



## **RICHMAN CHEMICAL INC.**

Custom Manufacturing and Fine Chemical Sourcing

768 N. Bethlehem Pike • Lower Gwynedd, PA 19002 USA

Tel: (215) 628-2946 • Fax: (215) 628-4262 • Web: [www.richmanchemical.com](http://www.richmanchemical.com)

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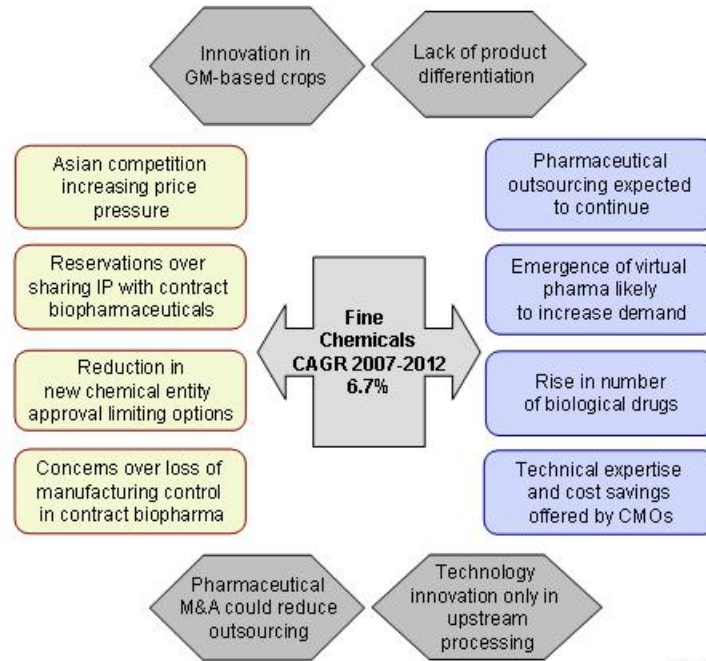
### *Tough Times Do Not Last, Tough Fine Chemicals Market Does*

The North American fine chemicals market is a stable one, and generated revenues of \$13,837.1 million in 2007. It is expected to register a compound annual growth rate (CAGR) of 6.7 percent from 2007 to 2012, to reach revenues of \$17,793.8 million in 2012

Within the North American fine chemicals market, four segments were identified and analyzed in this study:

1. Pharmaceutical Intermediates
2. Active Pharmaceutical Ingredients
3. Contract Biopharmaceutical Manufacturing
4. Agrochemical Intermediates

Chart 1.1  
 Fine Chemicals Market: Industry Economics (North America), 2008



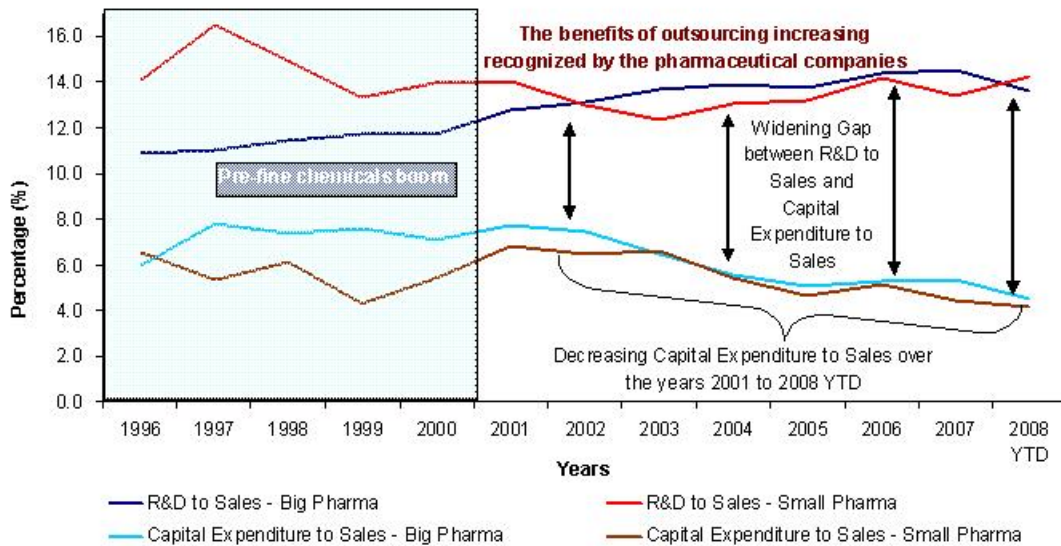
Source: Frost & Sullivan

Chart 1.1 provides a snapshot of the fine chemicals market in 2008.

