

CHEMICALS: ChemQuest Paints a Picture of Recovery

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April 8, 2004



COATINGS and ADHESIVES

An Industry Analysis Featuring Insights From

The ChemQuest Group

Decision points:

- **Coatings Continues to Recover.** In our recent hosted conference call, the ChemQuest Group (www.chemquest.com) painted a picture of recovery for the Coatings & Adhesives industry. Volumes for US Coatings increased 4.5% in '03 (1.3B gal.) and continues to be strong in '04. However, sales declined 1.4% in '03 (\$16.1B) due to product mix changes with lower auto refinishing business. Coatings volumes are forecast to increase 6% in '04 while sales will grow 4%, roughly in line with the 25-year average.
- **Margins Under Pressure, but Expected to Expand.** High raw materials costs increased COGS by ~4% in '03 and continue to affect the margins (ChemQuest estimates COGS to increase by 2% in '04). While coatings producers are expected to pass through some of the raw costs due to strong demand, ROH has found this difficult to accomplish. However, margins lost from the frontside of the rising raw material curve are expected to be recovered during the period of declining raws.
- **Paint Stores Still Tops with Contractors; Big Boxes Home for DIY.** Contractors are still responsible for the majority of paint sales and, despite the Big Boxes' efforts, they buy 95% of paints from the paint stores. However, the Big Boxes are finding success in DIY, increasing from 30% in '96 to 46% today. Coating suppliers usually find it easier to pass price increases to the paint stores than these big home centers.
- **Architectural Coatings Shows Strength,** having grown 15.3% in volume (781MM gal.) and 6.1% in value (\$7.6B) during '03. Robust housing starts and strong sales of existing homes are the major contributing factors as well as the trend toward larger homes (McMansions).

Important disclosures and analyst certification on last two pages.

- **Higher Margin OEM Coatings Fell in both Volume and Value.** Product OEM Coatings (\$5.3B sales in '03) declined 10.1% in value and 7.3% in volume during '03. Although total manufacturing shipments increased 2.5% over '02, durable goods had only a slight increase (+0.5%). Auto refinishing declined as accident rate lessened due in part to fewer miles driven as the result of weaker economy.
- **US Adhesives Rebounding after the '00 – '01 Drop.** Sales in '03 increased 4.5% over '02, reaching \$10B and the overall business continue to grow at a rate slightly higher than GDP. The Pressure Sensitive sector continues to be the star performer with 15% of industry sales after more than 20 years of steady growth. Overall adhesives volumes are forecast to increase 8% in '04 while sales will grow 6%.
- **Remaining Eastman CASPI Units Strong after Sale of Bottom Tier.** We believe that Eastman should continue to benefit from the steady growth in pressure sensitive adhesive, and its expansion into China will also be a positive move. If Eastman is successful in divesting its bottom tier businesses under CASPI (such as parts of Lawter and McWhorter, especially the alkyd resin business which has little opportunity to improve due to its mature nature), we believe CASPI will be a much better performing business, especially in tackifiers.

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Coatings & Adhesives: ChemQuest Paints a Picture of Recovery

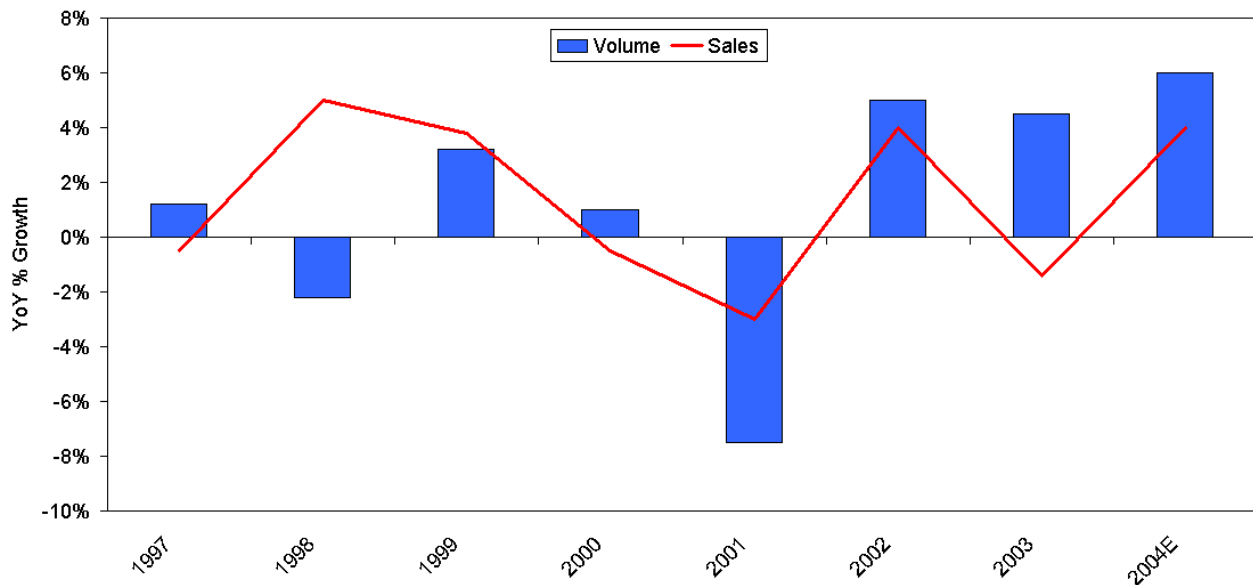
We recently hosted CEO Dr. Bill Broxterman and President Dan Murad of The ChemQuest Group, Inc., Cincinnati, OH (www.chemquest.com) to discuss the Paints, Coatings & Adhesives industry on our Fulcrum Chemicals conference call. During the call, ChemQuest painted the picture of a recovery continuing in 2004. The businesses have shown clear signs of recovery since the 2001 recession, with a modest improvement in 2002 and 2003.

COATINGS INDUSTRY

However, coatings sales declined 1.4% in '03 due to product mix changes as the volume declined in such higher margin products as auto refinishing and OEM coatings. Weak refinish was a result of less miles driven and fewer accidents due to higher gasoline price and weak economy. OEM coatings had volume declines in 2003 as durable good shipments were relatively flat (a slight increase of 0.5%) even though manufacturing shipments increased 2.5% over 2002. We believe that the economic recovery this year will help to improve coatings volumes by an estimated 4%.

U.S. Coatings volume increased 4.5% in 2003 and continued to be strong in 1Q04, driven largely by the housing market and infrastructure demands. ChemQuest forecasts nearly 6% volume improvement in 2004, as shown below:

Exhibit 1. U.S. Coatings Growth, 1997 – 2004E

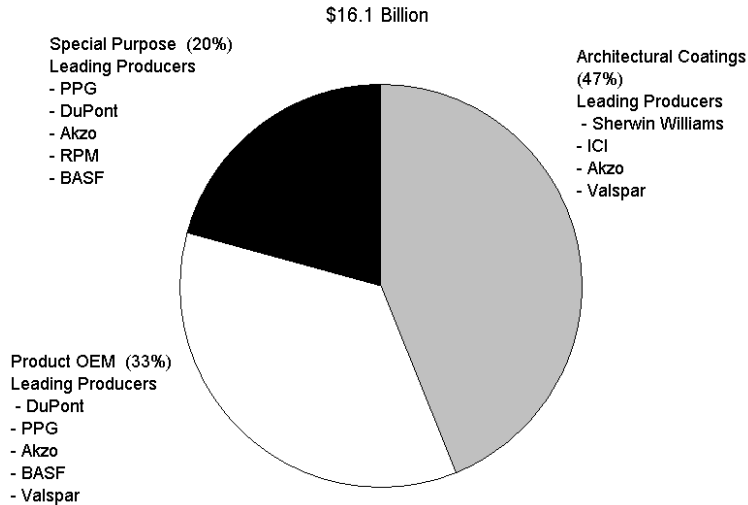


Source: The ChemQuest Group, Fulcrum Global Partners LLC

Paints and coatings provide two primary functions – decoration and protection. Architectural coatings account for the majority of end-use, primarily for decorating and protecting residential and office construction projects. This segment represents about 47% of the total Coatings sales. Another 33% of coating products are consumed by OEMs for automobile, furniture and other

durable goods. The rest is for Special Purpose such as auto refinish and industrial infrastructure, as shown below:

