

INSTITUTIONAL RESEARCH

INDUSTRY: SEMICONDUCTOR CAPITAL EQUIPMENT

The Urge to Merge – Part II



NEWCAP PARTNERS INC.
PRIVATE INVESTMENT BANKERS

Background

In May 1999, we published a research report entitled The Urge to Merge. In that report, we analyzed 47 publicly-traded semiconductor capital equipment companies and identified a significant disparity in relative valuations that existed between large-cap companies (which we define as companies with a market capitalization in excess \$250 million or greater), and small-cap companies (which are companies with a market capitalization less than \$250 million). Based on our research, we concluded that there would be a rash of mergers and acquisitions in the industry. Specifically, we expected to see three types of transactions as industry participants attempted to arbitrage relative valuation differentials:

- Large-cap companies acquiring small-cap companies.
- Two or more small-cap companies, merging to become large-cap companies.
- Private companies, which typically carry relative valuations even below small-cap companies, becoming attractive acquisition targets to both small-cap and large-cap companies.

The Urge To Merge

Events of the last 18 months have validated our conclusions. Since then, the companies in the Class of 1999 have been involved in 50 transactions. Among them were 8 transactions in which large-cap companies acquired small-cap companies or divisions of other public companies, and 6 transactions in which small-cap companies merged with small-cap companies or divisions of other public companies. In addition, as many as 36 privately held companies have been snapped up by our sample companies over this period. Some notable transactions in each category:

Large-cap Companies Acquiring Small-cap Companies:

- On June 7, 2000, Photronics, Inc. (PLAB), a major manufacturer and marketer of high-quality photomasks, reached a definitive agreement to merge with Align-Rite International (MASK).
- On March 29, 2000, Applied Materials (AMAT), the nation's leading provider of equipment used in semiconductor wafer manufacturing, finalized its acquisition of Etec Systems (ETEC), a manufacturer of mask equipment, for \$1.7 billion in stock.
- On August 16, 1999, FEI Company (FEIC), a leading designer and manufacturer of products based on focused charged particle beam technology, announced the completion of its merger with Micron Corporation (MICN).

Small-cap Companies Merging To Become Large-cap Companies:

- On June 28, 2000, Mattson Technology (MTSN), a company that designs, makes and sells advanced wet processing equipment, reached a definitive agreement to acquire CFM Technologies Inc. (CFMT), and the semiconductor equipment division of STEAG Electronics.

- On October 21, 1999, FSI International, Inc. (FSII) acquired YieldUP International Corporation (YILD), in a move to expand its capabilities to create a complete cleaning solution.
- On August 26, 1999, ADE Corporation (ADEX), a global leader of metrology and inspection systems for the semiconductor industry, reached an agreement to purchase the metrology assets of IPEC Precision, a division of Speedfam/-IPEC (SFAM).

Private Companies Acquired:

- On May 5, 2000, Brooks Automation Inc. (BRKS), a provider of tools and factory hardware and software automation solutions, agreed to acquire Irvine Optical Company, a company specializing in wafer handling technology.
- On May 5, 2000, Veeco Instruments Inc. (VECO), a global leader of metrology tools for the data storage and semiconductor industries, merged with the privately held Ion Tech Inc., a major supplier of Ion Beam Deposition Systems.
- On November 30, 1999, in a stock transaction valued at an estimated \$32 million, ATMI, Inc. (ATMI), which provides materials, equipment and related services, reached an agreement to purchase MST Analytics, Inc., a company specializing in semiconductor gas monitoring system products.

The transactions presented above represent only a portion part of the transactions we observed over the past 18 months. For a complete list of the transactions for the class of 1999, please send a request semiconductor.m&a@newcap.com.

The Class of 2000

This year we expanded the universe of companies in our analysis from 47 to 76. All of the 76 companies are publicly traded semiconductor equipment, materials and related services companies. A complete list is included in Appendix A. As in 1999, we examined the relative valuations of the companies in the semiconductor capital equipment industry. To analyze the relative valuations in the year 2000 we used the same set of criteria to define both large market capitalization companies, and small market capitalization companies as we did in 1999.