The fundamental factors which drive the growth of the biofuel market include

- The restructuring of pharmaceutical companies' production is expected to offer considerable benefits to preferred suppliers
- The strong pipeline of biopharmaceutical drugs, along with rising venture capital (VC) investments in the biopharmaceutical industry, are expected to continue to have positive growth implications for the contract biopharmaceutical manufacturing segment
- Strong growth possibilities in agrochemical intermediates as global grain stocks decline to their lowest levels since the 1980s

Chart 1.2  
 Fine Chemicals Market: R&D to sales and the capital expenditure to sales of pharmaceutical  
 Companies, (North America), 2008



Source: Frost & Sullivan & Company Reports

Chart 1.2 presents the R&D to sales and the capital expenditure to sales of pharmaceutical companies in the fine chemicals market in North America from 1996 to June 2008.

In order to map the institutional investors' requirements, the sector scorecard is used. The sector scorecard helps investors identify specific segments within the North American fine chemicals market space, which offer the best match with their specific investment criteria. Frost & Sullivan has identified the estimated growth during the forecast period, the sector consolidation prospects, and the overall attractiveness to institutional investors.

Chart 1.3  
 Fine Chemicals Market: Sector Scorecard (North America), 2008

| Sector                                   | Top 5 companies market share (%) | Top 10 companies market share (%) | Top 20 companies market share (%) | Sector Consolidation Prospects | Attractiveness to Venture Capitalists | Attractiveness to Asset Management | Attractiveness to Private Equity |
|--|----------------------------------|-----------------------------------|-----------------------------------|--------------------------------|---------------------------------------|------------------------------------|----------------------------------|
| Pharmaceutical Intermediates             | 18.0                             | 25.6                              | 33.5                              | High                           | Very Low                              | Very Low                           | Medium                           |
| Active Pharmaceutical Ingredients        | 21.3                             | 32.4                              | 46.6                              | High                           | Very Low                              | Low                                | Medium-High                      |
| Contract Biopharmaceutical Manufacturing | 34.5                             | 43.5                              | 48.7                              | Medium                         | Low                                   | Medium-High                        | Low                              |
| Agrochemical Intermediates               | 31.2                             | 47.3                              | 57.3                              | Medium-High                    | Very Low                              | Very Low                           | Medium-High                      |

Source: Frost & Sullivan

Chart 1.3 shows the sector scorecard for the North American fine chemicals market in 2008.

### **The factors driving consolidation**

#### Pharmaceutical Fine Chemicals

- To benefit from the production restructuring of pharmaceutical companies, fine chemical companies need to have critical mass. Since the pharmaceutical fine chemical market is highly fragmented, to achieve critical mass, a consolidation trend may be witnessed.
- Increasing direct investment by Asian (Indian) companies in the European market to achieve a global presence and acquire blue-chip pharmaceutical customers is propelling consolidation
- Achieving economies of scope and offering a broader product portfolio to pharmaceutical companies are critical. Hence, the trend of M&As is expected to continue.

### Contract Biopharmaceutical Manufacturing

The success of contract biopharma companies largely depends on the outsourcing strategy of biopharmaceutical companies. The latter prefer to outsource bulk orders to a few large companies, rather than to several small companies. As fixed cost structure is very important, it is imperative to have critical mass. Holding a higher market share is expected to enable companies to have more control with respect to cost, due to economies of scale, along with improved efficiency. Hence, these factors could drive consolidation in the contract biopharma segment.

### Agrochemical Intermediates

Agrochemical intermediates is a mature and fragmented market. The market is expected to witness organic growth. However, market experts do not expect any major consolidation activity in this space.

### **Investors' perspective of Fine Chemicals:**

Frost & Sullivan studies the attractiveness of Fine Chemicals to investors in North America. We have presented the attractiveness to Private Equity firms and Asset Management firms.