Exhibit 2. U.S. Paints and Coatings Segments and Major Producers, 2003

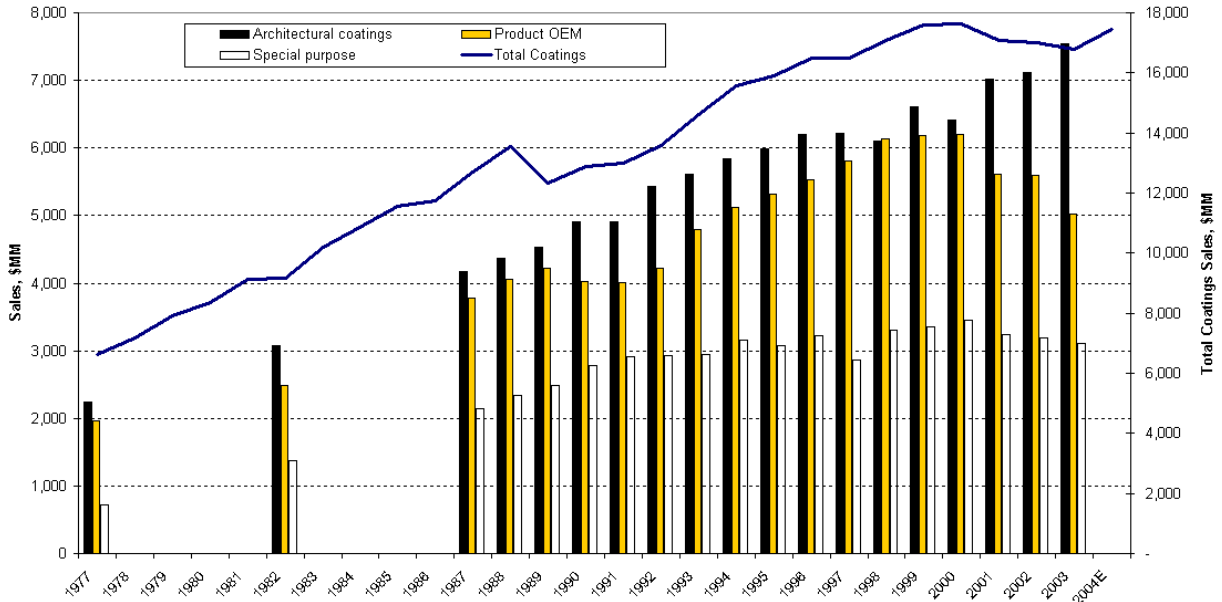


Source: The ChemQuest Group, Fulcrum Global Partners LLC

Historical Performance

The Coatings industry has shown relatively steady growth of ~ 3.3% dating back 25 years. Looking more recently, the historical growth of the Coatings industry, by its three segments for the past 25 years is shown in Exhibit 3. Architectural Coatings outperformed Product OEM by a large margin during last three years although Product OEM was very strong in late 1990's. While we expect that Architectural Coatings will continue to be the major growth engine, we expect that the recovery of Product OEM will narrow the gap between these two segments, as it happened after the recession in early 1990's (from the large gap in 1992 to equal size in 1998), as shown below.

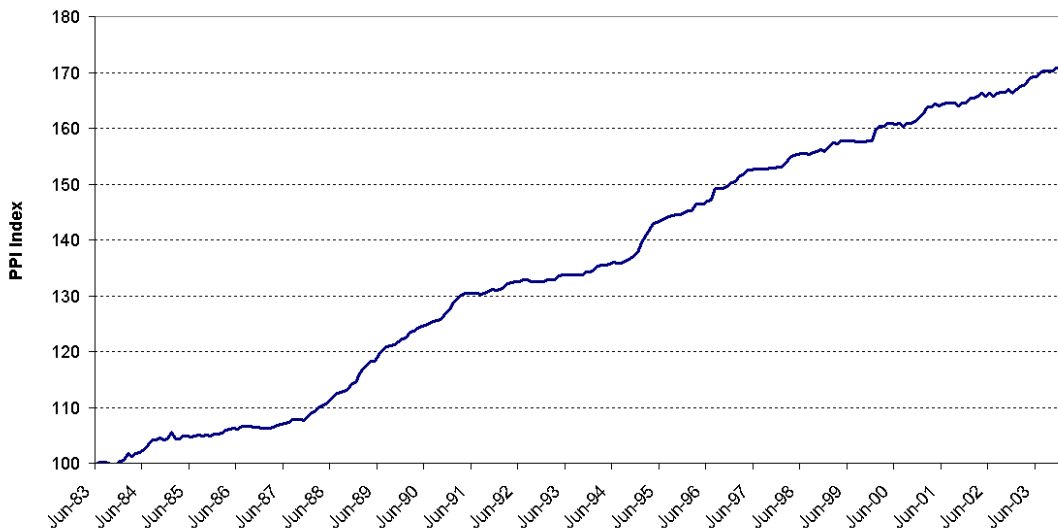
Exhibit 3. Coatings and Its Segments, 1977 – 2004E



Source: The ChemQuest Group, Fulcrum Global Partners LLC

Coatings producers generally are successful in raising prices and with the PPI index increasing 9.2% over the past five years, as shown below:

Exhibit 4. Paint Producer Index (not seasonally adjusted), 1983 - current



Source: Dept of Labor, Fulcrum Global Partners LLC

Coatings Industry Margins are under pressure due to high raws, but expected to expand. High raw materials costs increased the COGS about 3-4% in '03 and continue to affect the margins. ChemQuest estimated that COGS would continue to increase but only by about 2% in '04. While coating producers are expected to pass through some of the higher costs due to strong demand, Rohm and Haas among others has found it not an easy task to accomplish. After having just returned from the NPCA meeting, Mr. Murad commented that executives present are confident in

volume improvement and pricing initiation. For example, TiO₂ is expected to realize most of announced 5% price increase.

In the coatings industry, as with many commodity industries, margins lost during the rising period (“the front side”) of raw material pricing can usually be recouped during the period of declining raws (the “back side” of the pricing curve), which we expect to come with easing natural gas prices.

Raw material costs for the coating companies are the largest component, representing about 50-55% of income or over three quarters of COGS, as shown below.

Exhibit 5. Cost Structure of Average US Coating Companies

Income	100%
Cost of Goods Sold	
Raw Materials	50-55%
Labor	6%
Energy	2%
Overhead, Taxes, Ins., Dep.	7%
Total	65-70%
Gross Margin	30-35%
SG&A	20-30%
EBIT	7-12%

Source: The ChemQuest Group, Fulcrum Global Partners LLC

Among the major raw materials for coatings include acrylic and alkyd resins, solvents, TiO₂ and other pigments. Most of the organic raw materials are based on feedstocks from crude oil or natural gas and are highly affected by crude oil and natural gas prices. For example, for a 10% increase in crude, natural gas and energy prices, the impact would be 1.7% on acrylic resins and 5.1% on solvents. These impacts for raw materials would total 1.3% increase in raw materials if overall energy costs increase by 10%, as shown below:

Exhibit 6. Impact of Crude, Natural Gas and Energy Prices on Coatings Raw Materials

Paint Raw Materials	% of Paint Value	% Impact from 100% Increase in			Cumulative Impact	Weighted Impact
		Crude	Natural Gas	Process Energy		
Acrylic Resins	15.6	8.0	2.0	7.0	17.0	2.7
Alkyd Resins	15.1	5.0	2.0	8.0	15.0	2.3
TiO ₂	11.7	0.0	0.0	7.0	7.0	0.8
Solvents	10.8	41.0	2.0	8.0	51.0	5.5
Pigments	10.2	n/a	n/a	n/a	n/a	n/a
Steel Cans	5.7	0.0	0.0	11.0	11.0	0.6
Paint Fillers	5.1	2.0	3.0	7.0	12.0	0.6
Plastic Packaging	2.0	10.0	20.0	5.0	35.0	0.7
Additives/Other	23.8	n/a	n/a	n/a	n/a	n/a
Total	100.0					13.2

Source: The ChemQuest Group, Fulcrum Global Partners LLC

As for TiO₂, The ChemQuest Group predicts that most of the 5% price increases announced by the suppliers will be implemented as the demand continue to be strong. DuPont and Millennium are the two largest TiO₂ producers and will likely reap the benefit, as shown below:

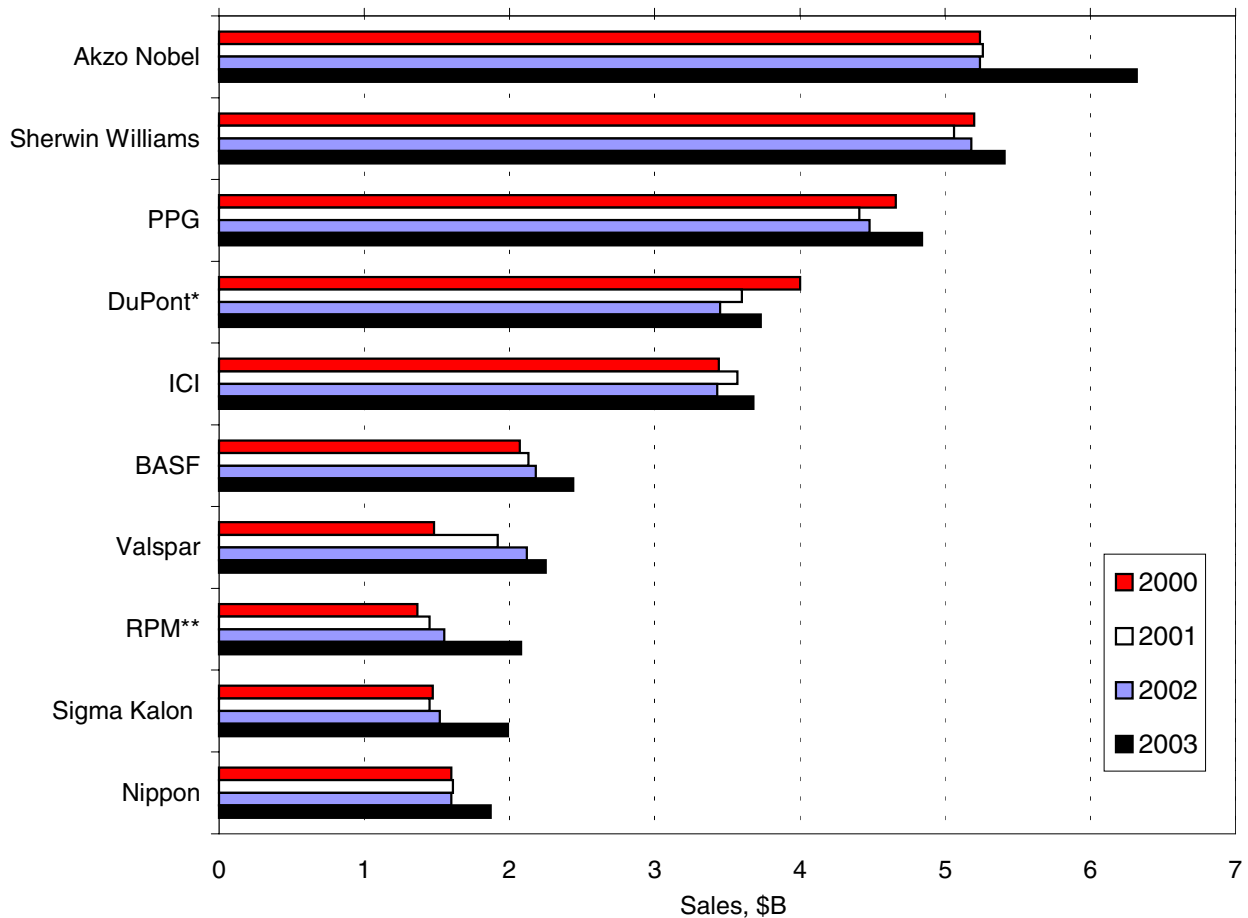
Exhibit 7. TiO2 EPS Sensitivity for Selected Suppliers