There were 27 companies that fell into the small-cap group and 49 in the large-cap group. We determined the relative valuations of the companies by measuring their market capitalization with respect to revenue, net income, EBIT, and book value, and then averaged them for both groups. For the purpose of consistency, a cut-off date of November 3, 2000 was established. Calculations were based on trailing twelve-month data, except book value for which we used the latest balance sheet data available.

The average valuation ratios of the two groups are summarized in the following table. More detailed statistics are included in Appendix B and Appendix C.

Average Valuation Ratios

	Ratios of Market Value Divided By			
	Revenue	Book Value	EBIT	Net Income
Small-Cap	1.66	2.23	16.72	18.76
Large-Cap	3.55	4.05	19.65	22.94

From our analysis, we draw the following observations:

- There continues to be a disparity in relative valuations between large-cap and small-cap companies.
- The disparity is more evident in valuation measures based on revenue and book value, and less evident in measures of profitability. Large-cap companies sell for approximately a 100% premium over the small-cap companies based on revenue and book value multiples. However, when looking at the profitability measures, the premium is much smaller – approximately 20%.
- Compared to 1999, the revenue and book value multiple premiums were only slightly higher than in 2000, but the profitability multiple premiums have dropped significantly. Last year the large-cap companies had premiums which were roughly 500% higher than those associated with the small-cap companies in the industry.

Conclusions

Based upon our research, we believe that merger and acquisition activity in the semiconductor capital equipment will continue in 2001, but we expect the pace to be slower from that of late 1999 and 2000. We believe that there were two exogenous factors which impacted the pace of activity over the past 18 months. First, the frothy equity markets buoyed by internet stocks which rewarded revenues not profitability have corrected to focus on profitability. There is much more focus today on profitability and business model validation. Second, we think there were many transactions done in anticipation of the pending elimination of rules permitting "pooling of interests" accounting.

Today, with profitability multiples valuation differentials much less significant, and our belief that profitability is much more important to investors, we expect fewer merger and acquisition transactions designed to arbitrage the relative valuation differentials. Instead, we expect that strategic underpinnings of transactions such as broadening product lines, or acquiring technologies with the objective of solidifying competitive positions, will become much more important in 2001.

