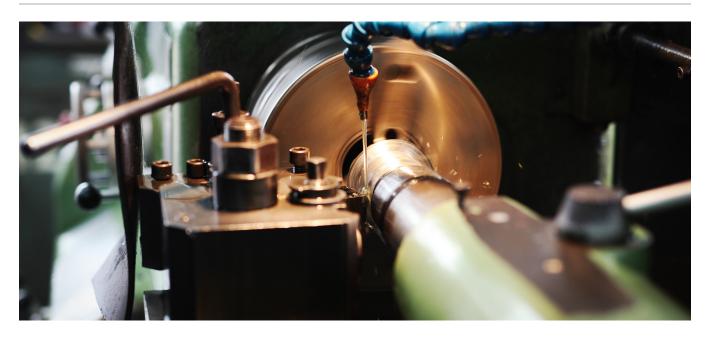


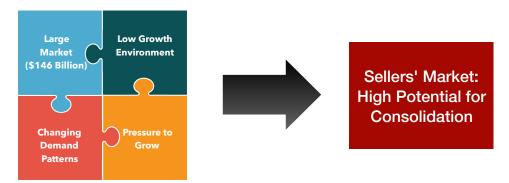
CHEMICALINSIGHTS



Heating Up: Exit Opportunities for Independent Producers in the Consolidating Lubricants and Greases Industry

At Grace Matthews, chemical clients considering a potential sale frequently ask us "what is the M&A outlook for my sector?" For the lubricants and greases industry, a confluence of market conditions: a massive and fragmented sector, low-growth environment and shifting consumer demands, has created an environment ripe for consolidation – a true sellers' market. This has buyers eager to pursue growth by acquisition. In recent years, we've started to see more and more of this consolidation activity occurring. For independent lubricant manufacturers thinking about a future sale, this industry dynamic creates opportunities, but also requires a great deal of preparation to achieve a successful outcome. In this edition of *Chemical Insights*, we provide an overview of some of the key consolidation drivers in the lubricants industry and offer several thoughts on how privately held lubricant and grease producers can best position themselves for a successful transaction.

Figure 1: Sellers' Market: Lubricants Market Factors Contributing to Industry Consolidation



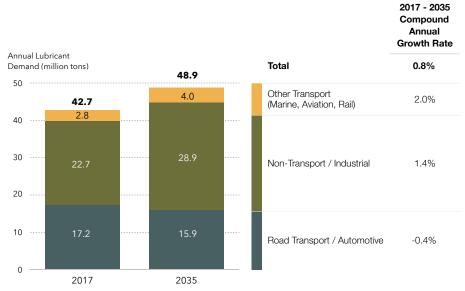


Lubricants Market Dynamics: A Recipe for Consolidation

Of the 17 chemical sectors tracked as part of Grace Matthews' Chemical Index (see page 5), the lubricants industry is one of the largest, with over \$146 billion in sales globally, according to BCC Research. Roughly half of the market consists of a handful of 'major' base oil manufacturers and large self-formulators such as Shell, Chevron, BP / Castrol, ExxonMobil, Fuchs and Quaker Houghton, while the other half consists of hundreds of smaller and medium-sized independent manufacturers. The 'majors' have historically dominated high-volume applications such as passenger car motor oils (PMCOs) where huge economies of scale exist. In contrast, independent manufacturers have found ways to differentiate based on technology and service levels in more specialized applications including industrial lubricants, metalworking fluids, process oils, foodgrade and marine lubricants and specialty greases. Further, independents often exemplify characteristics of the increasingly popular "chemicals as a service" business model, including high-touch, close-to-the-customer relationships and value-added services.

This fragmented market landscape, coupled with long-term demand challenges for automotive lubricants, is contributing to an increase in M&A activity diversifying buyers away from automotive. Manufacturers recognize that electric vehicle adoption, car-sharing, longer oil change intervals for internal combustion engines and regulatory changes will lead to a long-term decline in automotive lubricants demand. This is top of mind for participants throughout the supply chain, including base oil manufacturers, formulators, additive manufacturers and distributors. As illustrated below in Figure 2, a 2018 study by McKinsey & Company predicts that road transport / automotive lubricants volume demand will peak in the next five years, and ultimately decline by 0.4% annually through 2035. In contrast, other markets are expected to grow at 1 – 2% annually over that same time period.