Company	Ticker	Billion Lbs.	EPS	
			Impact	Lbs. per Share
DuPont	DD	2.3	\$0.02	2.3
Millennium	MCH	1.6	0.16	24.5
Huntsman Tioxide	na	1.2	na	na
Kerr-McGee	KMG	1.2	0.08	11.5
Kronos	KRO	1.0	0.14	20.8
Ishihara	na	0.5	na	na
Kemira	na	0.3	na	na

Source: IBMA, Fulcrum Global Partners LLC

Coating Producers. Leading global producers are Akzo Nobel, Sherwin Williams, PPG, DuPont and ICI, as shown in the exhibit below. Top ten producers represent nearly 55% of world wide sales.

Exhibit 8. Leading Coatings Producers, 2000 - 2003



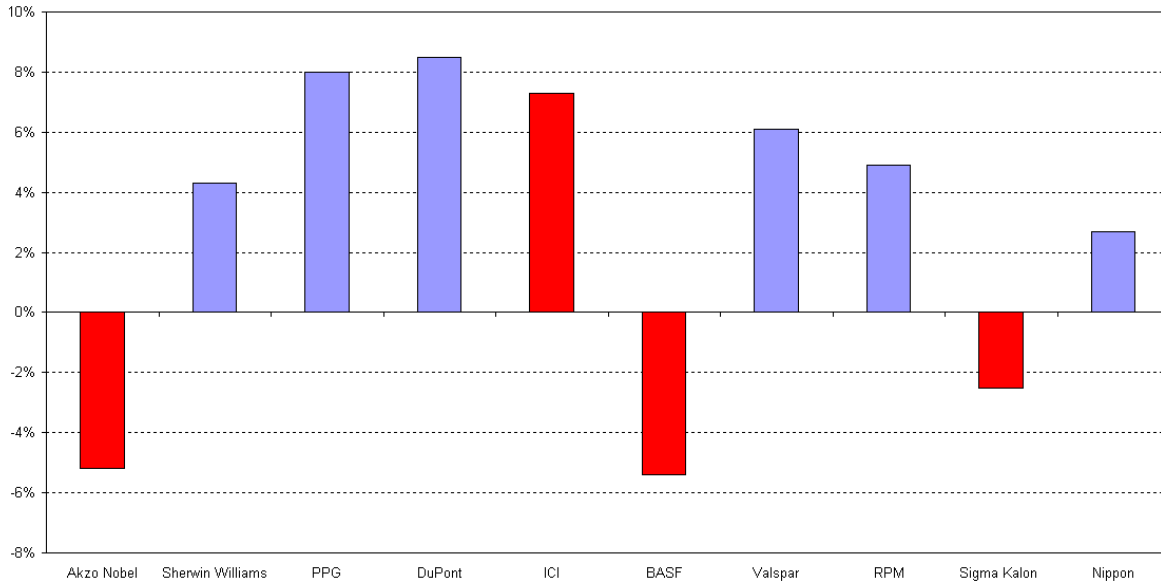
* Estimate of DuPont's coatings sales excluding TiO2.

** Coatings only sales estimates.

Source: The ChemQuest Group, Fulcrum Global Partners LLC

The cumulative growth rate for these top ten companies was 4.1% in 2003 over 2002. Noticeably, the sales of U.S. based companies significantly outperformed foreign companies. Among the top ten companies, U.S. companies achieved 6% YoY growth while foreign companies sales declined, reflecting the challenging business conditions for the European coatings industry, due to slow economy growth and unfavorable currency exchange.

Exhibit 9. Leading Global Coatings Producers, 2003 YoY Change.



Source: The ChemQuest Group, Fulcrum Global Partners LLC

While the sizes of the major global players have changed over the years due to consolidation and individual company's performance, the top five companies rankings stayed largely unchanged except ICI's decline. ICI was the third largest coatings supplier in 1998 with \$3.5B sales, ahead of both PPG (\$3.4B) and DuPont (\$2.4B). We believe that ICI's strategic missteps (i.e. changing its store names from Glidden to Dulux) will further deteriorate its market share and will likely drop it from its current #5 position.

Meanwhile, Valspar has been successful in expanding its market share and may continue to move up to pass BASF or even ICI. Valspar was only at a #8 position in 2000, slightly ahead of Sigman Kalon (which was acquired by the private equity firm Bain Capital about a year ago). BASF will find it difficult to stay ahead because of its heavy focus on the slower growth auto refinish business (#3 in this market).

For DuPont, its performance coatings is likely having similar challenge as BASF because of slow growth in auto refinishing. We note that DuPont is the only major paint supplier with a TiO2 business; however, this vertical integration does not give DuPont any advantages over its competition.

As a mature industry, Coatings suppliers have gone through significant consolidations. The number of companies declined 57% in the three decades period from 1970-2000, as shown below. The M&A activities slowed down during last three years, however, we expect modest increase as recovery picking up and free cash flows increase.

Exhibit 10. Coatings Consolidations, 1970 - 2000

	Number of Companies	% Change		Number of Plants	% Change
2000	600	-18%		800	-31%
1990	735	-29%		1,160	-20%
1980	1,040	-25%		1,445	-12%
1970	1,380	-13%		1,650	-8%

Source: The ChemQuest Group, Fulcrum Global Partners LLC

More importantly, specialization has been an important characteristic in this industry, and a focused portfolio is more likely to lead to improved margins through efficiency and new product development. The large paint companies have traditionally focused on scale in the three major segments: Architectural, Product OEM, and Special Purpose.

Special Purpose is one of the most profitable areas, but it is reliant on new product developments to justify the large price differential. In contrast, Architectural and Product OEM represent more stable earnings tied to the general economy and consumer and industrial, respectively. As a result of the specialization, DuPont exited the architectural segment years ago and currently concentrates on the automotive and OEM markets, along with PPG. The leading global suppliers by segment are shown below.

Exhibit 11. Leading Suppliers by Segments

Architectural	Product OEM	Special-Purpose
Sherwin-Williams	DuPont	PPG
ICI	PPG	DuPont
Akzo	Akzo	Akzo
Valspar	BASF	RPM
	Valspar	BASF

Source: The ChemQuest Group, Fulcrum Global Partners LLC

The suppliers for raw materials have also undergone consolidation. The major supplier by product type are shown below:

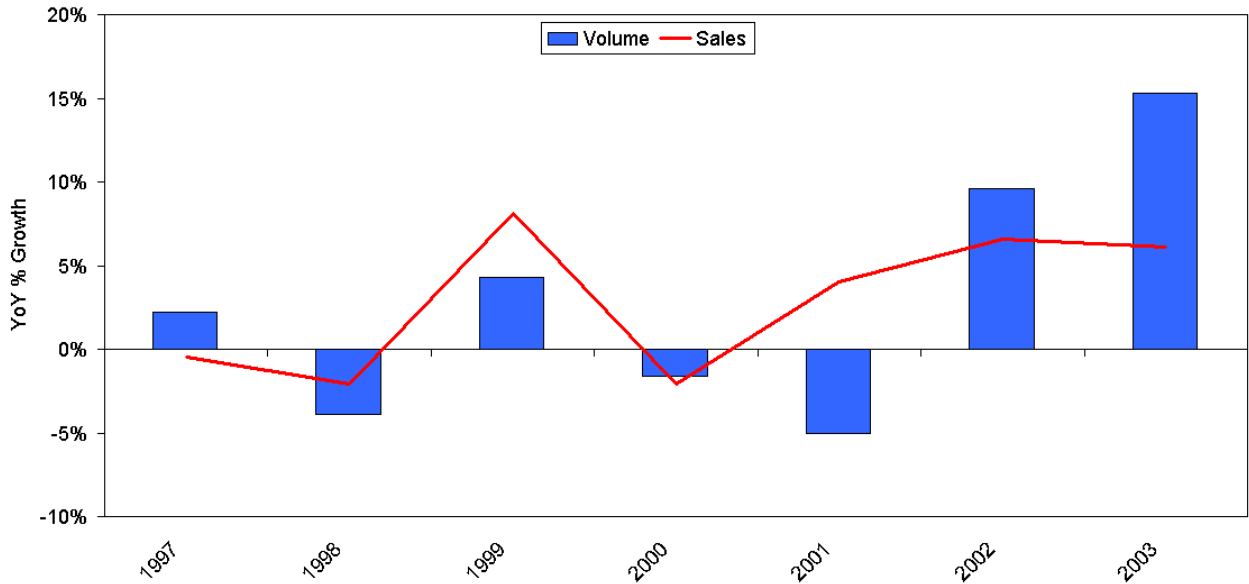
Exhibit 12. Key Suppliers of Coatings Raw Materials.

