



It's well known that Cisco Systems Inc. customers are just about forced to buy optics from Cisco, and at hefty markups. The practice is an annoyance to some customers - and now a report suggests investors should start worrying about it, too.

Cisco's practice of reselling optical modules represented 25 percent of the company's operating income in fiscal 2006, according to *Andrew Schmitt, principal of Nyquist Capital*, in a report being issued today.

To put it another way: Cisco's pro forma earnings per share for fiscal 2006 totaled \$1.12. The figure drops to 86 cents when you take out profits from modules, Schmitt claims.

The modules in question connect a linecard to an optical fiber, and they come in standard formats such as GBIC and SFP. Cisco buys these modules from vendors like *Finisar Corp.*, then resells them to Cisco customers, charging a massive markup. Along the way, Cisco does almost nothing to the module beyond adding some identifying information (*which is important - more on that later*).

Cisco doesn't consider optical module reselling to be a separate business unit. But Schmitt claims the practice generates some eye-popping revenues - \$2.5 billion in fiscal 2006, or 9 percent of Cisco's total, he believes.

Cisco officials wouldn't comment, noting they don't publicly disclose this level of detail for their operating results.

Schmitt isn't accusing Cisco of any chicanery here. *"In a sense, there's nothing wrong,"* he says. *"They have done an excellent job of taking their strong position in Ethernet and extracting value out of what is a commodity device."*

But the margins on optics are so high - up to 90 percent gross profit, Schmitt figures - that they're padding the company's profit growth, he says. Investors looking at the raw numbers would think Cisco's profits are increasing because of technology when, in fact, a good chunk of the increase comes from the optics markup.

It's analogous to the situation at *Lucent Technologies Inc.*, where profits are sometimes propped up by gains from the company's pension fund. In both cases, something outside the company's normal business is boosting income - and the X factor isn't necessarily sustainable.

"This has really been an engine for their earnings growth - and how long is that growth going to continue?" Schmitt says of Cisco's optics business. *"If you measure return on invested R&D for Cisco, do you include this business or not?"*

It could be an important question. When Cisco's module markups are factored out, its profit growth during the last three years doesn't look so steep, by Schmitt's calculations. And that would imply the stock is overvalued.

Now, why does Cisco get away with reselling optics at these prices in the first place?

The answer dates back to 2003, when the company tweaked its Internetwork Operating System (IOS) to reject optical modules that didn't come from Cisco. So, even though the standards-based modules are supposed to be interchangeable, Cisco customers have had to buy their modules from Cisco. (See *Use Our Optics, or Else!*)

The practice began with the GBIC and SFP module types for Gigabit Ethernet, and it's expanded to the Xenpak and X2 modules for 10-Gbit/s Ethernet, Schmitt says. Cisco's trick is to put identifying information onto the memory chip that's inside each module - Schmitt refers to this as *"copy protection"*, but a 2003 Cisco document used the much more entertaining term, *"Cisco Quality ID"*.

So, Cisco can charge a premium for its optics. But it gets better: Since Cisco represents the majority of optical module sales - particularly when it comes to Ethernet - it's able to buy at a low price from the module manufacturers. The result is a nice fat margin for very little effort.

(Your word-of-the-day moment: The term Schmitt bandies about is "Monopsony", a situation in which multiple suppliers are trying to sell to one customer. It's like the mirror image of a monopoly. Schmitt figures components suppliers will have to consolidate in order to reduce Cisco's monopsony power.)

Market forces might already be in motion that could keep Cisco's module margins in check. As one might expect, Asian entrepreneurs have begun cloning Cisco-approved optics, Schmitt says. Cisco hasn't filed any lawsuits yet - and the law might not come to Cisco's aid, anyway. Schmitt sees parallels with the companies that sell knockoff ink and toner cartridges for printers, a business that's stood despite legal challenges.