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Consolidation in a **Global Marketplace**

Melinda Rose

As M&A activity heats up, optics and photonics companies are increasingly looking across borders for a good strategic fit—and that creates both challenges and opportunities.

After a three-year drought following the 2008 worldwide recession—when the industry focused mainly on cutting costs and doing more with less—optics and photonics companies are once again increasingly eyeing mergers and acquisitions (M&A) as a growth path. Over the past five years, as the global economy has recovered, companies, "having tapped their organic growth opportunities, are putting their cash to work inorganically," according to Linda Smith, president and founder of Ceres Technology Advisors, a corporate finance consulting firm based in Needham, Massachusetts, USA, that provides M&A advice and guidance in the photonics industry.

"There's an availability of capital on the balance sheets of large companies that need to innovate and to fill holes in their product lines, and an availability of companies with technology and product development teams that would have more commercial value with the distribution channels and working capital of these large companies behind them," observes Smith. "So, given those two things, it's a healthy environment for M&A." That's showing up in the numbers. In the optical components market, Smith says, her firm tracked 28 reported significant M&As valued at US$1.6 billion in 2010. By 2014, the number of significant deals had expanded to 169, with a value of US$8.4 billion.

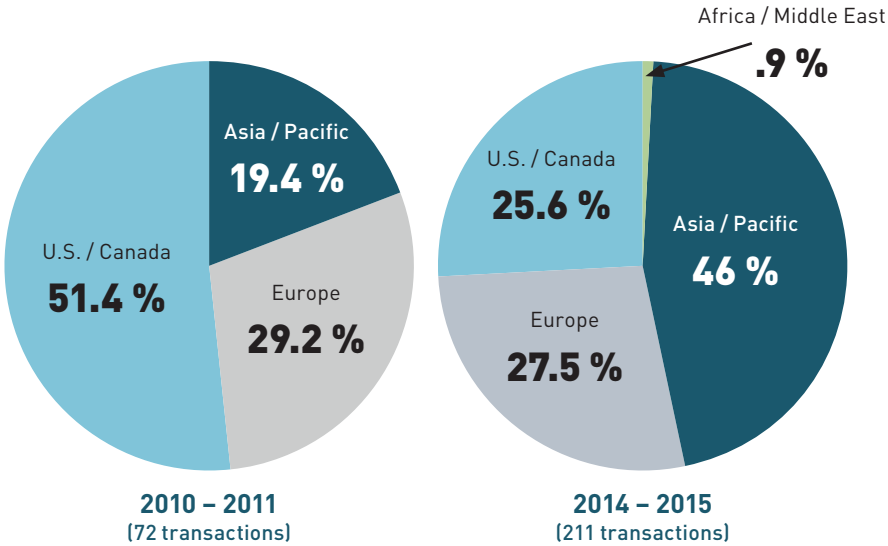
But tempting as consolidation can look as way to quash duplication of effort and to boost innovation and profits, the urge to merge or acquire—especially in a global marketplace—calls for a careful consideration of risks, rewards and corporate compatibility.

Sizing up risks and opportunities

Above all, says Smith, "the acquisition has to be a strategic fit with the business"—for example, a product line fit, an opportunity to open a new distribution channel, or the chance to buy a strong patent portfolio. Then, she continues, it comes down to price, and to an assessment of the risks. In a transaction that crosses borders, these can include financial risks such as currency translation; economic risks such as the debt balance and volatility of the target company's economy; and political risks ranging from government corruption to unstable leadership.

Often, these factors can dramatically affect perceptions of an acquisition's prospects, in some geographically distinctive ways. For example, a company in Germany, where government debt weighs in at less than 75 percent of gross domestic product (GDP), might require a higher return than otherwise in acquiring a company operating in Japan, where government debt approaches 250 percent of GDP. By contrast, a U.S. company sizing up a European acquisition candidate might look carefully at currency volatility, which, says Smith, "maps to higher financial risk and lower valuation."

Smith also stresses the value of a skilled workforce. Technology clusters—centered in places like Rochester, N.Y. (USA), Shenzen (China) and Jena (Germany)—offer communities not only of skilled employees, but also of domain expertise and collaboration. "Buying companies and moving them away from those epicenters to realize lower costs can be risky," warns Smith, "or even destroy the value of the acquired business if innovation and product and service quality are not maintained. I think strategic buyers understand that well, and are careful not to do it."