Figure 2: Lubricants Volume Growth to 2035



Source: McKinsey & Company

In light of this outlook, larger lubricants producers are increasingly seeking growth through acquisitions that accelerate entry into markets and technologies that have not historically been a core competency (in other words: non-auto). One example is the \$1.4 billion Quaker / Houghton merger that was initially announced in 2017 and closed in August 2019. In addition to nearly doubling Quaker's revenue, it also provided entry into new markets (e.g., heat treatment, architectural aluminum) and expanded Quaker's presence in more attractive markets (e.g., aerospace). Another example is Yushiro's partnership with QualiChem in 2018. Yushiro, a publicly traded Japanese metalworking fluids manufacturer primarily serving the automotive industry, recognized the need to diversify into other end markets and geographies. In partnering with QualiChem, a company serving a wide range of end markets including aerospace, oil & gas, electronics, medical and automotive, Yushiro was able to immediately gain a foothold in several growing segments. See the case study on page 4 of this newsletter for additional detail.



Strategic buyers are not the only buyers contributing to the consolidation trend. Several private equity firms have been actively and successfully pursuing roll-ups. Two prominent examples in the lubricants distribution space are Reladyne (backed by Audax) and PetroChoice (backed by Golden Gate Capital). With approximately \$1.5 billion in revenue, Cincinnati-based Reladyne has completed an eye-popping 17 acquisitions since being acquired by Audax in 2016, while Fort Washington (PA)-based PetroChoice has followed a similar model, acquiring seven companies since Golden Gate's 2015 investment. Grace Matthews is frequently contacted by private equity funds seeking to build similar platforms in distribution and the broader lubricants value chain.

Staying Ahead of the Curve: Advice for Independent Manufacturers Considering an Exit

Grace Matthews recently attended the Independent Lubricant Manufacturers (ILMA) annual conference in Colorado Springs. Through conversations with dozens of industry leaders, it became apparent that another factor was contributing to the consolidation trend in the industry: more and more private company owners are nearing retirement age and considering options for their business. Given the aggressive nature of the market and myriad options available, many are considering a sale. Yet despite this dynamic, many owners have not given much consideration to succession or exit planning. This prompted Grace Matthews to share the following thoughts on how to prepare for a sale process.

First and foremost: do not ignore the situation. We regularly hear from clients who receive daily calls and emails from potential buyers, all of which they disregard as they delay planning an exit strategy. While this approach may keep owners focused on running their business, it does nothing to resolve the looming topic of exit planning. We have found that the most successful exits are those planned well in advance and begun by completing one simple task: talking to someone. Engaging in that initial conversation with a trusted advisor forces owners to think about what's most important to them in a successful outcome. With each of our clients, we start by defining success (i.e., value, terms, transition dynamics, legacy), and then work backwards to engineer a sale process to meet those objectives.

Next, we recommend taking time to understand the key factors about the business (both positive and negative) that will influence buyer interest in a transaction. With that understanding, sellers can exploit those positives and manage the potential negatives, with the goal to best position the company and create multiple attractive exit options. Below we present several of the most common 'value drivers' and 'marketing challenges' we often see in the chemicals M&A market.

Figure 3: Select Marketing Variables in a Sale Process

VALUE DRIVERS MARKETING CHALLENGES Leading Market Position Strong Brand Recognition Key Man Risk Commodity Price Exposure Stability Management Depth Poor Financial Systems Limited Scale **Proprietary Technologies High Growth Characteristics** Customer/Supplier Concentration Cyclicality Margin Profile **Quality of Financials Environmental Concerns** Business Underperformance

On the 'value drivers' side of the ledger, independent lubricants manufacturers often possess a unique market position or technology portfolio that has helped define their success. A common attribute is the ability to be nimble relative to much larger competitors. Examples of this include rapid innovation cycles that create attractive technology portfolios, value-added services, asset-light business models enabling companies to scale quickly, and high service levels (i.e., "close to the customer") cultivating loyal, tenured customers. We've often found that sellers do not need to look and act like their larger competitors by expanding product lines with 'me-too' products to be attractive to buyers. Instead, successful independents in today's lubricants industry focus on a core segment of the market and outperform the competition in that niche. Acquirers can then accelerate growth by utilizing additional resources such as broader channels to market, enhanced manufacturing capabilities and integrated supply chains.