Key Suppliers	Company
TiO₂	DuPont, Millennium, Kerr McGee, Kronos
Resins	
Polyurethane	Bayer, Crompton, Dow, Avecia, Noveon, BASF
Epoxy	Dow, Resolution Performance Products, Vantico
Acrylic	Rohm and Haas, Dow, Reichhold, Eastman
Vinyls	Dow, Rohm and Haas, Air Products, Reichhold
Alkyd	Eastman, Reichhold
Intermediate Monomers	Rohm and Haas, Dow, Celanese, BASF, Total Fina, Ineos

Source: The ChemQuest Group, Fulcrum Global Partners LLC

Architectural Coatings. Leading the growth in the Coatings Industry is Architectural Coatings, which grew 15.3% in volume and 6.1% in value during 2003, reaching 781MM gal and \$7.6 billion.

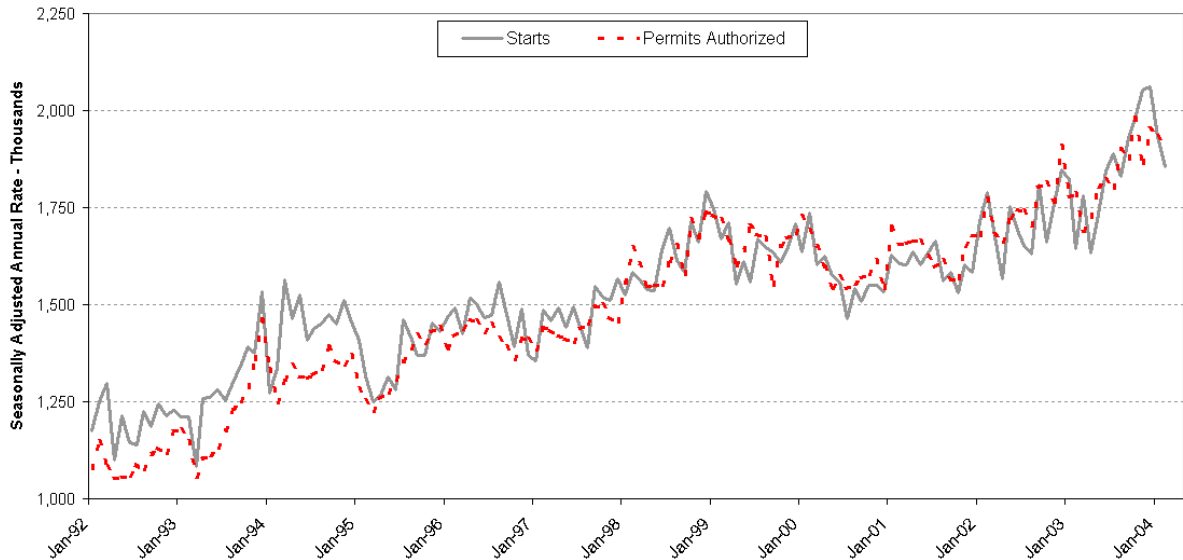
Exhibit 13. Architectural Coatings Growth, 1997 – 2003



Source: The ChemQuest Group, Fulcrum Global Partners LLC

The growth in Architectural Coatings is largely benefiting from the robust new housing starts and strong sales of existing homes. Housing starts remained at near record levels at 1.8MM units annualized rate, and building permits are also very high, as shown below:

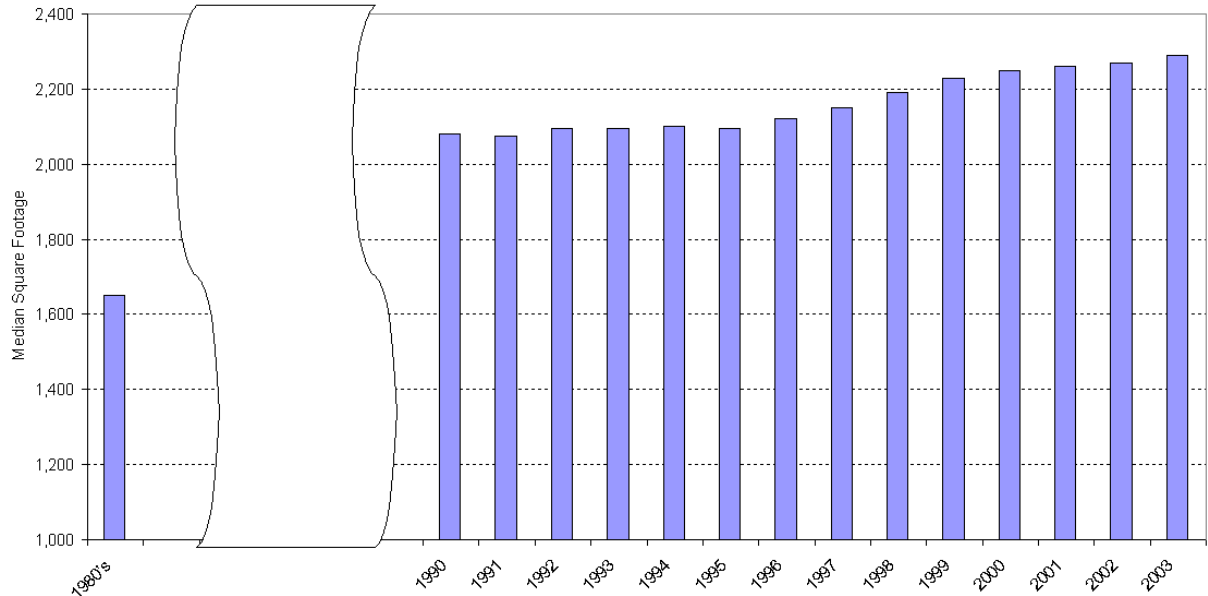
Exhibit 14. Housing Starts and Permits Authorized, 1992 - Current



Source: The ChemQuest Group, Fulcrum Global Partners LLC

Moreover, the trend toward larger homes continues to power the growth of architectural coatings. The median size of a new home today is in excess of 2,290 sq. ft., compared with 1,650 sq. ft. in 1980's, as shown below.

Exhibit 15. Square Footage Trend of New House, 1980's - 2003



Source: The ChemQuest Group, Fulcrum Global Partners LLC

Architectural Coatings Distribution Channels. Paint stores and contractors still playing important roles even though the Big Boxes account for most of DIYs. Regarding the channels of distribution, contractors are still responsible for the majority of paint sales, buying 95% of paints from the paint stores. The Big Box home centers (e.g., Home Depot and Lowes) are having a difficult time penetrating the contractors' market as contractors prefer the royal treatment by the paint stores (as an aside, we're aware of a contractor, who normally gets paid in cash, agreed to take check payment because he said he could cash it from his paint store!) Contractors often don't have to pay anything to the stores until they get paid from their customers. While the Big Boxes may have set up Dunkin' Donuts within their shops to lure contractors, the effort hasn't paid off.

Moreover, contractors are often very loyal in sticking with their supplier and they are more demanding in terms of field customer support.

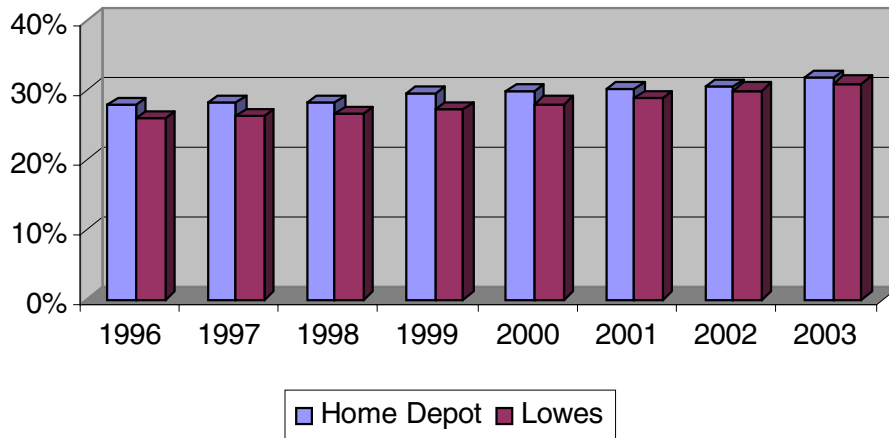
Exhibit 16. Architectural Distribution Channels

	Market Shares		
	DIY	Contractor	Total
<i>Paint Stores</i>	22.3%	94.9%	65.7%
<i>Home Centers/ Building Supply</i>	45.9%	3.5%	20.5%
<i>Discount/ Department Stores</i>	23.8%	0.2%	9.7%
<i>Hardware Stores</i>	5.7%	1.4%	3.2%
<i>Other</i>	2.3%	0.0%	0.8%
Total	100%	100%	100%

Source: The ChemQuest Group, Fulcrum Global Partners LLC

However, the Big Box home centers are getting bigger with about 46% of retail DIY market vs. only 30% in 1996. Coating suppliers usually find it easier to pass price increases to the paint stores than these big home centers, although the home centers have been successful in their effort to increase margin while expanding their market shares. The gross margins of two major home centers, Home Depot and Lowe's, had consistent improvement over the last eight years, as shown below:

