extraction, brewing, grain processing, protein processing, oil & fat processing, biomass processing, textile processing, leather processing, paper & pulp processing, bio-fuels, bio-catalysis etc.

Issue details

AET is coming out with an initial public offering (IPO) of 0.459-0.460cr equity shares (of which offer for sale comprises 0.403cr shares) with a face value of ₹10 each. The issue is priced at ₹880-896/share. The company intends to raise ₹50cr in fresh capital while the remaining ₹361cr is offer for sale. Of the fresh capital rising, ₹50cr will be used for the repayment of certain loans availed by Advanced Enzyme USA, its wholly-owned subsidiary.

After deducting the offer related expenses in relation to the fresh Issue, the company proposes to utilize the funds towards the following objects:

1. Investment in Advanced Enzymes USA, the company's wholly owned subsidiary, for repayment / pre-payment of certain loans availed by Advanced Enzymes USA (₹50cr).

and

2. General Corporate Purposes.

Exhibit 1: Shareholding pattern

Particulars	Pre-Issue		Post-Issue	
	No. of shares	(%)	No. of shares	(%)
Promoter group	17,549,000	80.5	14,829,500	66.5
Others	4,251,000	19.5	7,470,500	33.5
Total	**21,800,000**	**100.0**	**22,300,000**	**100.0**

Source: Company, Angel Research

Industry

Enzymes are sustainable alternatives to hazardous chemicals used in many industrial bio-chemical processes. Enzymatic processes can occur under moderate conditions, including normal temperature and with minimal use of water, leading to reduced energy consumption and elimination of costs associated with maintaining extreme environments - necessary for many chemical-led reactions. This decline in energy consumption also benefits the environment by reducing greenhouse gas emissions.

As chemical-induced reactions lack specificity, they are required in larger volumes and can lead to toxic by-products which are difficult to dispose off. On the other hand, since enzymes react specifically and are biodegradable, they are required in smaller amounts and minimise the production of toxic by-products. In fact, some enzymatic reactions create end-products which can be treated and used as fertilisers.

Thus, replacing chemicals with industrial enzymes can lead to cost and time savings for manufacturers and can help them comply with various environmental norms. With higher emphasis on energy conservation and more stringent environmental laws, enzyme demand from various industries is likely to witness rapid growth. The global enzyme market stood at US$5.1bn in 2012 of which industrial enzymes constituted ~US$3.6bn or ~71%, with the rest ~29% being contributed by specialty enzymes. Going forward, the global enzyme demand is expected to experience broad-based growth led by strong demand across all enzyme types, with market growing by 6.3% every year to $7.0bn in 2017 from $5.1bn in 2012. The market is further expected to grow at a 5-year CAGR of 6.5% after 2017, reaching a size of $9.5bn by 2022.

Through this period, the growth in the global enzyme demand is expected to be led by specialty enzymes, including diagnostic and research and biotechnology enzymes, as well as biocatalysts and increasing penetration of enzymes into their potential applications in developing countries. Moreover, falling costs of DNA manipulation and sequencing, will act as a demand driver allowing for rising use of enzymes in research and biotechnology and diagnostic applications.

On the other hand, the industrial enzyme market will see modest growth as high growth in animal feed, food and beverage and cleaning products market will be partially offset by leveling off of grain-based bio-fuel production and challenging environment for various technical applications such as starch processing, textile and leather production. The animal feed and food & beverage enzymes will experience above-average growth in demand benefitting from the expansion of the middle class population in rapidly developing economies, which will fuel increased meat consumption and adoption of more western-style diets. Further, the environmental benefits of enzyme use, such as reduced wastewater production and energy use, provides room to further boost the industrial enzyme market.

Thus, the share of industrial enzymes is expected to gradually reduce from ~70.8% in 2012 to 68.5% in 2017 to 66.3% in 2022, while the share of specialty enzymes is expected to gradually increase from ~29.2% in 2012 to ~31.5% in 2017 and to ~33.7% in 2022, on account of the relatively stronger potential growth of specialty enzymes over the next few years.

