

MERGERS, ACQUISITIONS AND CONSOLIDATION IN THE INSTRUMENTATION MARKET

Introduction

Merger and acquisition transactional activity has continued apace in the scientific and technical equipment (STE) instrumentation market over the last two years. The highly fragmented STE instrumentation industry continues to be consolidated by both large instrumentation conglomerates in the U.S. and Europe, as well as well-financed and aggressive mid-sized manufacturers seeking to buy and combine small niche players at attractive valuations. With approximately 130 transactions per quarter, the consolidation trend suggests that the leaders in this market have determined that buying growth through acquisitions makes good sense in a time of tight capital spending and slow organic growth. Mirus expects activity will persist driven by several dominant trends including the increasing presence of financial buyers (leveraged buy-out firms); conglomerates with large cash reserves that are facing single digit growth prospects in their core markets; margin erosion resulting from increased competition; the market's growing appetite for "one-stop shopping" with branded, well-known suppliers; and, the need for a global sales and services footprint to capitalize on newly deregulated economies in the Asia Pacific region. In addition to exploring these trends, Mirus will detail the value drivers in the STE industry that have consistently equated to premium valuations.

Industry Trends

In our research, we identified several industry trends that begin to shed light on anticipated future merger and acquisition activity:

New Classes of Measurements Emerge: Several new classes of measurements have emerged driven by breakthrough scientific discoveries (e.g. sequencing of the human genome) and new technologies (e.g. nanotechnology), as well as the growth of homeland security initiatives. For example, in the life sciences arena, the race to truncate the decade-long drug discovery process and improve R&D investment yields are expected to drive sales of DNA chips and measuring instruments, combinational liquid chromatography (a separation technique) and mass spectrometry (an analysis technique) equipment, and

bioanalytical instruments and sensors. While still under-research, the waste produced by nanotechnology is also expected to drive tremendous investment in new types of Nano-environmental control equipment, and increasing terrorist threats have resulted in increased demand for utility monitoring and particle characterization instruments such as those used in water contamination testing and explosive material detection. Thermo Electron's recent purchase of Saint Gobain's radiation monitoring business for \$30 million in cash (equating to an enterprise value-to-sales (EV/Sales) multiple of 0.91x) is just one example of this trend. Mirus expects Thermo Electron and others to pursue additional acquisitions in the explosive detection arena.

Point-of-Care & Portable Devices Boom:

Technology advancements in electronics, greater microprocessor control, and microfabrication techniques have enabled a new class of portable point-of-care devices. For instance, in the clinical diagnostics arena, significant decrease in time and administrative costs are driving the demand for non-invasive individualized testing devices with the largest and most obvious market being the testing of glucose levels for diabetics. However, DNA profiling devices for genomes, proteomics and small molecules that help detect/explain an individual's propensity for a certain disease and/or ailment are expected to see increased demand once regulatory constraints are navigated. DNA-based chip and immunoassay-based test devices are also expected to see significant penetration in the food and water markets. Bayer Diagnostics GmbH, a unit of Bayer AG, recently acquired all the outstanding common stock of Visible Genetics Inc, a manufacturer of diagnostic DNA testers and portable equipment, for \$43 Million, equating to a 3.2x EV/Sales multiple.

Heightened Environmental and Quality Standards:

Heightened environmental regulatory requirements from government bodies such as the EPA/FDA in the US and like organizations in other countries, together with global quality standards such as ISO 14000, are driving demand for environmental monitoring instrumentation and process control equipment. For example, with global potable water supplies being

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stretched and an increased focus on basic hygiene and sanitation in emerging markets such as Africa, Asia and Latin America, the water quality and treatment market is expected to grow even larger than the \$100B market that research firm Frost and Sullivan reported for last year. In fact, several municipal authorities across the world have major initiatives in place to improve water quality. Teledyne Technologies Inc recently acquired Monitor Labs Inc, a manufacturer of environmental monitoring equipment, from Spirent PLC, for \$24 million in cash, representing an EV/Sales Multiple of 0.09. Mirus anticipates that new lab-on-a-chip players like Sensicore, which just received a \$6.5M round of investment, will also be likely targets.

The water quality and treatment industry is also seeing engineering and instrument sourcing become one as many large engineering organizations, such as UK-based Suez, develop their own analytical groups. With large construction and engineering service organizations controlling the STE purse strings, smaller water quality and monitoring vendors will need to cozy up to these large engineering and construction services firms if they want access to larger, more lucrative contracts.