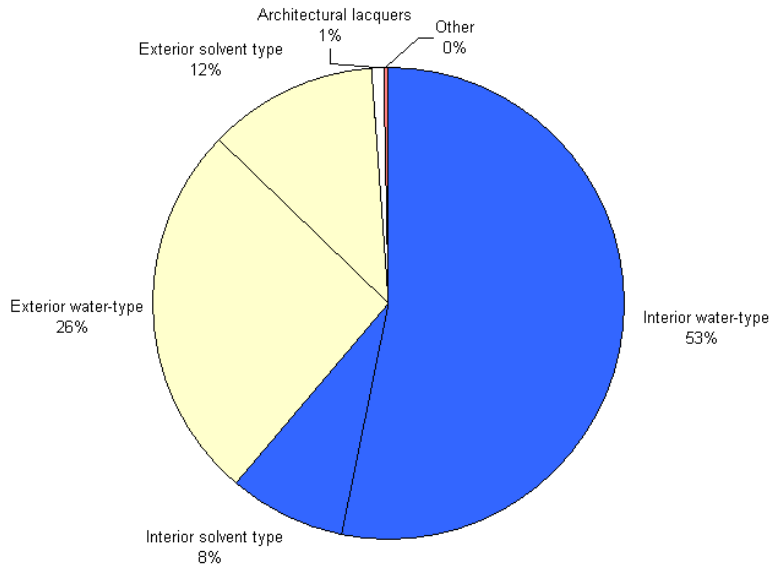
Exhibit 17. Gross Margins for Home Centers, 1996 - 2003



Source: The ChemQuest Group, Fulcrum Global Partners LLC

End Uses of Architectural Coatings. Over 50% of Architectural Coatings consists of water-based interior paints. Exterior paints accounts for a total of 38% of end use with most (26%) applied with water-based paints.

Exhibit 18. U.S. Architectural Coatings Types/End-Markets



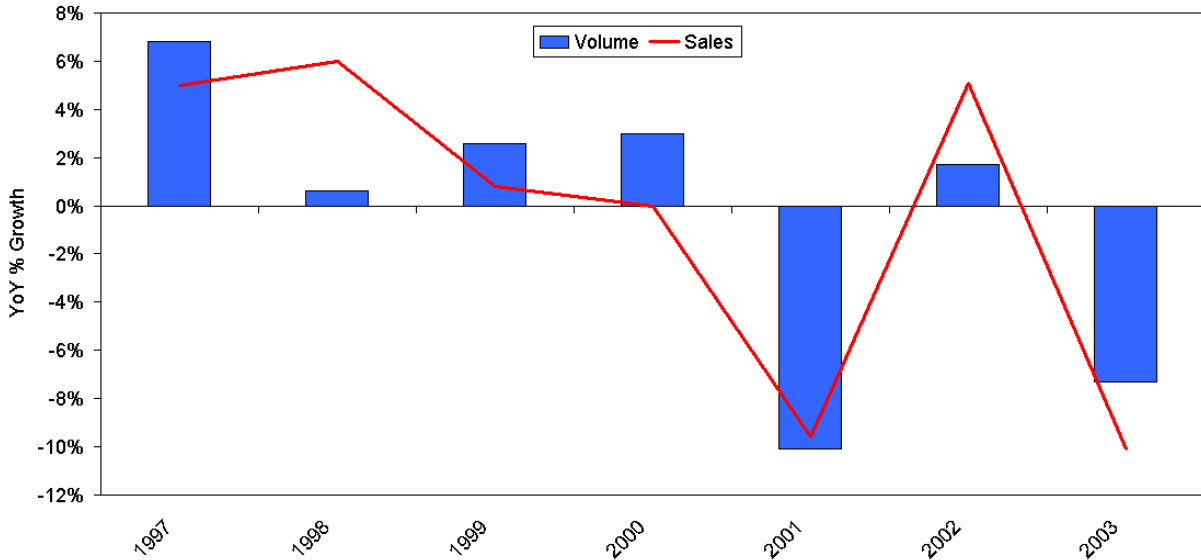
Source: The ChemQuest Group, Fulcrum Global Partners LLC

Key players in the Architectural coatings include:

- Sherwin Williams
- Akzo Nobel
- ICI
- Valspar

Product OEM Coatings. Product OEM Coatings (\$5.3 billion sales in 2003) had declined 10.1% in value and 7.3% in volume during '03. Although total manufacturing shipments increased 2.5% over '02, durable goods had only slight increase (+0.5%). Coating demand from non-defense aircraft and parts continues to be weak.

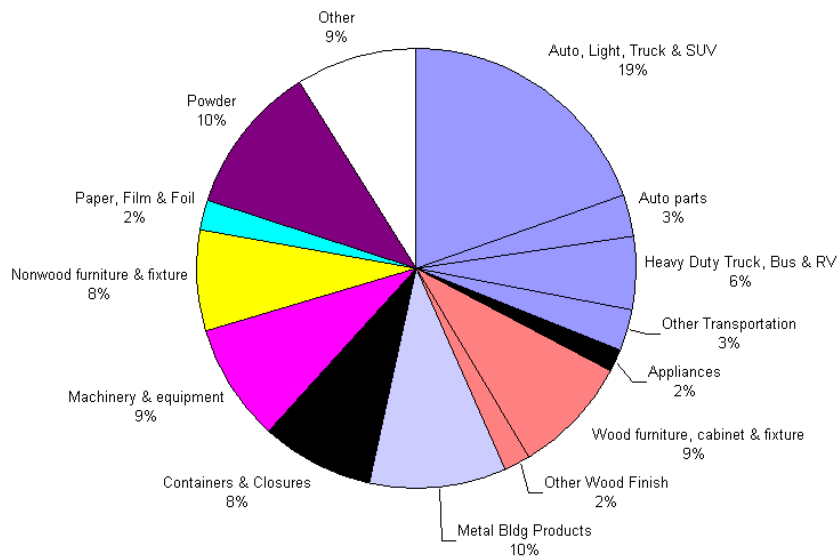
Exhibit 19. Product OEM Coatings Growth, 1997 – 2003



Source: The ChemQuest Group, Fulcrum Global Partners LLC

End Markets of Product OEM Segment. Product OEM coatings, a third of the total U.S. Coatings market, are used for industrial manufacturing and production. This segment serves several industrial markets, with such diverse end-markets as autos, light trucks, SUV, wood furniture, kitchen cabinets, and powder coatings, as shown below.

Exhibit 20. U.S. Product OEM Coatings End-Markets



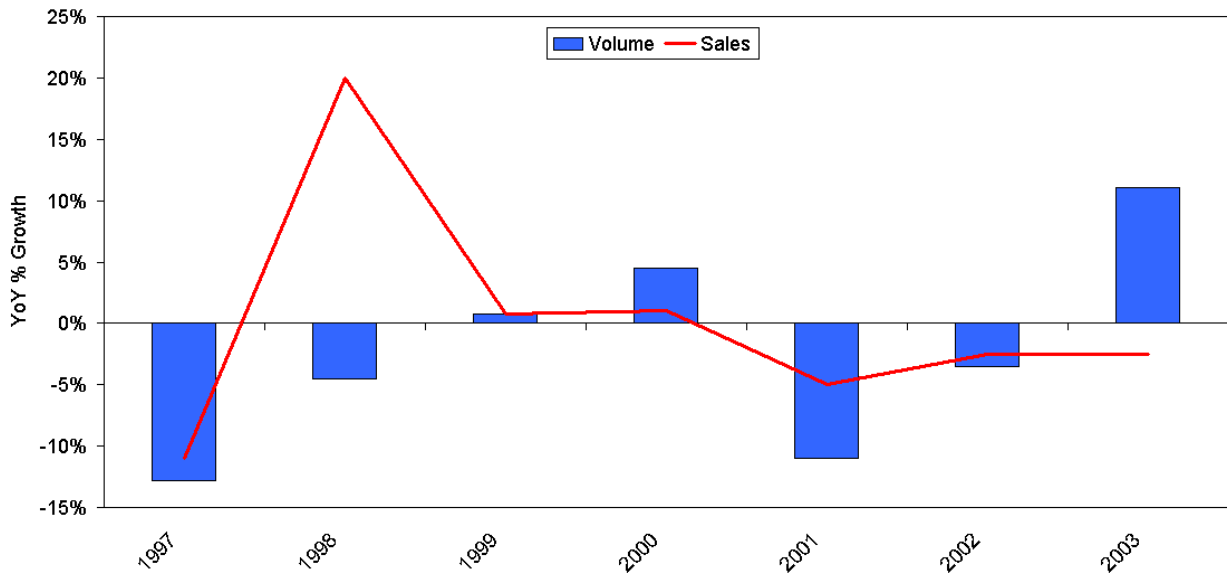
Source: The ChemQuest Group, Fulcrum Global Partners LLC

Key players in this segment are:

- DuPont
- PPG
- Akzo
- BASF
- Valspar

Special-Purpose Segment volumes increased a healthy 11% in 2003, as shown below. However, the value dropped 2.5% mainly because such markets as auto refinishing declined as the accident rate fell due to fewer miles driven as the result of weaker economy and higher gasoline price. The volume increase was driven by improved demand from infrastructure coatings for petroleum & refining, entertainment complexes, utilities and roadways.