From a 'marketing challenges' perspective, sellers are better positioned if they can identify and, if possible, address potential risks prior to launching a sale process. These can include key man risk, customer or supplier concentration, commodity price exposure and poor financial systems, to name a few. We think about marketing challenges in two buckets: factors you can control, and those you can't. Key man risk, for example, can be mitigated over time by transitioning



relationships, technical leadership, and general operational control of the company to the next layer of management. Conversely, commodity price exposure is more difficult for an independent producer to address. While the 'majors' often possess integrated supply chains and purchasing power due to scale and can pass along price increases to customers relatively quickly, smaller manufacturers tend to be price takers when raw material prices fluctuate. Going through the exercise of identifying strengths and weaknesses well in advance of a sale process gives owners the time to address variables that can be controlled. Properly positioning and clearly articulating value drivers and marketing challenges will give owners the best opportunity to maximize value and avoid "surprises" late in a process.

Concluding Thoughts

It is an exciting time for lubricants and greases industry participants. The confluence of a large, fragmented competitive landscape, low-growth environment and shifting consumer demands has created an environment ripe for consolidation activity. Larger strategics and private equity consolidators active in the space are under pressure to find ways to grow, and many are increasingly turning to acquisitions of independent manufacturers to meet their objectives. For sellers seeking to maximize their chances of a successful outcome, the advice is simple: Prepare. Talk to an advisor well in advance of a potential sale process, determine what is most important in a successful transaction, work backwards to design a process that will achieve that outcome, and understand the elements of your business that will drive value and those that will create challenges. No two business are alike. Sellers who can demonstrate self-awareness and understand how the market will perceive them will be best positioned to capitalize on the consolidation trend occurring in the lubricants industry.

Preparing for an Exit: A Case Study of QualiChem's Partnership With Yushiro

Established in 1989 with headquarters in Salem, Virginia, QualiChem, Inc. develops and manufactures metalworking fluids and water treatment chemicals. The Metalworking Fluids Division produces next-generation cutting and grinding fluids, straight oils, corrosion preventatives and metal cleaners and is one of the fastest growing metalworking fluids businesses in North America. The Water Treatment Division formulates, blends and private labels chemicals used for the control of scale, corrosion and fouling in cooling towers, boilers and other industrial systems.



Led by 30+ year industry veterans Glenn Frank and Dennis Butts, QualiChem had reached an inflection point. After overseeing a 15+ year period of transformative growth of the company, the owners recognized that it was time to begin preparing for an ownership transition that

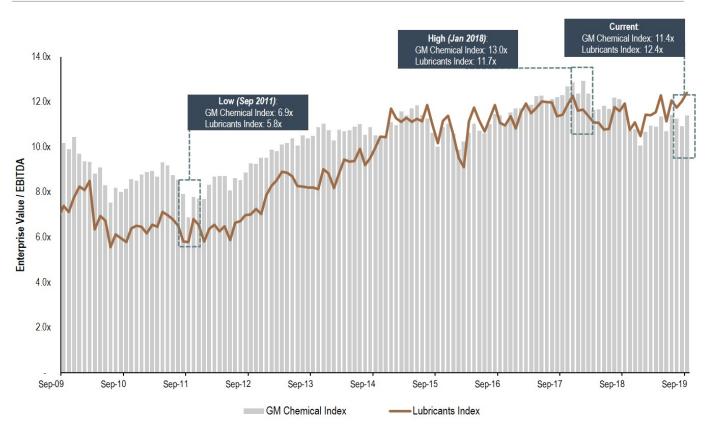
would facilitate the next phase of the company's growth. QualiChem engaged Grace Matthews to identify a partner that would complement its existing capabilities and create opportunities for its distributors, customers, and employees.