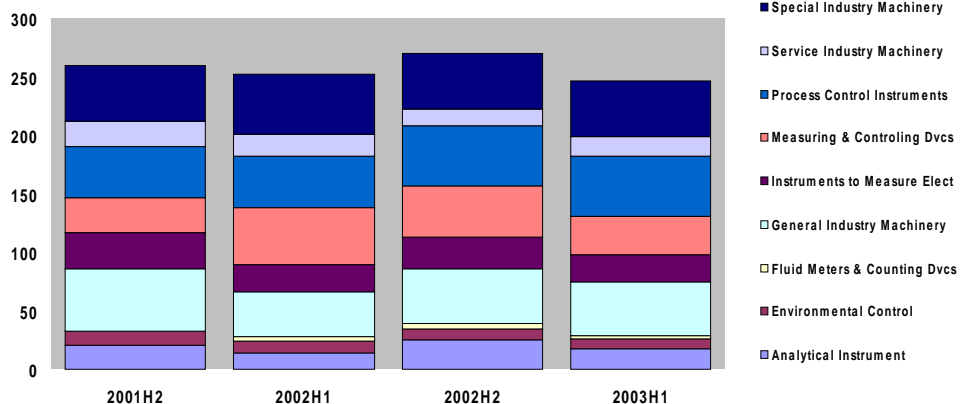
While on-line process optimization initiatives focused on increasing manufacturing yields and eliminating waste have historically been led by more traditional manufacturing industries such as refining, food and beverage and petro-chemicals, large pharmaceutical companies are rolling out their own process control and quality initiatives. These new initiatives are being driven in part by the FDA's new PAT (Process Analytical Technology) initiative, which is focused on improving drug product quality. Moreover, investment in the process and quality control aspects of drug manufacturing have also benefited from large

pharmaceutical companies' focus on later stage drug development rather than early stage research. Moreover, additional demand for process analytical and monitoring instruments is coming from traditional manufacturing companies looking to reduce costs and extend the life of their existing plants.

Continued Growth and Consolidation: Based on our sample data, the highly-fragmented STE industry is still consolidating. Mirus divided the STE industry into 9 segments based on primary SIC codes. The Mirus STE universe included: Analytical Instruments, Environment Control, Fluid Meters, Counting Devices, General Industry Machinery, Instruments to Measure Electricity, Measuring & Controlling Devices, Process Control Instruments, Service Industry Machinery, and Special Industry Machinery. As illustrated below in Exhibit 1, transaction activity has persisted across all segments every quarter since the second half of 2001, suggesting that the consolidation trend is not yet over. Consistent with the dominant industry trends discussed earlier, the Measuring & Controlling Devices (MCD) and Process Control Instrument (PCI) segments experienced the most transaction activity, representing 15.5% and 18.5% of the total activity or 155 and 190 transactions respectively. Also notable is that both segments had median EV/Sales multiples that exceeded our sector average of 1.1, enjoying multiples of 1.5 and 1.2 respectively. GE Measurement and Sensings acquisition of industry-leading electronic pressure measuring concern Druck Holdings PLC. for a 3 X EV/Sales and a 14 X EV/EBITDA provides a recent MCD example. In the PCI segment, Flowserve Corp. acquired the flow control business (FCB) of Invensys PLC (IP) for 375.2 million British pounds (\$535 mil US) in cash, representing a EV/Sales multiple of 1.1.

Exhibit I

Scientific & Technical Equipment Number of Deals (overtime)



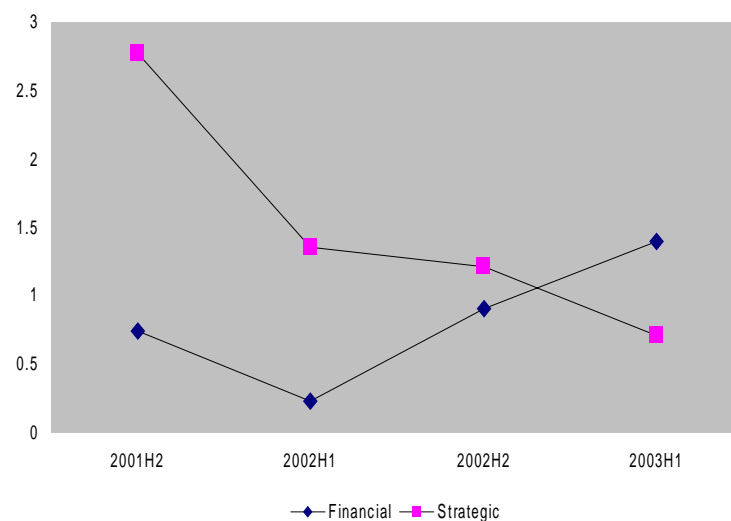
M&A Trends

Hungry Financial Buyers: Our research also found that financial buyers are putting larger sums of money to work, and in many cases are paying higher multiples. This finding is consistent with a recent Mirus analysis that reviewed middle-market M&A over the last five years. Our study found that financial buyer activity grew from 12 percent of all M&A activity in 1999 to just under 20 percent in the first half of 2003. According to Fleet Capital, financial buyers have approximately \$100-\$125 billion of private equity to invest in 2003 and are finding more competition for fewer quality deals, driving up valuations. Mirus found average investments have increased in size by approximately 6.5 times from \$12.07 million in second quarter of 2002 to \$78 million in the same quarter this year. In the second quarter of 2003 alone, \$546 million was invested in the STE market compared to only \$24 million in the same quarter last year.