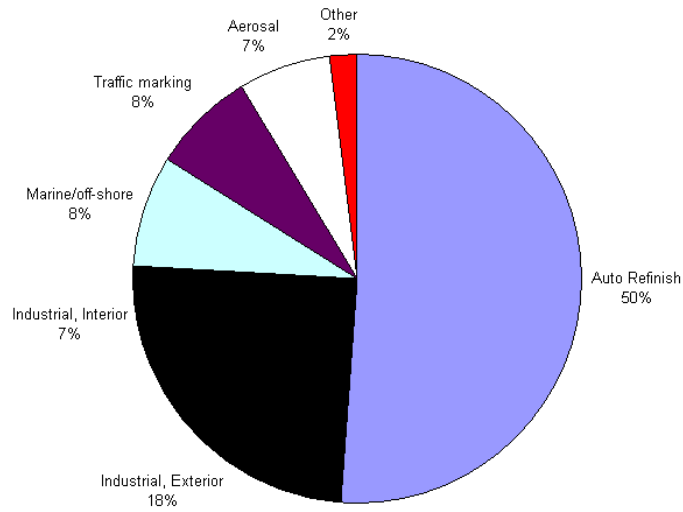
Exhibit 21. Special-Purpose Coatings Growth, 1997 - 2003



Source: The ChemQuest Group, Fulcrum Global Partners LLC

End Uses of Special Purpose Coatings. Special Purpose coatings are used in various applications, including automobile repair, aerosol paints, traffic marking, and corrosion protection coatings for both interior and exterior of industrial facilities and infrastructure. This category is heavily reliant on the auto refinish markets, which make up half of the total.

Exhibit 22. U.S. Special-Purpose Coatings End-Markets



Source: The ChemQuest Group, Fulcrum Global Partners LLC

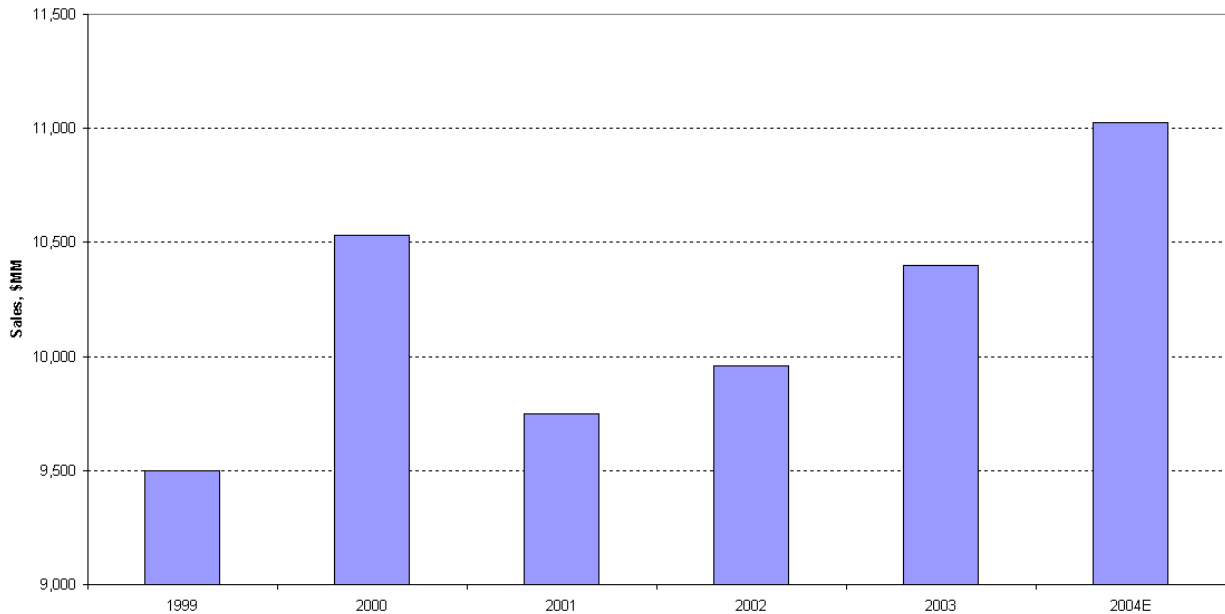
Significant players in special purpose coatings include:

- PPG
- DuPont
- Akzo
- RPM
- BASF

ADHESIVES INDUSTRY

US Adhesives Industry Had Steady Growth after the 2001 Drop. Sales in 2003 increased 4.5% over '02, reaching over \$10B and the overall business continues to grow at a rate slightly higher than GDP. While the revenues dropped in 2001 (the first decline in 30 years!), the YoY growth rate is steady excluding the 2000 number, suggesting the bubble economy in 2000. We expect another year of healthy growth with volume growth of 8% and value growth of 6% in 2004.

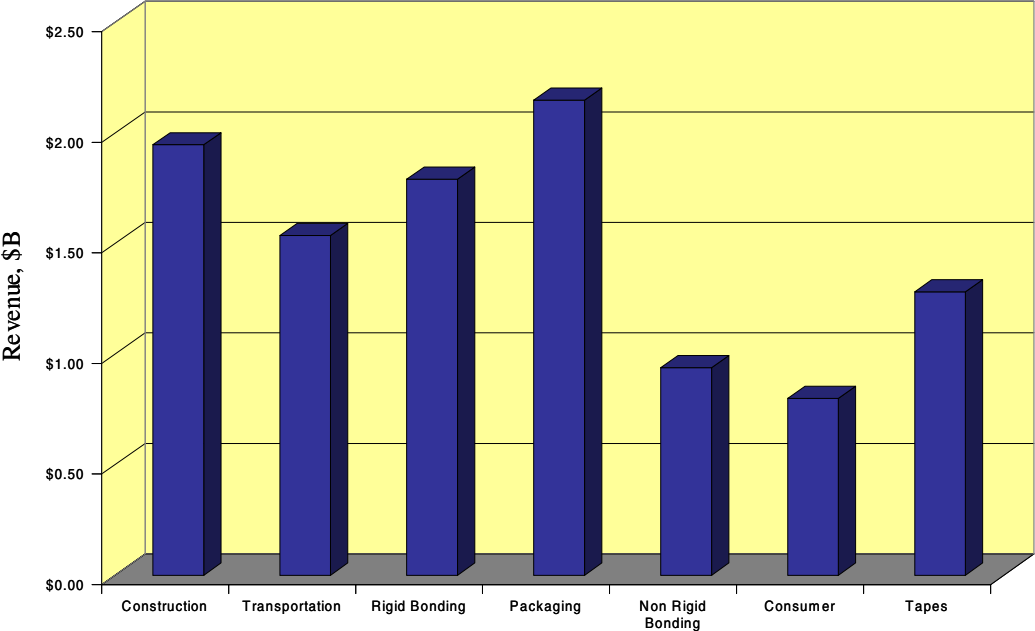
Exhibit 23. U.S. Adhesives Industry, 1999 – 2004E



Source: The ChemQuest Group, Fulcrum Global Partners LLC

The U.S. adhesives industry is somewhat similar to the coatings industry (also based on formulated products) with many of the same drivers. However, Adhesives is more fragmented than Coatings with many market sectors. Since the majority of adhesive market applications involve fastening functions, Adhesive should be considered to be a component of the fastening industry and will often be competing with other mechanical fasteners. The largest market sectors are Packaging, Construction, Transportation, and Rigid Bonding, accounting for over two-thirds of the overall market, as shown below.

Exhibit 24. U.S. Adhesive Major Market Sectors



Source: The ChemQuest Group, Fulcrum Global Partners LLC

Adhesive Suppliers. The Adhesives industry is also fragmented by the large number of adhesive manufacturers that supply products to it. Some estimate the number of players to be more than 500! An overview of the major suppliers are shown below:

Exhibit 25. Major U.S. Adhesive Suppliers by Segment

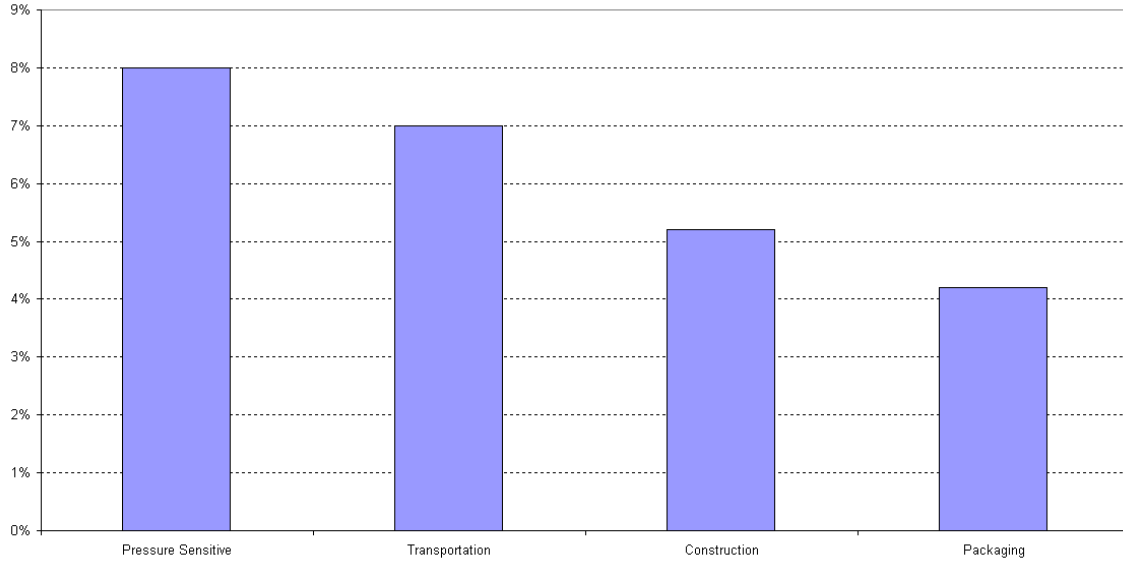
Type	Typical Market Segments		Competitors
Construction	Resilient Flooring	Joint Cements	Sovereign
	Ceramic Tile	Curtain Walls	H.B. Fuller
	Counter Tops	Wall Covering	RPM
	Manufactured Housing	Dry Wall Adhesives	Sika
	Fabricated Beams & Trusses	Roofing Adhesives	Mapei
	Carpet Layment	HVAC	SKW
	Under Layment	Concrete	
	Panel Adhesives		
Transportation	Auto Exterior Trim	Railroad	Eftec
	Auto Interior Trim	Aircraft/Aerospace	Henkel
	Auto Assembly	Marine	Ashland
			Bostik Findley
			Lord 3M Rohm and Haas
Packaging	Corrugated	Envelopes	National Starch
	Cartons	Remoistenables	HB Fuller
	Disposables	Film/Film Laminations	Henkel
	Bags	Specialty Packaging	Forbo
	Labels/Signs/Decals	Composite Containers	Bostik Findley
	Cups	Other Flexible Packaging	
	Cigarettes		
Pressure Sensitive	Packaging Tapes	Masking Tapes	3M
	Electrical Tapes	Consumer Tapes	Avery-Dennison
	Industrial Tapes	Labels	Ashland
	Surgical/Medical Tapes		Air Products
			UCB National Starch Bostik Findley HB Fuller Rohm and Haas