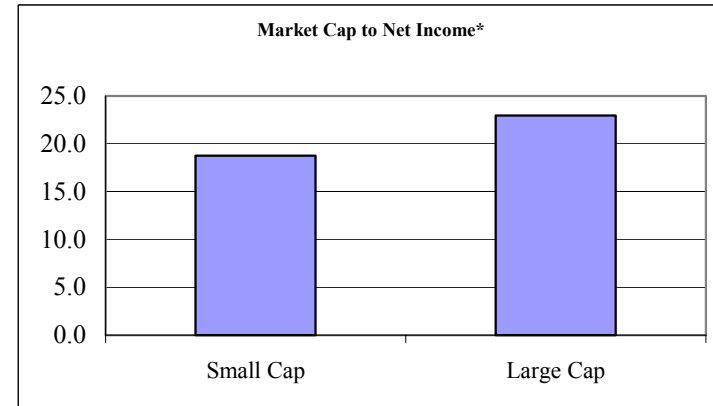
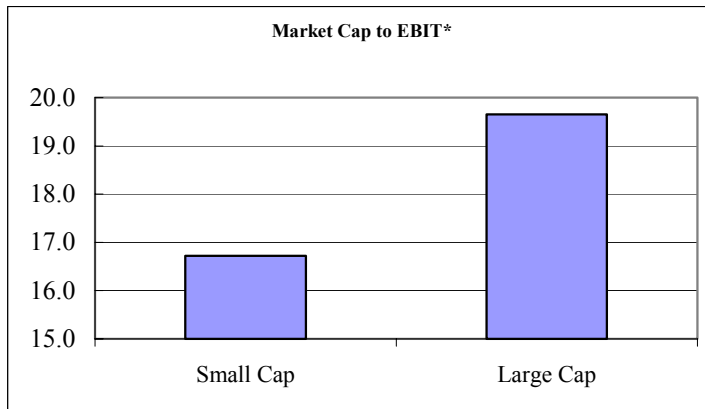
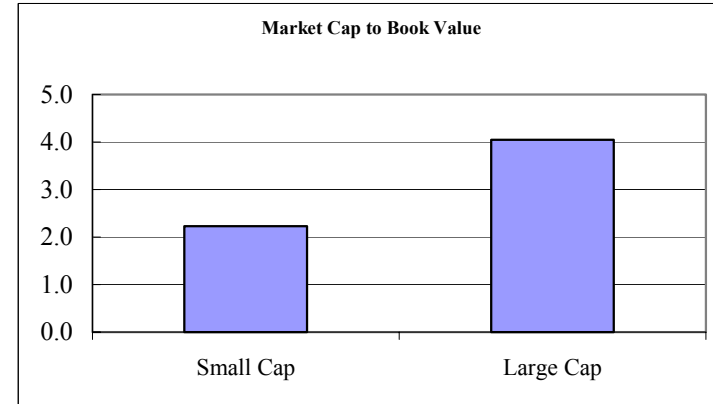
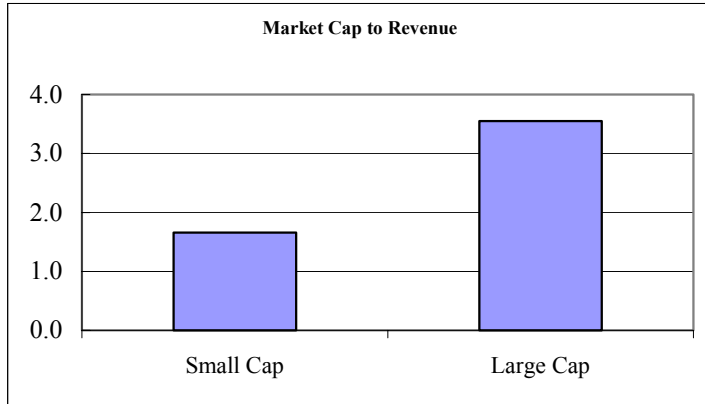
APPENDIX A