Industrial enzymes constitute the larger portion of the world enzyme demand accounting for ~$US3.6bn, or ~70.8% in 2012. The global demand for industrial enzymes is expected to grow at a 5-year CAGR of 5.6% to reach ~US$4.8bn in 2017 and 10-year CAGR of 5.7%, to reach a size of US$6.3bn by 2022. The strongest demand for industrial enzymes shall be experienced in the sub-segments of food and beverages and animal feed.

World demand for specialty enzymes will grow by a strong 7.9% per annum to $2.2bn in 2017. Growth will be fairly robust in all markets, with the fastest gains in the diagnostics and research and biotechnology markets. The ongoing demographic shift toward older populaces in developed countries will also support higher diagnostic enzyme demand. Research and biotechnology will continue to benefit from robust investment in the biotechnology sector at both the corporate and national levels. On a geographic basis, growth will be in Central and South America, and the Asia / Pacific and Africa / Mideast regions as strong economic growth and rising disposable incomes boost demand for improved health care, and as pharmaceutical and other fine chemical companies increasingly turn to Brazil, China and India for contract manufacturing solutions.

North America dominates the global enzyme market accounting for ~41.5% of the global enzyme demand in 2012, implying a market size of $2.1bn. Western Europe, Asia Pacific and other regional markets (which include Central & South America, Eastern Europe and Africa / Mideast) accounted for 21.2%, 21.6% and 15.7% of the global enzyme market in 2012. However, even by 2022, North America shall continue to be the largest regional market, accounting for ~34.8% of the global enzyme demand, with the Asia Pacific region, Western Europe and other regional markets accounting for ~18.1%, ~29.2% and ~18.0% of the market size respectively. Demand for enzymes in Eastern Europe is also expected to be above average. The Indian enzyme market is expected to grow from US$105mn in 2015 to US$279mn in 2022 at a CAGR of 15.0%.

Key investment rational

Specialized business with high entry barriers

The enzyme industry is very concentrated and consists of very few players like Biocon in the domestic market and foreign MNCs like Novozymes, DSM Nutritional Products and DuPont Danisco. According to our research, Top 3 players (Denmark based Novozymes, US based DuPont and Netherlands based DSM) account for ~75% market share, with Novozymes being the only company with a pure play approach to enzymes, having an estimated market share of 48%.

The industry structure is concentrated because manufacturing of enzymes, enzyme products and enzyme solutions requires specialised knowledge of enzyme fermentation and the diverse end-user industries. Technical and niche nature of the business, heavy reliance on R&D and dearth of qualified professionals (with experience in enzyme & biotechnology industry) act as entry barriers to new players. As a result, the enzyme industry has very few players and the top players account for a significant portion of the global market share.

AET, being one of the Indian players run by technocrats in the industry, has the potential to garner market share in the industry. Currently the company, with a global market share of ~0.9% is a marginal player and hence has lots to scope to grow. In India, though the market is relatively small at around US$105mn (in 2015), the company is the second largest enzyme company in India.

Fully integrated with presence across the enzyme value chain

AET is an integrated company with presence across the enzyme value chain, covering the entire range of activities - from R&D, commercial scale manufacturing, to marketing of enzyme products. It also delivers customized enzyme solutions, which helps the company to remain cost-competitive besides ensuring end-to-end quality control (resulting in superior products). The company's business model is designed to capture opportunities arising from global megatrends by combining strong production capabilities with application of expertise and local delivery.

AET has invested significant resources in the R&D of various enzymes, proprietary enzyme products and customized enzyme solutions since inception. In the fiscal years of 2016, 2015 and 2014 on a standalone basis, the company spent ~5.8%, 7.2% and 5.9%, respectively on R&D activities. Currently, the company has four R&D facilities located at Thane, Sinnar and Chino (California, USA). These R&D facilities are supported by a team of 55+ members comprising scientists, microbiologists, engineers, food technologists and biotechnologists.

It is one of the leading enzyme manufacturers globally with fermentation capacity of 360 cubic meters. It has six geographically diversified manufacturing facilities. Its manufacturing facilities are flexible and multi-purpose in nature, and are capable of developing quality enzyme products & solutions with varying batch sizes (customized to meet clients' requirements). The large production capacities, coupled with a globally competitive cost base, have enabled the company to develop new enzymes, enzyme products and customized solutions across business verticals for the domestic as well as international markets.