Source: The ChemQuest Group, Fulcrum Global Partners LLC

While the Coatings industry doesn't have much captive manufacturing, it is significant in certain portions of the Adhesives industry. Such companies as 3M manufacture a significant amount of adhesives for captive uses.

Pressure Sensitive and Construction Sectors were the fastest growers in 2003 with 8% and 7% increases, respectively. While less impressive, both Transportation and Packaging sectors also had nice growth, as shown below:

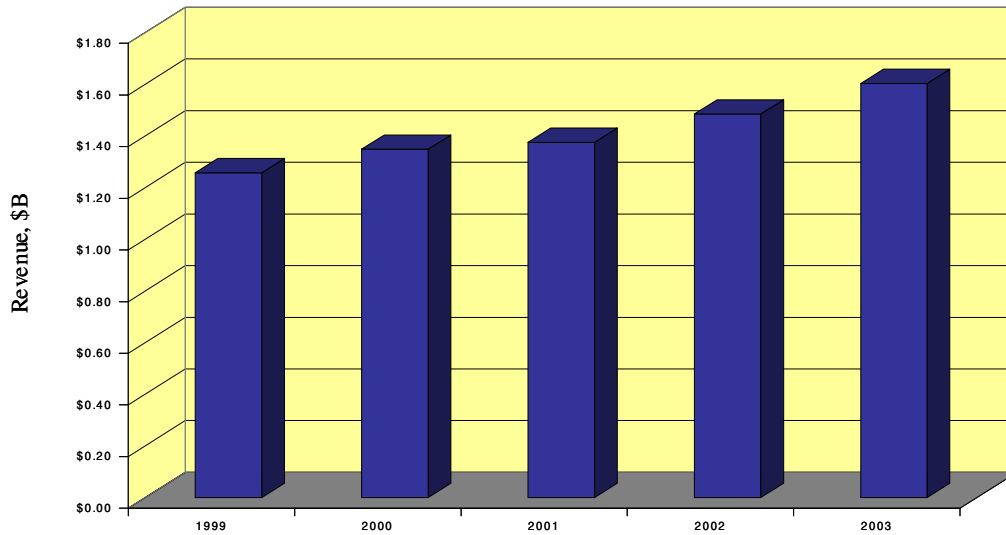
Exhibit 26. Adhesive Sales Growth by Sectors, 2003



Source: The ChemQuest Group, Fulcrum Global Partners LLC

The Pressure Sensitive Sector continues to show star performance after more than 20 years of steady growth. This sector includes packaging tapes, electrical tapes, industrial tapes, and consumer tapes. Pressure Sensitive adhesives had sales of \$1.6 billion, representing about 15% of industry sales, as shown below.

Exhibit 27. Pressure Sensitive Sales, 1999 - 2003



Source: The ChemQuest Group, Fulcrum Global Partners LLC

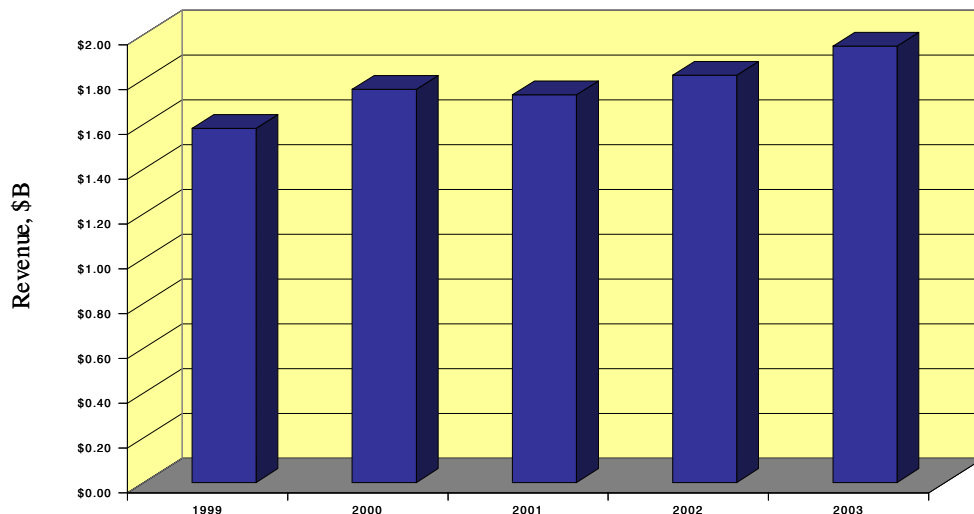
The leading suppliers include:

- 3M
- Avery-Dennison
- Ashland
- Air Products
- UCB
- National Starch (ICI)
- H.B. Fuller
- Rohm and Haas, and
- Eastman.

Eastman Chemical should continue to benefit from the steady fast growth in Pressure Sensitives, and its expansion into China should also be a positive move. Its Adhesive business is ranked as a middle tier business in its CASPI segment, meaning that it is not part of the bottom tier that Eastman is actively looking to sell. If Eastman is successful in divesting its bottom tier CASPI businesses (such as parts of Lawter and McWhorter, especially the Alkyd resin business which has little opportunity to improve due to mature nature of the businesses), we believe CASPI will be left with much better performing businesses, especially in the tackifier products.

The Construction Sector of the Adhesive Industry also enjoyed nice growth of 7% in 2003, better than GDP growth due to strong housing market. Sales reached \$1.9 billions, representing 18% of the Adhesive industry.

Exhibit 28. Construction Sector Sales, 1999 – 2003



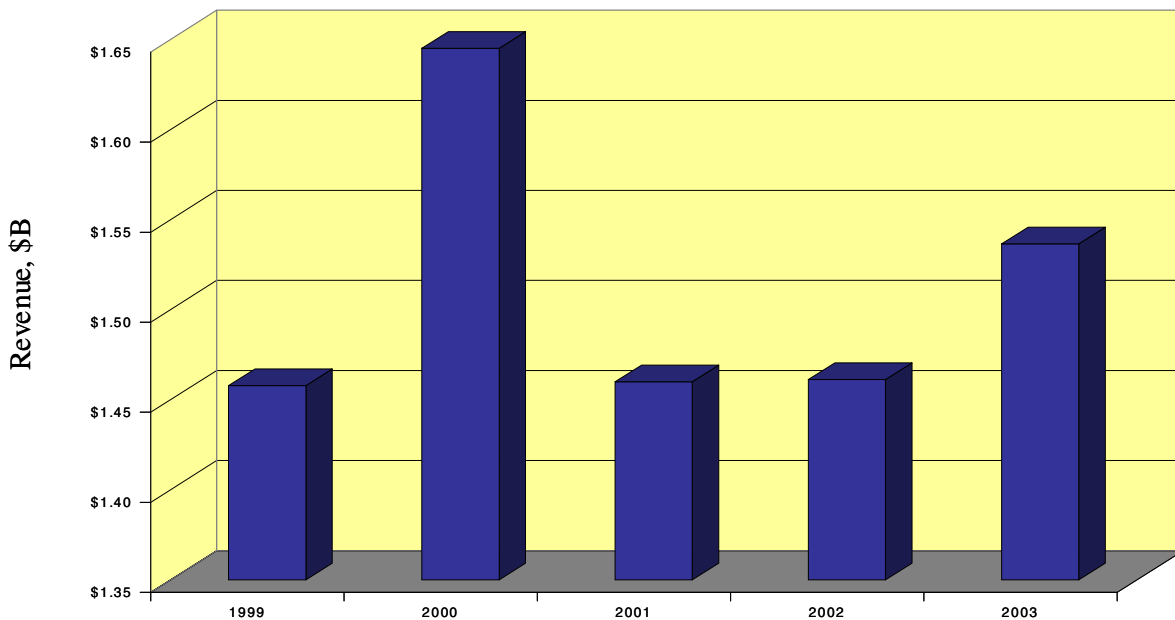
Source: The ChemQuest Group, Fulcrum Global Partners LLC