While over the past two years average strategic transaction sales multiples trump their financial counterparts, in the first half of 2003 our data suggests an increasing trend of higher sales multiples being paid by financial buyers, as illustrated in Exhibit II. The average sales multiple for financial transactions is 1.33x, up from 0.22x in the same period last year, whereas strategic transaction sales multiples have dropped to 0.71x for the first half this year from 1.35x for the same period last year. While the total and average deal values and valuations for financial players have increased over time, the number of transactions has remained relatively constant at 20 transactions per quarter. In other words, financial buyers, finding fewer quality deals, are willing to put more capital to work at higher valuations in the most promising companies.

Exhibit II

EV/Sales



Migration to high-growth verticals: Companies offering solutions to the high-growth life sciences (e.g. pharmaceuticals, biotechnology companies, agricultural biotech companies, academic and government research institutions and clinical laboratories) and water treatment markets were the most popular targets in our sample universe. Notable transactions in these two arenas can be found below in Exhibit III.

Platform Solution Selling: Lead by STE sector leaders, such as Waters Corporation in the high performance liquid chromatography (HPLC) industry, expect to see multiple measurement and analysis instruments merged onto single information-driven platform. Since, the enormous quantity of life sciences data, which has proved difficult to analyze, has created increased demand for robust pattern recognition and chromatography data management software, Mirus anticipates other HPLC leaders such as Agilent and

Exhibit III

Date	Target Name	Acquiror Name	Sector	Value	EV/Sales
7/30/2003	Creon Lab Control	Waters Corp	Life Sciences	\$ 16.00	1.60
4/7/2003	Bruker AXS	Bruker Group	Life Science	\$ 66.87	0.61
11/4/2002	Osmonic	GE	Water	\$277.38	1.31
9/16/2002	ABB Ltd-Metering Business	Ruhrgas Industries GmbH	Water	\$ 244.00	0.54
7/24/2002	Panametrics	GE	Water	\$220.00	NA
7/18/2002	Genomics Solutions	Harvard BioScience	Life Science	\$ 23.05	1.11
7/17/2002	PanAnalytical	Spectris Plc	Life Science	\$150.51	1.01
4/29/2002	Betz Dearborn	GE	Water	NA	NA
3/12/2002	CRS Robotic	Thermo Electron Corp	Life Science	\$ 39.27	2.22
			Average	\$129.64	1.20
			Median	\$108.69	1.11

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Shimatsu will follow Water’s recent acquisition of chromatography data analysis and management player Creon Lab Controls. Beyond the convergence of instrumentation and data analysis and management software, “one-stop shop” solution providers will also sell a full suite of consumables/reagents and services. With the increased number of regulations and need to improve quality control, a company’s “services story” will become increasingly important as customers look to their trusted suppliers to help insure their instruments comply with regulatory and quality standards.

Cross–Border Activity: In an effort to take advantage of new plant development overseas and to further diversify revenue exposure beyond any one economy, STE vendors have recognized the inevitable need to have a truly global geographic footprint, resulting in cross-border consolidation. Notable cross-border transactions can be seen in Exhibit IV below.

Presence in Growing Vertical Markets – Targets in more rapidly growing life sciences, environmental testing, and water monitoring industries will enjoy higher multiples than their cohorts in single-digit growth verticals such as petroleum and refining.

Financial Performance – Buyers will look for 50%-60% gross margins and several quarters of sequential unit growth to confirm that the market recognition of the value offered by a target’s engineered products, differentiated applications and proprietary technology.

Strong Brand- Specific niche market leaders that command #1-2 market share positions will attract larger buyers who in general are willing to pay premiums for bolt-on acquisitions to fill product line holes.

Nameplate Engineering Capabilities- Buyers are willing to pay a premium for targets whose products are built upon modular, standardized platforms. As

Exhibit IV

Date	Target Name	Acquiror Name
7/30/2003	Creon Lab Control	Waters Corp
3/10/2003	Assets of Gasboy Intl, Inc	Danaher Corporation
1/16/2003	Rheology Business/Rheometric Scientific	Waters Corp
8/1/2002	Ai Cambridge Ltd.	Roper Industries, Inc.
2/11/2002	Jones Chromatography Ltd	Argonaut Technologies Inc

Value Drivers

Mirus believes the following ingredients are critical in driving up value for middle market STE instrument companies.

buyers look to expand horizontally within their existing customer bases serving a broad market segment and price points from the same product platform with plug-n-play ease has become a “must-have”.

Strong Recurring Revenue Base – Buyers hungry for the reliability and profitability of strong services and consumables revenue streams are willing to pay top dollar.

If you would like to discuss the content of this thought piece and how it impacts your company’s strategic growth initiatives, please feel free to contact Peter Alternative at 617-338-1333 ext. 243.

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