Diversified product portfolio and wide customer base

AET has a diversified product portfolio, catering to various verticals and end-user industries with more than 400 proprietary enzyme products developed from 60 enzymes. The company has a wide presence in healthcare & nutrition and bio-processing verticals, and caters to some of the leading companies such as Sanofi India, Cipla, etc. Its top 10 customers accounted for less than 40% of total revenues on a consolidated basis in FY2016. The company offers these products to its global clientele of more than 700 customers spanning presence across 50 countries worldwide. In terms of geographical presence, USA, India, Asia (ex-India), Europe and other geographies (ex-India and USA) accounted for 54.9%, 36.4%, 3.6%, 3.8% and 1.2% of total revenues, respectively in FY2016.

Robust ROEs driven by high margins

While AET has posted sales CAGR of only 14.4% during FY2012-16, it reported a strong EBITDA CAGR of 22.1% during the same period, thus aiding the net profit to post a CAGR of 23.9%. This was on back of improved fixed asset turnover (FTA) (from 1.6x in FY2012 to 2.4x in FY2016) and improvement in margins (OPM of 36.2% in FY2012 to 47.1% in FY2016). Thus, the company earns healthy ROEs and stable cash flows. During FY2016, the company reported Return on Net worth (RONW) of 32.1%. This has also led to an improvement in its long-term borrowings–to-equity ratio to 0.04x in FY2016 from 1.4x in FY2012.

Valuation

AET is the second largest player in the Indian enzyme industry. Given the Management experience in the industry and the Indian cost advantage, we believe that the company can post robust growth going forward. AET has reported a strong CAGR of 23.9% in net profit in-spite of the 14.4% CAGR in sales during FY2012-16, helped by high entry barriers, which also enables the company to get high margins.

We believe that the company's scale of operations is very small in comparison to its global peers and is dependent on few people (especially on the R&D front, which is critical for the business) and few products for sustaining its business. In addition, the impending Chinese competition could pose a threat to the company's profitability. Further at ₹880-896/share, which is the lower and upper end of the offer price band, the company is available at ~6.1-6.2x its FY2017E P/BV, which we believe fully discounts all the positives. **Thus, we recommend a neutral on the issue.**

Risks

- AET derives a significant portion of its revenues from exports and is exposed to foreign currency fluctuations. In FY2016, around 63.5% of its revenues came from international operations.
- The company has not entered into any long-term or definitive agreements with its customers. If customers choose not to source their requirements from AT then it could impact its business and financials.
- The company gets less than 40% of its total revenues from its top 10 customers. The company doesn't enter into any long term contracts, and loss of any client could impact its sales.
- The company has been significantly dependent on sales of its top five product groups. For the six months period ended September 30, 2015, these top five product groups accounted for 39.6% of its total revenues. Any reduction or discontinuation in demand or a temporary or permanent discontinuation in manufacturing of these product groups would have a material adverse effect on its business, prospects, financial condition and operations. Further, introduction of similar products by its competitors in future could also adversely affect its business, prospects, financial condition and results of operations.
- Any change in government policy or introduction of new legislation or amendment to the existing regulation or any adverse event as a result of which customers are adversely affected, or company have to incur additional compliance costs; will have a material adverse impact on its business, financial conditions and results of operations.
- Environmental issues, including climate changes impact & influence the global enzyme markets significantly. Enzymes are affected by a number of environmental issues, both at the production and consumption level, which may adversely affect its enzyme production and the end product quality, thus affecting its business and results of operations.
- Any delay in the grant of approvals for new products, or any withdrawal of approval for existing products would adversely affect our results of operations.
- During FY2014, there was an exceptional item of ₹53.16cr, reported by the company. Some of the consignments of goods of enzymes sold by the company were reported to have potential contamination. Hence, during the second half of FY2014, the company had done voluntary recall of those specific lots and got goods returned back from some of its customers. Accordingly, the group had to charge a one time inventory write off, settle claims of some of the customers and incur certain expenses related to recall. Thus, such events given the size of the company can impact the financials of the company significantly.
- Currently, the global enzyme industry is highly concentrated; increased competition from low cost producers from countries like India or China (especially in the feed and technical industries) could impact business. The

competition is further intensified by Chinese enzyme manufacturers exploring overseas markets.

