SHAKER INVESTMENTS

A RESEARCH-DRIVEN GROWTH APPROACH TO EQUITY PORTFOLIO MANAGEMENT

Volume 4 Issue 2

Note From Edward Hemmelgarn

This issue of our newsletter focuses on electronic manufacturing service companies (EMS), which we believe will be beneficial to our expected pickup in economic growth. Today's EMS companies also exemplify the ability of U.S. corporations to quickly restructure during an economic downturn, while maintaining the resiliency to participate in an economic recovery.

One company that appears to have done this exceptionally well is EMS market leader Flextronics, whose Senior Vice President of Finance is interviewed in this newsletter.

At Shaker Investments, our small and mid-cap portfolio has achieved three straight quarters of positive returns, and is handily outperforming its benchmarks in 2003. Our focus has always been on companies that are well-positioned to grow at faster rates than the overall economy. In recent months our intensive research has led us to an overweighting in both the technology and healthcare sectors.

We believe that the current economic rebound is sustainable and will accelerate over the next 6-12 months because of the combined effects of the many economic stimuli that are in place. Furthermore, we believe that well positioned small and mid-cap stocks will continue to lead the market. We also believe that investors will be less prone now than they were five years ago to indiscriminately drive up sectors and will focus more on individual companies with superior attributes. All three of these trends favor Shaker Investments' approach to portfolio management. S

EMS Industry – Restructuring in preparation for an end market rebound

Harish Aiyar, Ph.D., Research Associate

Although corporations have yet to see a broad uptick in top line growth, the cost-cutting initiatives many have undertaken are beginning to bear fruit and should accelerate earnings going forward. The electronics manufacturing services (EMS) industry is no exception.

EMS companies provide all facets of the manufacturing process — from design, assembly and testing to distribution and repair services — to original equipment manufacturers (OEMs). The industry has evolved over the past two decades from a "safety valve" for OEMs to an integral partner. Many OEMs use EMS companies to the extent that they never touch the end product. The global EMS market is estimated to be $100Bln (2003) and is expected to grow to $170Bln by 2006.

During the late 1990s, EMS companies added capacity (through acquisitions and organically) at a record pace, only to face a dramatic downturn in demand. That required these companies to shutter facilities and reduce their workforce. On average, EMS companies have laid off 25-35% of their total workforce and have removed nearly 25-35% of capacity. Despite these measures, capacity utilization remains low (50-60%) and industry restructuring activity continues.

Inventory turns, cash conversion cycle and debt-to-capital measures reveal how effective restructuring activities have been, and highlights the potential leverage in the model. On average, inventory turns for the EMS group declined from a peak of 9.6x in 1998 to 4x in mid-2001. Since then, the group has reduced inventories each quarter and turns have improved to greater than seven times. During this same time period, the cash conversion cycle for the group increased from 42 days to a peak of 73 days. Since then, the average cash cycle has returned to historic/pre-bubble levels. As a whole, balance sheets are strong, with long-term debt to total capital near 10-year lows at 20%.

However, organic top line growth remains anemic for the group. Many EMS companies have demonstrated top line growth in recent quarters, but this was primarily a result of mergers/acquisitions or OEM divestiture deals. Weak end-market demand, low capacity utilization as well as pricing pressure, have combined to compress margins. Average gross margins have declined from nearly 10% in March'99 to 6% in March'03. As utilization improves, margins should return to historic levels.

Major EMS companies include Flextronics, Celestica, Sanmina-SCI, Solectron, Jabil Circuit, Benchmark and Plexus. These companies differ in regard to scale, service offering, end market exposure, geographic presence, and customer diversity.

Flextronics is the largest EMS company, rivaling many OEMs in annual revenue. The company has the largest footprint in low-cost regions, boasts some of the best operational metrics in the industry, and has a broad customer base. In 1Q03, its top 10 customers accounted for roughly 50% of revenue. Risks include its exposure to consumer spending and its printed circuit board fabrication business.

Jabil Circuit has been aggressive over the past year on the acquisition front (e.g. Philips and Valeo outsourcing deals), which has helped to diversify its end market exposure. As with Flextronics, a key risk is its growing consumer exposure.

The long-term outlook for this industry is positive. EMS growth opportunities are real, and will come from secular outsourcing trends, industry consolidation, OEMs consolidating vendor relationships, new markets and end market demand. Although pricing pressure will persist, EMS companies will benefit from increased switching costs for customers if they differentiate their offering with higher margin, value-added services. Those EMS companies with a diverse customer and manufacturing base, as well as strong operational metrics, will emerge as winners. S

PORTFOLIO AT-A-GLANCE

As of June 30, 2003

TOP 10 HOLDINGS

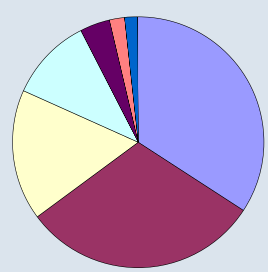
- Caremark Rx Inc.
- International Rectifier
- Microchip Technology
- Invitrogen Corp.
- Fair Isaac
- Xilinx Inc.
- Intersil Corp. - CL A
- Qiagen, N.V.
- Royal Caribbean Cruises
- McKesson HBOC, Inc.