Construction end uses include resilient flooring, ceramic tile, counter top, manufacturing housing, and wall covering. The major suppliers for this sector are:

- Sovereign
- H.B. Fuller
- RPM
- Sika
- Mapei, and
- SKW

Transportation Sector. This segment supplies adhesives for uses in auto exterior trim, auto interior trim, railroad, aircraft/aerospace, and marine applications. After two years of poor performance, Transportation has begun to recover. Sales increased 5.2% to \$1.5 billion in 2003 and the growth has continued into 1Q04, as shown below:

Exhibit 29. Transportation Sector Sales, 1999 - 2003



Source: The ChemQuest Group, Fulcrum Global Partners LLC

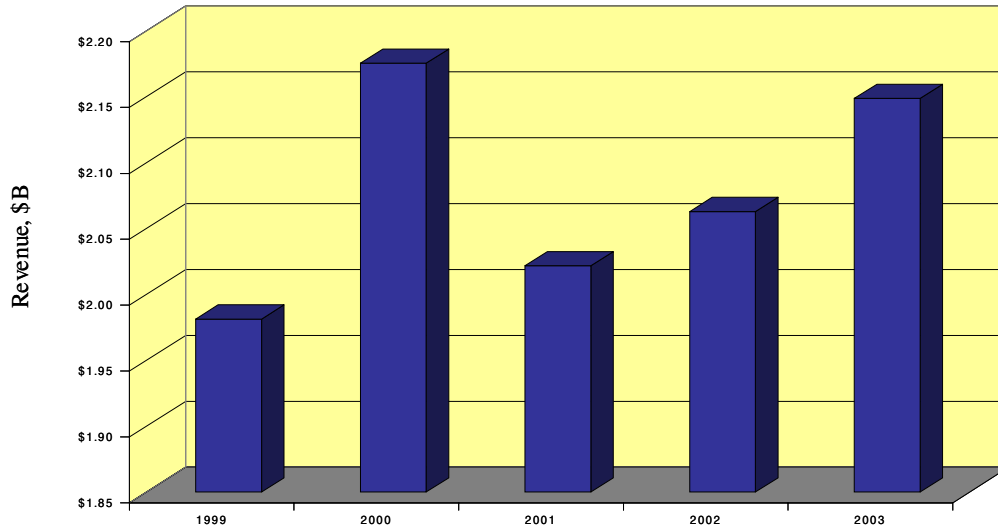
The top suppliers in Transportation sector include:

- Eftec
- Henkel
- Ashland
- Bostik Findley
- Lord
- 3M, and
- Rohm and Haas.

The Packaging Sector also continues to recover from the major decline in 2001, as shown below. Packaging remains the largest sector in the Adhesive industry with 18% of revenue. The end uses include all sorts of packaging applications from corrugated packaging, cartons, bags, to

cigarettes, envelops and laminated film packaging. The revenues in 2003 were \$2.2 billion, up 4.2% over 2002.

Exhibit 30. Packaging Sector Sales, 1999 - 2003



Source: The ChemQuest Group, Fulcrum Global Partners LLC

Suppliers include:

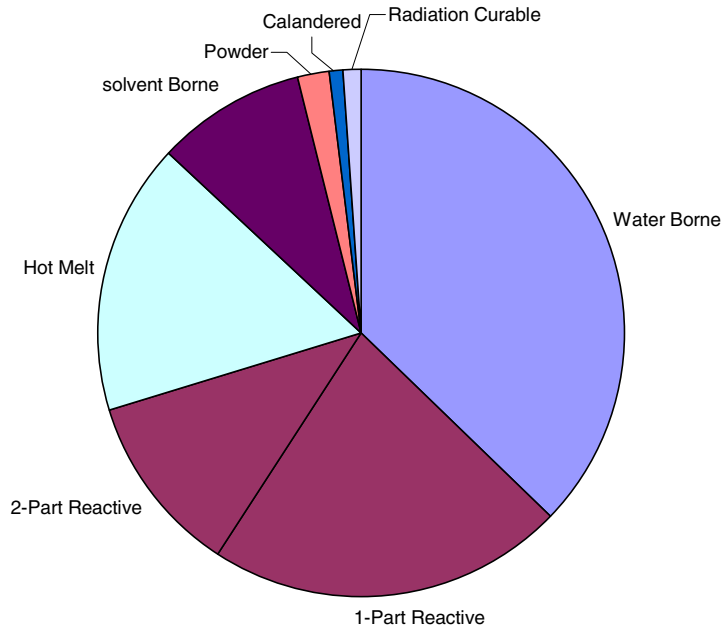
- National Starch
- H.B. Fuller
- Henkel
- Forbo, and
- Bostik Findley.

Forecast for U.S. Adhesive: 6% Sales Growth. We believe that overall adhesive will continue to grow at a strong rate. Volume is expected to grow about 8% in 2004 as improvement should be seen across the board. Above GDP growth rate is supported by continuing evolution of new applications and its ability to capture applications by replacing mechanical fasteners.

The growth in the Adhesives industry with the evolution of new applications are also powered by the technology improvement in this field. Radiation curable adhesives will continue to show high growth but it is still a small business. The solventless reactive systems (1-Part and 2-Part) are finding ways to take applications away from the traditional mechanical fasteners, and exceeding industry growth.

Hot Melt adhesives, on the other hand, are now nearing mature, and it is expected to grow only slightly faster than the overall industry. Solvent borne adhesives will continue to decline from its current 9% of the market as they are replaced by principally water borne and hot melt adhesives for obvious environmental advantages. The adhesive market by formulative technologies are shown below:

Exhibit 31. The Adhesive Industry by Formulative Technologies



Source: The ChemQuest Group, Fulcrum Global Partners LLC

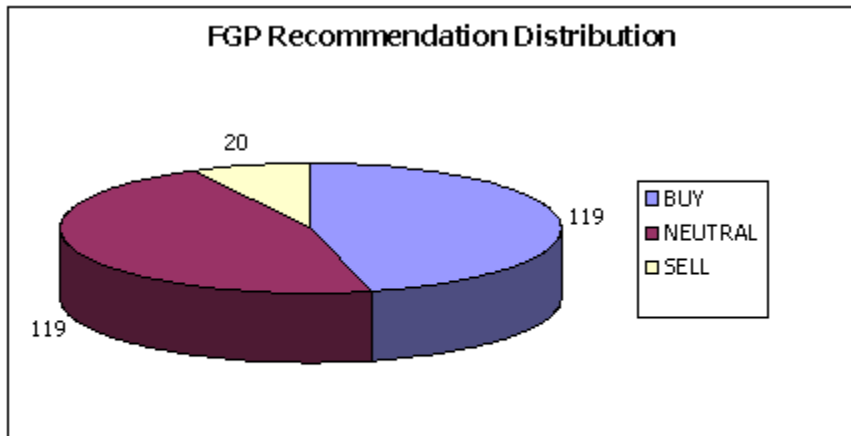
Since the Adhesive industry is highly fragmented, there is significantly more room for consolidation than the Coatings industry. The top 8 adhesive companies currently account for less than 50% of the U.S. market demand. We believe that acquisitions will pick up as the recovery is underway, especially after a quiet M&A period during last three years due to the recession and low availability of acquisition funds.

The ChemQuest Group, Inc. is an international strategic business management consulting firm specializing in Paints, Coatings, Resins, Polymers, Adhesives, & Sealants industries.

ANALYST CERTIFICATION

Frank J. Mitsch and James Chen hereby certify that the views expressed in this research report accurately reflect my personal views about the subject company(ies) and its (their) securities. I also certify that I have not been, and will not be receiving direct or indirect compensation in exchange for expressing the specific recommendation(s) in this report.

Distribution of All Fulcrum Recommendations:



Source: FactSet and Fulcrum Global Partners

Note: The percentage of subject companies in each rating category for which F&P has provided investment banking services within the last 12 months is 0%.

Stock price charts designating rating change/price target information are available upon request. Please contact rmenasian@fulcrumgp.com.

Fulcrum Global Partners LLC ratings are defined as follows:

BUY – A stock that is expected to produce a positive return of 15% or greater over the 12 months following the recommendation.

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NEUTRAL – A stock that is not expected to appreciate or depreciate meaningfully over the next 12 months.

Other public companies mentioned:

Dow Chemical (DOW, \$40.73, NYSE, NEUTRAL)

DuPont E. I. de Nemours & Co. (DD, \$43.60, NYSE, NEUTRAL)

Eastman Chemical (EMN, \$43.29, NYSE, BUY)

PPG Industries (PPG, \$59.33, NYSE, NEUTRAL)

Rohm & Haas (ROH, \$40.74, NYSE, NEUTRAL)

3M Company (MMM, \$82.75, NYSE, Not Rated)

Ashland (ASH, \$46.23, NYSE, Not Rated)

H.B. Fuller (FUL, \$28.85, NYSE, Not Rated)
BASF Aktien (BF, \$52.85, NYSE, Not Rated)
Sherwin Williams (SHW, \$37.62, NYSE, Not Rated)
Akzo Nobel (AKZOY, \$37.78, NYSE, Not Rated)
Valspar (VAL, \$49.54, NYSE, Not Rated)
Home Depot (HD, \$36.49, NYSE, Not Rated)
Imperial Chemical Industries (ICI, \$17.13, NYSE, Not Rated)

Important Disclosures:

Unless otherwise noted, all prices are as of the close, April 7, 2004.

For additional information, please contact your Fulcrum sales representative at (212) 803-9000.

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