

# Investment Thesis:

### High Performance Composites

Dr. Rakesh Kapoor Operating Partner - *Materials Outovation*<sup>®</sup>



#### **Market Overview**

The worldwide composites market is growing at a healthy rate (6.6% CAGR) and expected to reach \$144Bn by 2028 (from \$89Bn in 2021)<sup>1</sup>. The major driver is the need for lighter structures in aerospace, ground transportation, wind energy, and medical devices. However, multifunctional composites (combined structural and electrical properties) are needed for electronics and semiconductor markets especially with the move to 5G communications.

#### **Investment Thesis**

Edgewater is interested in a narrow segment of the market where the highest performing composites are used to address mission critical applications. Such composites are often multi-functional—targeting not only structural properties but also electrical or microwave signal properties and in some cases leveraging advanced coatings (e.g., to enhance anti-microbial behavior in specialty fabrics).

<u>Materials of interest include</u>: a) Carbon fiber composites, ceramic fiber composites, high end glass fiber composites, aramid composites; b) Coatings or surface modifications of fibers to enhance interfacial properties are appreciated; and c) Companies that use additives to the resin (such as graphene) to enhance electrical and thermal properties offer differentiated solutions.

<u>Applications of interest include</u>: a) Aircraft sub-structures—especially external such as fairings, radomes, and pods; flight sub-structures such as rotors; b) Satellite sub-assemblies; c) Space craft sub-structures such as seats, crew capsules, hatches etc; d) Highly differentiated, high performance automotive parts (structural or battery related); e) Composites for healthcare including medical devices and robots; and f) Composites for diagnostic instruments. High end sporting good composites and components for wind energy are also of interest.

Manufacturing processes of interest include: Layup, resin transfer molding, filament winding and others.

<sup>i</sup>Global Composites Market Size, Share & Trends Analysis Report by Product (Carbon, Glass), Manufacturing Process (Layup, Filament, RTM), End Use, Region, and Segment Forecasts, 2021-2028. Grandview Research.

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Edgewater's approach in composites is illustrated with two specific Edgewater portfolio company case studies.

#### Case Study: Fiber Materials Inc (FMI), an Edgewater Portfolio Company (*realized*)

#### **Background of FMI**

- FMI designs and manufactures high temperature composites for defense, aerospace and industrial applications.
- A key differentiator is 3d weaving, which allows for more isotropic composite properties.
- Corporate Carveout from GrafTech International.

#### **Edgewater Improvements**

- Staff management team including CEO, CFO, and Safety Officer. Strengthened commercial function.
- Strengthened the Safety culture—drastically changing the legacy approach.
- Invested in significant headcount increases.
- Leveraged company's technology and capabilities to address the growing market of hypersonics.

#### Case Study: Iten Defense, an Edgewater Portfolio Company (active)

#### Background

- Iten Defense is a leading provider for advanced composites and armor solutions for personal protection, ground vehicles, airplanes and maritime vessels.
- Founders desired an investment partner to support significant growth—while retaining significant ownership interest and leadership roles in the business.

#### **Edgewater Improvements**

- Strengthened management team with a new Executive VP and a new HR Manager.
- Implemented Edgewater's best in class safety program and are actively transforming safety culture.
- Invested in new equipment, new office space, ERP and IT systems.
- Systematically exploring new applications, markets and geographies for growing the company.

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#### **About Edgewater Capital Partners**

Edgewater Capital Partners, headquartered in Cleveland, Ohio, is a sector focused private equity firm investing in lower, middle-market performance materials businesses. We have extensive experience and expertise in niche manufacturers of specialty chemicals, pharmaceuticals, and engineered substances. Twenty years of industry specific investing has allowed us to develop a deep understanding of the complexities and nuances common to performance materials businesses. As a result, we believe expertise in our target markets enables us to quickly and comprehensively understand a company's value proposition, customer relationships, and perceived or misunderstood risks.

### About the *Materials Outovation*® Practice

*Materials Outovation*<sup>®</sup> Practice of ECP focuses on businesses whose core theme for growth relies on leveraging the composition, structure, properties, and processing of materials to provide customized performance in a material or a component for a specific application. Material families of interest include metal, alloys, ceramics, glasses, polymers, composites, adhesives, coatings, cements, concrete, and others. Phrases such as "mission critical", "enabling", "high performance", among others are often used to describe the materials and components produced by companies in this practice.

*Materials Outovation*<sup>®</sup> refers to the systematic process of looking "outside" the organization (at suppliers, consultants, other companies, customers, universities, experts, startups) to find ways of triggering innovation "inside" the organization for new markets, new applications, new customers and new technology – all of which enhances highly profitable growth. The professional networks of our operating partners provide a rich source for industry specific contacts.

The practice aspires to instill in each portfolio company world class business tools including environmental health and safety conscious culture, a lean operational culture inspired by the Toyota Production System and a streamlined supply chain – all in a spirit of continuous improvement, set in a backdrop of highly professional governance practices (adopted from the NACD guidelines).

We encourage a transparent open culture, emphasizing management team and employee empowerment including continually investing in the development of our people.

For more information please contact Rakesh Kapoor at <u>rkapoor@edgewatercapital.com</u> (+1-508-925-0729)