AVERAGE PORTFOLIO CHARACTERISTICS

Number of Holdings	36
Wtd Forward P/E	22.6
Wtd Sustainable Growth Rate	26%
Median Market Cap	2.4 bil
Wtd Price Book Value	3.3

SECTOR WEIGHTINGS*

- Technology 34.3%
- Healthcare 30.3%
- Consumer Discret 17.0%
- Financial Services 10.9%
- Producer Durables 3.9%
- Other Energy 1.8%
- Materials & Process 1.8%



*based on sector definitions by Frank Russell Co.

Executive Insights

Tom Smach, Senior Vice President of Finance
Flextronics, [NASDAQ: FLEX]

Q: *How has the role of EMS companies like Flextronics changed over the past ten years?*
A: A decade ago, original equipment manufacturers (OEM) primarily used electronic manufacturing services (EMS) companies to offload their peak manufacturing requirements and to balance internal capacity needs. Since then, OEM companies have significantly increased the outsourcing of their core activities, and look to EMS companies to provide fully integrated supply chain services.

Q: *How large is the EMS market in which Flextronics operates, and what is your share?*
A: The estimated current value of the EMS market is around $100 billion, which represents roughly one-eighth of the $800 billion worldwide electronics industry. Flextronics is by far the largest EMS provider in this a highly fragmented industry, and currently owns 14% of this market. Other tier-one EMS providers include Solectron Corp., Celestica, Sanmina-SCI, Jabil and Hon Hai.

Q: *How does Flextronics' vertical integration model differ from those of its competitors? Is this approach gaining acceptance among your OEM customers?*
A: Flextronics has been an industry pioneer in the move to full vertical integration. This has enabled us to provide customers with a suite of services that covers nearly the full spectrum of the supply chain. On the front end, we offer our customers full product design, component manufacturing for printed circuit boards, and design and manufacturing of plastic and metal enclosures. On the back end, we provide repair and warranty services, as well as logistics functions that help customers reduce redundancy throughout the supply chain. As outsourcing becomes increasingly popular among OEM companies, our vertical integration model continues to gain momentum.

Q: *What are the advantages of Flextronics' worldwide "industrial park" approach?*
A: Flextronics has developed integrated industrial parks to maximize the advantages of our global, large-scale, high volume capabilities, and to reduce production costs. These parks are strategically positioned in regions of the world where real estate prices, utilities and manufacturing costs are low, and often are located in low tax jurisdictions. The ability to manufacture and ship products directly from our parks significantly reduces overall freight costs. In addition, decreased shipping lag time provides our OEM customers with two key benefits: higher flexibility to respond more rapidly and effectively to consumer demands and decreasing time-to-market.

"industry studies and customer surveys anticipate that during the next several years, outsourcing will grow to nearly 70%."

Q: *Is price the main driver for an OEM when it is time to choose an EMS partner?*
A: Pricing plays a relatively minor role in this decision process, as OEMs are able to obtain market pricing from virtually any supplier. In our business, relationships and capabilities are the main determinants. Flextronics' value proposition is our ability to fully understand our customers' needs, and to rapidly deliver integrated supply chain management solutions that significantly reduce costs and time-to-market.

Q: *How would you describe your business development strategy?*
A: In the electronics segment, acquiring new customers is not the primary focus of our sales and marketing efforts, as we currently have significant relationships with the majority of the key OEM players. We prefer to concentrate in further expanding our existing relationships and winning additional outsourcing contracts primarily from our established customer base.

Q: *Are there any specific markets that Flextronics has not historically participated in, that you hope to penetrate in the future?*
A: We believe that the electronics industry will continue to be, by far, the largest outsourcer. There are certain attractive segments in which we are actively trying to expand our presence, and these include semiconductor capital equipment, automotive, medical, and industrial.

Q: *Has SARS impacted your business?*
A: SARS has created some inconvenience as a consequence of our need to implement precautionary measures worldwide. From an operational perspective, however, it has not caused interruptions of our global operations or had an adverse economic impact.

Q: *What do you perceive to be Flextronics' largest opportunities, looking ahead?*
A: Our biggest opportunities centers around the continuing trend in outsourcing. Currently, the worldwide electronic market outsources only 14% of its manufacturing. However, reliable industry studies and customer surveys anticipate that during the next several years, outsourcing will grow to nearly 70%. The growth of this secular trend, combined with the ongoing expansion of our vertical integration model, will enable us to significantly increase our revenue stream from supply chain services.

Q: *What area of the outsourcing market is growing the fastest?*
A: Original design manufacturing (ODM) is growing at a faster pace than any other service. Flextronics is well positioned to take advantage of the significant potentials for revenue growth offered by this sector.

Q: *Are acquisitions included in Flextronics' growth plan?*
A: Acquisitions aren't slated to play a major role in Flextronics' current strategic plans, although we are prepared to consider attractive opportunities. However, our major focus now is to continue to add capabilities and expand services, rather than to purchase market share.

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