The Class of 2000 Semiconductor Capital Equipment Companies

Name	Symbol	Name	Symbol
ADE CORPORATION	ADEX	GASONIC INTERT CORP	GSNX
ADVANCED ENERGY IND INC	AEIS	GENUS INC	GGNS
AEHR TEST SYSTEMS	AEHR	HELIX TECHNOLOGY CORP	HELX
AETRIUM INC	ATRM	IBIS TECHNOLOGY CORP	IBIS
AMISTAR CORP	AMTA	IKOS SYSTEMS INC	IKOS
AMKOR TECHNOLOGY INC	AMKR	INTEGRATED MEASUREMENT	IMSC
AMTECH SYSTEMS INC	ASYS	INTEST CORP	INTT
APPLIED MATERIALS INC	AMAT	JMAR TECHNOLOGIES INC	JMAR
APPLIED SCIENCE & TECH	ASTX	KEITHLEY INSTRUMENTS INC	KEI
ASAT HOLDINGS LTD	ASTT	KLA-TENCOR CORP	KLAC
ASE TEST LIMITED ORD SHR	ASTSF	KULICKE & SOFFA IND	KLIC
ASM INTERT N.V.	ASMI	LAM RESEARCH CORP	LRCX
ASM LITHOGRAPHY HOLDINGS	ASML	LTX CORP	LTXX
ASYST TECHNOLOGIES INC	ASYT	MATTSON TECHNOLOGY INC	MTSN
ATMI INC	ATMI	METRON TECHNOLOGY NV	MTCH
AUGUST TECHNOLOGY CORP	AUGT	NOMETRICS INC	NANO
AXCELIS TECHNOLOGIES INC	ACLS	NOVA MEASURING INSTRMTS.	NVMI
BE SEMICONDUCTOR IND NV	BESI	NOVELLUS SYSTEMS INC	NVLS
BROOKS AUTOMATION INC	BRKS	PHOTON DYMICS INC	PHTN
BTU INTERTIOL INC	BTUI	PHOTRONICS INC	PLAB
CERPROBE CORP	CRPB	PRI AUTOMATION INC	PRIA
CFM TECHNOLOGIES INC	CFMT	QC OPTICS	OPC
CHIPPAC INC CL A	CHPC	QUAD SYSTEMS CORP	QSYS
COGNEX CORP	CGNX	RELIABILITY INC	REAL
COHERENT INC	COHR	ROBOTIC VISION SYSTEMS	ROBV
COHU INC	COHU	RUDOLPH TECHNOLOGIES	RTEC
CREDENCE SYSTEMS CORP	CMOS	SEMITOOL INC	SMTL
CYMER INC	CYMI	SILICON VALLEY GROUP INC	SVGI
DATA I/O CORP	DAIO	SPEEDFAM-IPEC INC	SFAM
DAW TECHNOLOGIES INC	DAWK	SPIRE CORP	SPIR
DUPONT PHOTOMASKS INC	DPMI	TEGAL CORP	TGAL
ELECTRO SCIENTIFIC IND	ESIO	TERADYNE INC	TER
ELECTROGLAS INC	EGLS	TRIKON TECHNOLOGIES INC	TRKN
EMCORE CORPORATION	EMKR	TRIO-TECH INTERT	TRT
ENTEGRIS INC	ENTG	ULTRATECH STEPPER INC	UTEK
ESTERLINE TECHNOLOGY CP	ESL	VARIAN SEMICONDUCTOR	VSEA
FEI COMPANY	FEIC	VEECO INSTRUMENTS	VECO
FSI INTERTIOL INC	FSII	ZYGO CORP	ZIGO

APPENDIX B

Semiconductor Capital Equipment Company Relative Valuations



*Sample limited to profitable companies.

APPENDIX C
Semiconductor Capital Equipment Company Valuation Ratios

All Companies

	<i>Market Value to Revenue</i>	<i>Market Value to Book Value</i>	<i>Market Value to EBIT</i>	<i>Market Value to Net Income</i>
Mean	2.88	3.40	18.95	21.83
Median	1.90	2.54	12.29	16.18
Low	0.12	0.41	5.19	7.87
High	26.50	18.13	69.86	78.13
Count	76	76	50	49

Small-cap Companies

	<i>Market Value to Revenue</i>	<i>Market Value to Book Value</i>	<i>Market Value to EBIT</i>	<i>Market Value to Net Income</i>
Mean	1.66	2.23	16.72	18.76
Median	1.30	1.62	11.98	14.10
Low	0.12	0.41	5.19	7.93
High	5.48	5.08	61.23	66.13
Count	27	27	12	13

Large-cap Companies

	<i>Market Value to Revenue</i>	<i>Market Value to Book Value</i>	<i>Market Value to EBIT</i>	<i>Market Value to Net Income</i>
Mean	3.55	4.05	19.65	22.94
Median	2.10	2.90	12.83	17.32
Low	0.53	0.78	5.30	7.87
High	26.50	18.13	69.86	78.13
Count	49	49	38	36



NEWCAP PARTNERS INC.
PRIVATE INVESTMENT BANKERS

NewCap Partners, founded in 1987, is a private investment banking firm located in Los Angeles, California, (USA) with offices in Orange County and Silicon Valley. NewCap Partners is a “broker-dealer” registered with the U.S. Securities and Exchange Commission (SEC) and the National Association of Securities Dealers (NASD).

NewCap Partners provides specialized strategic merger, acquisition and divestiture services to buyers and sellers. NewCap Partners also privately places debt and equity securities for its clients to finance expansion, acquisitions, buyouts, recapitalizations and reorganizations. NewCap Partners also specializes in business transactions in the Greater China Region. NewCap Partners is staffed by a team of senior, experienced and professional investment bankers. For additional information on NewCap Partners visit our website at www.newcap.com or contact any of the individuals listed below.

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