Grace Matthews ran a focused auction process, limiting contacts to buyers with a strong strategic fit or an ability to partner with and support existing management to continue growing the business. In 2018, QualiChem chose to partner with Yushiro Chemical Industry Co. Ltd. (TYO: 5013) and its U.S. subsidiary. With global headquarters in Tokyo, Japan and U.S. operations in Shelbyville, IN, Yushiro is a leading global provider of world class metalworking fluids, lubricants, and services for the automotive, aerospace, metals, mining, machinery, die cast, solar, electronics, and glass industries. The partnership provides Yushiro with new channels to market through QualiChem's distributor network as well as a strong platform into new markets beyond Yushiro's core automotive end market expertise.

The partnership represents an excellent outcome for QualiChem, who can leverage Yushiro's extensive R&D capabilities, complementary sales channels and global manufacturing footprint to gain immediate entry into new markets. Additionally, it provides Mr. Frank and Mr. Butts with the opportunity to continue in their existing leadership roles while creating a clear path to their eventual retirement and ensuring the continued success of the company.



Grace Matthews Chemical Index: Enterprise Value / EBITDA (Last 10 Years)



Source: Grace Matthews and Capital IQ

The Grace Matthews Chemical Index tracks the Enterprise Value / EBITDA ratios ("EV/EBITDA multiples" or "EBITDA multiples") of 92 publicly traded chemical companies that span multiple sub-sectors and geographies. The Index aggregates the latest reported financial data and stock prices, and tracks valuation trends and operating metrics across different industry sectors. Index averages are equally weighted, as opposed to weighting by market capitalization.

Select Lubricants Industry Transactions

Transaction values in \$US millions								
Date	Acquirer / Target	Target Description	Enterprise Value	EV / Sales*	EV / EBITDA*			
Aug-19	Altas Partners / DuBois Chemicals	Metal finishing and metalworking solutions, lubricants, and wastewater treatment chemicals	-	-	-			
Aug-19	TOTAL Lubricants Services Automobile / Houghton International (industrial lubricants business)	North American rolling oils business of Houghton	-	-	-			
Jul-19	Croda International / REWITEC	Lubricant additives	-	-	-			
Jul-19	Hillenbrand / Milacron Holdings	Plastics processing equipment and related technologies; transaction included metalworking fluids division CIMCOOL	\$2,051	1.7x	12.9x			
May-19	The Heritage Group / Biosynthetic Technologies	Bio-based synthetic oils for use in lubricants and other industries	-	-	-			
Mar-19	Amalie Oil Co. / Lubricating Specialties Company	Greases and lubricants	-	-	-			
Mar-19	Fuchs Lubricants / Nulon Products	Lubricants, coolants, and additives for the automotive industry	\$12	0.4	-			

^{*} EV = Enterprise Value (equity value, plus funded debt, minority interests and preferred shares, less cash and cash equivalents)