- Company's promoters Mr. Chandrakant Laxminarayan Rathi and Mr. Vasant Laxminarayan Rathi have a cumulative experience of more than seven decades in the enzymes industry. According to the draft, company depends on the management skills and guidance of its promoters for development of business strategies, monitoring its successful implementation and meeting future challenges. Its promoters, along with its key managerial personnel, who form an integral part of its company, have over the years built relations with suppliers, customers and other key stakeholders associated with the company. Thus according to the company, its future performance will depend largely on its ability to retain the continued service of its management team. According to the company, if one of its key managerial personnel are unable or unwilling to continue in his/ her present position, it could be difficult for them to find a suitable or timely replacement and its business could be adversely affected.

Consolidated Profit & Loss Statement

Y/E March (₹ cr)	FY2012	FY2013	FY2014	FY2015	FY2016
Gross sales	172	220	240	223	294
Less: Excise duty	-	-	-	-	-
Net sales	172	220	240	223	294
Other operating income	3.1	3.7	1.0	1.2	0.9
Total operating income	**175**	**224**	**241**	**224**	**295**
% chg	*45.4*	*28.2*	*7.3*	*(6.7)*	*31.4*
Total expenditure	110	131	136	132	156
EBITDA	**62**	**90**	**104**	**91**	**138**
% chg		*43.9*	*16.0*	*(12.4)*	*52.1*
(% of Net Sales)	*36.2*	*40.6*	*43.3*	*40.7*	*47.1*
Depreciation& amortisation	6	8	10	9	9
Interest & other charges	12	10	13	9	8
Other income	-	-	-	-	-
(% of PBT)	-	-	-	-	-
Share in profit of Associates	-	-	-	-	-
Recurring PBT	**48**	**76**	**82**	**74**	**123**
% chg					
Extraordinary expense/(Inc.)	-	-	54	-	-
PBT (reported)	**48**	**76**	**28**	**74**	**123**
Tax	14.0	25.9	6.4	22.8	43.2
(% of PBT)	*30.6*	*32.7*	*32.0*	*30.9*	*35.2*
PAT (reported)	**34**	**50**	**21**	**51**	**79**
Add: Share of earnings of asso.	-	-	-	-	-
Less: Minority interest (MI)	0	1	1	1	1
Prior period items	-	-	-	-	-
PAT after MI (reported)	**33**	**49**	**20**	**50**	**79**
ADJ. PAT	**33**	**49**	**74**	**50**	**79**
% chg		*47.4*	*50.7*	*(32.2)*	*56.4*
(% of Net Sales)	*19.4*	*22.3*	*8.4*	*22.5*	*26.7*
Basic EPS (₹)	**15.3**	**22.5**	**33.9**	**23.0**	**36.0**
Fully Diluted EPS (₹)	**15.3**	**22.5**	**33.9**	**23.0**	**36.0**
% chg		*47.4*	*50.7*	*(32.2)*	*56.4*

Consolidated Balance Sheet

Y/E March (₹ cr)	FY2012	FY2013	FY2014	FY2015	FY2016
SOURCES OF FUNDS					
Equity share capital	21	22	22	22	22
Preference Capital	-	-	-	-	-
Reserves & surplus	75	140	145	188	257
Shareholders funds	**96**	**162**	**166**	**210**	**279**
Minority Interest	1.6	2.4	3.6	4.5	5.4
Total loans	139	117	88	54	39
Deferred tax liability	6	13	13	15	17
Total liabilities	**243**	**294**	**270**	**283**	**340**
APPLICATION OF FUNDS					
Net block	**50**	**116**	**115**	**111**	**112**
Capital work-in-progress	155	171	171	171	171
Goodwill	60	2	4	10	10
Long Term Loans and Adv.	12	14	17	16	18
Investments	0.1	0.1	0.1	0.1	0.1
Current assets	73	94	102	110	140
Cash	5	4	3	4	26
Loans & advances	4	6	7	9	5
Other	63	85	92	96	109
Current liabilities	106	102	138	135	111
Net current assets	**(34)**	**(8)**	**(36)**	**(25)**	**29**
Mis. Exp. not written off	-	-	-	-	-
Total Assets	**243**	**295**	**271**	**283**	**340**

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