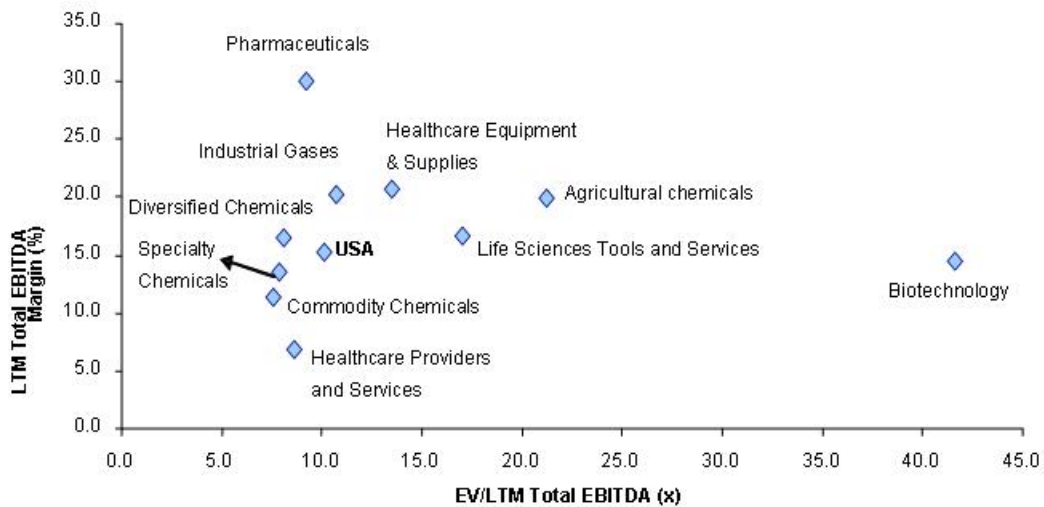
### **Attractiveness to Private Equity Firms**

Since mergers and acquisitions are on the rise, it is attractive from a private equity perspective, because valuation multiples are expected to increase. Further, mergers result in additional benefits in terms of expansion of customer base, leveraging on fixed costs, and improving capacity utilization. It is interesting that the Asian companies in general and the Indian companies in particular are interested at acquisitions in the fine chemicals market. This is expected to provide private equity companies exit opportunities. The private equity participants would not be interested in acquiring companies product offering which directly competes with the Asian countries. The exit options include trade buyers or selling to private equity companies or an IPO. The preference could be a larger market or any market which has a history of fine chemical companies being traded. The

benefit from this strategy is to establish a fair value for the company, as well as ensure analyst coverage of the company. The first three preferences could be NYSE, London Stock Exchange, and XETRA. However, till 2008, there may be weaknesses in the market due to financial crisis.

### Asset-management Perspective

Chart 1.4  
Fine Chemicals Market: Asset Management Attractiveness (North America), 2008



Source: Frost & Sullivan

Chart 1.4 presents the Asset Management attractiveness of the North American fine chemicals market in 2008.

Fine chemicals fall under specialty chemicals. The fine chemical business is preferred over its commodity chemicals because the nature of the fine chemical business is undertaking relatively more difficult process compared to commodity chemicals. Hence, it results in repeat business. Additionally, since the fine chemicals industry is regulated, operating margins are among the highest in the specialty chemicals industry. However, asset management investors opine that fine chemical companies do not have high

bargaining power over customers. Accordingly the fine chemical companies are price takers, and expected to face severe price pressure. So the fine chemical companies are not likely to be attractive in the short term. Historically, the fine chemicals industry had not yielded the expected return on investment, and is also not reputed for declaring dividends. It may be noted that the pharmaceutical companies are gradually shifting to Asian markets, and the generic contribution to prescription sales is increasing. Hence, investors have fairly valued share prices. Asset management firms will be adopting a wait-and-watch strategy before investing in fine chemical companies.

### **Final Thoughts**

The factors that can have a definitive impact on the North American fine chemicals market from 2008 to 2012 include the following:

- Mr. Barack Obama, U.S. Presidential nominee, promised tax incentives to curtail outsourcing.
- In 2008, regulators in the European Union and the United States may introduce laws that will speed up market approvals for biosimilars
- Impact of green chemistry: Growing pressure from environmental groups and regulators to adopt sustainable and green manufacturing practices. Efficient and innovative processes such as continuous manufacturing are being considered as strategies to fight cost-competition.
- The crude oil price rise may have an impact on fine chemicals margins. Solvents, the raw material for fine chemicals are related to crude oil prices. Hence, there may be margin pressures given the rapid rise of crude oil price.
- The dollar may appreciate over the forecast period, which may reduce acquisitions in the United States
- As a megatrend, the pharmaceutical market is moving to Asia and other emerging markets, which may prompt fine chemical companies to be closer to customers
- The appreciating yuan may influence investment decisions in China