Transaction values in \$US millions								
Date	Acquirer / Target	Target Description	Enterprise Value	EV / Sales*	EV / EBITDA*			
Dec-18	Zhong Hai You Qi (Tai Zhou) Petrochemical Company / China Offshore Bitumen Petrochemical Company	Lubricating and other oils, as well as various services	-	-	-			
Aug-18	Bucher-Motorex Holding / MOTOREX (50% stake held by Fuchs)	Oils and lubricants	\$34	-	-			
Aug-18	Yushiro Manufacturing America / QualiChem	Metalworking fluids	\$57	1.4	-			
Jul-18	Vesco Oil Corporation / Accurate Lubricants & Metalworking Fluids	Lubricants and metalworking fluids	-	-	-			
Jul-18	Fuchs Petrolub / Comercial Pacific (lubricants business, 65% stake)	Lubricants	-	-	-			
Jun-18	Addivant (SK Capital) / SI Group	Chemical intermediates, additives and process solutions	-	-	-			
Apr-18	Exxon Mobil Corporation / PT. Federal Karyatama	Motorcycle lubricant oils	\$436	-	-			
Apr-18	Italmatch / Afton Chemical Corporation (metalworking fluids business)	Metalworking fluids additives and additive packages	-	-	-			
Feb-18	Ipiranga Produtos de Petróleo / Chevron Brasil Lubrificantes	Lubricants, greases, refrigerants, and fluids	-	-	-			
Dec-17	LK Investment Partners / Kukdong Oil & Chemicals (19% stake)	Lubricants, petrochemicals and petroleum	-	-	-			
Dec-17	Maximus Global FZE / Pacific Lubricants (49% stake)	Industrial, specialty and automotive lubricants	-	-	-			
Dec-17	Caltex (Ampol Singapore) / SEAOIL Philippines (20% stake)	Lubricants and fuels	\$575	-	13.6			
Nov-17	Italmatch / Detrex Corporation	Specialty chemicals	\$46	1.1	7.1			
Oct-17	Vertex Resource Group Ltd. / KinetiChem	Specialty chemicals and lubricants	\$5	-	-			
Sep-17	H.I.G. Capital / Vantage Specialty Chemicals	Specialty additives and chemical blends	-	-	-			
Aug-17	Puma Energy / Admore Gas (51% stake)	Refined petroleum products and lubricants	-	-	-			
Jul-17	Pilot Chemical Company / ATRP Solutions	Oilfield chemicals, lubricant additives	-	-	-			
Jun-17	Dubois Chemicals / Bluestar Lubrication Technologies	Metalworking fluids, lubricants, and greases	-	-	-			
Jun-17	Plz Aeroscience / The Penray Companies	Aftermarket chemcials for auto, heavy-duty and marine applications	-	-	-			
May-17	Omnia Group / Umongo Petroleum (90% stake)	Distributes additives, base and process oils	\$56	0.8	8.4			
Apr-17	Quaker / Houghton	Metalworking fluids and services	\$1,414	1.8	11.8			
Apr-17	KMG Chemicals / Flowchem	Drag reducing agents for petroleum pipeline systems	\$495		11.5			
Mar-17	The Jordan Company / DuBois Chemicals	Metalworking fluids, lubricants, and other specialty chemicals	-	-	-			
Jan-17	KMG Chemicals / Sealweld Corporation	Lubricants, sealants, and valve cleaners	\$17	1.4	6.6			
Jan-17	PetroChoice Holdings / Miller Industrial Fluids	Lubricants, metalworking fluids, and other specialty chemicals	-	-	-			
Jan-17	ZSCHIMMER & SCHWARZ / Inolex Chemical	Industrial lubricants	-	-	-			



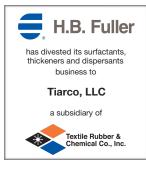
Grace Matthews: Select Chemicals and Materials Transactions







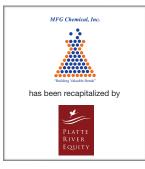


































Grace Matthews Overview

Grace Matthews is recognized globally as a leader in transaction advisory services for manufacturers and distributors throughout the chemical and material value chain. Grace Matthews' clients include privately held businesses, private equity funds, and large, multinational corporations.

Grace Matthews' practice is global in scope, and focuses on several areas: sell-side transactions and divestitures for private companies, private equity holdings, and multinational corporations; buy-side work for large public companies, major multinationals, and sponsor-backed chemical platforms; leveraged transactions and recapitalizations, strategic advisory analysis, and transaction fairness opinions. Areas of expertise include:

- Adhesives, Sealants, Tapes
- Catalysts, Petrochemicals
- Construction Chemicals, Building Products
- Contract Manufacturing, Custom Synthesis
- Distribution, Equipment, Infrastructure
- Food Ingredients, Flavors, Fragrances
- High Purity, Electronic Chemicals
- Industrial Minerals, Inorganic Chemicals

- Intermediates, Industrial Chemicals
- Lubricants, Greases, Metalworking Fluids
- Oilfield & Water Treatment Chemicals
- Paints, Coatings, Inks
- Personal Care, Soaps, Medical Materials
- Plastics, Colorants, Additives
- Tolling, Private Label Products
- Additional Chemical Sectors

Grace Matthews is a privately held investment bank with successful chemical industry transactions dating back to the early 1990s. Grace Matthews principals have completed over 100 transactions involving global corporations. Our team approach is unique in investment banking, with a combination of extensive industrial, financial and M&A experience.

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Grace Matthews, Inc. (www.gracematthews.com) is an investment banking group providing merger, acquisition, and corporate finance advisory services for chemical companies both in the U.S. and internationally. Grace Matthews is global in scope and well known for its strong track record of success dating back to the early 1990s.

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