M&A transactions in the photonics sector

Percentage of photonics sector merger & acquisition transactions by buyer/investor geography, 2010–2011 vs. 2014–2015. Source: CERES Technology Advisors

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A skilled workforce carries particular weight in acquisitions, Smith notes, because of the current shortage of optical engineers, technicians, designers and manufacturing specialists. "These teams that have been built are extremely valuable. It would take companies years and years, if ever, to replicate them," she says. "So I think strategic buyers … value most highly the people, the technical team, and the intellectual property, be it patents or know-how, that they've created, that keeps the competitors at bay."

Who's buying—and where

Taking all of that into account, Smith does see some trends in the M&A marketplace for optical components. For one, she says, "you see a trend of Asia becoming more acquisitive, and the U.S. becoming less as a percentage of the total transactions," she said.

Overall, says Smith, "there seem to be two classes of optical component companies. There are those that are growing at inflation-adjusted GDP, like five or six percent, year over year, and then there are the ones that are going at 20, 30 or 40 percent."

Companies growing at GDP include component suppliers for markets like life sciences instrumentation, medium low-volume medical devices and metrology, while companies that supply consumer electronics, communications, solid-state lighting

and point-of-care medical device markets are growing faster.

"But the U.S. manufacturers don't seem to be playing as well in those markets as the Asian manufacturers," she said. Most of the sellers, meanwhile, are still based in the United States and Europe—a reflection, she suggests, of the amount of innovation still going on in the mature technology clusters in those regions, and the skilled workforces located there.

As a specific example of an Asian company that has put the pieces together in recent acquisitions, Smith points to Han's Laser, a Chinese company that her firm, Ceres, guided through an acquisition of two subsidiaries being divested by the U.S.-based, global-scope firm GSI Group. Control Laser (USA) and Baublys (Germany) supply laser material processing systems for marking, engraving and micromachining to manufacturers of medical devices, auto parts, microelectronics and other industrial and consumer goods. Their manufacturing, research and development and sales operations are located in the United States (Florida) and Germany.

"This was a small acquisition, but with big strategic implications for Han's," Smith says. "It got them two big brands and an installed base of customers in geographies where they had little to no presence. Further, they were able to acquire engineering and applications development teams that they never would have been able to recruit organically."

The view from Edmund Optics

Anthony Artigliere has a different perspective on M&A in the optics business: as a corporate decision-maker on both the buy and sell sides. As director of the Optics Business Unit at the global firm Edmund Optics, Artigliere has worked in the industry for 30 years. And over that time, he says, "Not all the consolidation that I've observed has been healthy. And by healthy I mean creating additional value."

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Photonics M&A transactions
by market segment, 2010–2015

37.3%	Materials & coatings
21.3%	Optics
17.3%	Cameras, detectors & sensors
7.6%	Lasers
6.1%	Optomechanics
6.1%	Services & software
4.3%	Integrated optics & MEMS

Source: CERES Technology Advisors

At present, according to Artigliere, Edmund Optics has approximately 50 percent of its business in the Americas, with the balance roughly split between Europe and Asia. He says that, in the longer term, the company hopes to move toward a more even balance among the three regions, which "would provide some level of protection against currency fluctuations."

Artigliere describes Edmund Optics' M&A philosophy as "relational, opportunistic and culturally sensitive." Relational in that it has to make sense with the company's existing business and its customers, and opportunistic in that it fits into a strategic growth area, an emphasis that echoes some of Linda Smith's observations. But Artigliere also stresses the cultural dimension.

"A mismatch between cultures," he says, "could easily derail the benefits of a potential acquisition. … So we put a high premium on the cultural fit." Ensuring such a fit, he suggests, requires a proactive effort by the company, including training and communications to instill core corporate values, and the leveraging of technological tools such as videoconferencing and common software platforms, and more programmatic tools such as travel and employee rotation and talent exchange programs. And, says Artigliere, "we're also extremely comfortable at Edmund Optics experimenting with new ideas."

While Edmund Optics has observed companies chasing low labor costs, Artigliere said, one has to weigh those savings against expenses that include product quality, labor turnover and technology development. And, as automation tools become more readily available and manufacturing processes become less labor-dependent, hourly labor rates become less important.

"In the end," he says, "it's a complicated decision that needs to factor in equipment, labor, those other hidden costs, to ensure the benefits are real and worthwhile." OPN

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