

Opto Circuits India Ltd - Stock Analysis (Dec'08)

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Synopsis

Opto Circuits is a small company in Medical Electronics industry with focus in the niche areas of invasive (coronary stents) and non-invasive (sensors, patient monitors) segments. Prior to '2002 Opto Circuits's Revenues were less than Rs. 50 Cr. Today Revenues stand at Rs.468 Cr, with exports accounting for more than 95% of Revenues. Opto Circuits is based in Bangalore India and operates out of offices established in USA, Europe, South-East Asia, Latin America and the Middle East and boasts of a strong international distribution network present in over 70 countries.

[The Numbers](#) speak for themselves. Net profit margins are healthy (over 28%), great return on equity (~ 40%, unmatched in the Medical Electronics industry), and solid return on invested capital ratios (over 45%). Financial health has been steadily improving over the years with comfortable financial leverage (1.34) and Debt to equity (0.31), with solid Current & Quick ratios. However, Opto Circuits still has a long way to go before it can show loads of excess cash on its books, due to its aggressive business expansion. Free Cash Flow as a percentage of sales is ~6 percent. Opto Circuits fares very well when compared to its peers in this [Peer Comparison snapshot](#).

Though there are [Significant Risks](#) going forward, Opto Circuits has lots of positives going for it. Over the last 7 years since FY2002, Opto Circuits Revenues have clocked a long term sales growth of over 45% while long term EPS growth has galloped at a handsome 60% plus. It has been working steadily grow its business through pursuing organic growth through investments in manufacturing capacities and penetrating into newer markets, supplemented by inorganic growth through judicious acquisitions. To its credit Opto circuits has managed acquisitions so far quite well, drawing synergies by leveraging distribution networks and lower-cost manufacturing bases. There is enough evidence of [Sustainable Growth](#) over the medium term.

Opto Circuits's track record so far evidences early signs of being served by a [Competent Management Team](#). The stock is promising and there's nothing wrong with investing in a young growth company like Opto Circuits, as long as you know what you are getting into. It has a long way to go before it qualifies to be among the Core holdings in anyone's Portfolio. It's a long shot, though one that might just pay you back many times over. **However, this is only *half the story* because even the best companies are poor investments if purchased at too high a price.** We cover [Opto Circuits's stock valuation](#) in the *other half story*.

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Growth

How fast has the company grown?

Opto Circuits is a fast-growing company (FY 08 Sales Rs. 468 Cr) that has emerged as a leading player in the non-invasive Medical Electronics segment, where its product portfolio comprises of sensors, patient monitors, cholesterol monitors, digital thermometers and fluid warmers. Through the acquisition of EuroCor, Germany in 2006, Opto Circuits diversified into the invasive segment, where it manufactures cardiac stents used in the treatment of coronary artery blockages. It also manufactures security systems and optoelectronic equipments and is one of the few companies in India undertaking the design of optoelectronic devices.

Opto Circuit's has been setting a scorching growth pace. From a Sales turnover of Rs. 50 Cr in FY02, Opto Circuits has grown eight-fold to Rs. 460 Cr plus in FY08. All along it has driven growth by aggressive sales of existing products - penetrating new markets and geographies, and simultaneously, it has been driving inorganic growth through expansion of its product lines through judicious acquisitions. It has achieved synergies by leveraging its selling and distribution networks in both the overseas and domestic markets. The company derives 95% of its revenues from the overseas markets, with key markets being USA, Europe, South East Asia and the Middle East.

Opto Circuits Growth Snapshot	FY 02	FY 03	FY 04	FY 05	FY 06	FY 07	FY 08
Sales (Rs. Cr.)	56.51	68.06	102.96	122.84	139.8	251.6	468.1
Year-on-Year Sales growth (%)		20.44%	51.28%	19.31%	13.81%	79.97%	86.05%
3-Year Avg. Sales growth (%)	-	-	-	30.34%	28.13%	37.70%	59.94%
Long term Sales growth (%)	-	-	-	-	-	-	45.14%
PAT (Rs. Cr.)	7	7.56	13.67	19.96	38.65	73.25	131.32
EPS (Rs.)	7.03	6.63	9.98	11.21	14.42	11.89	13.94
EPS -adjusted for splits/bonus (Rs.)	0.91	0.94	1.71	2.49	4.81	7.93	13.94
Year-on-Year EPS growth (%)		3.79%	80.56%	46.10%	92.91%	64.91%	75.85%
3-Year Avg. EPS growth (%)	-	-	-	43.48%	73.19%	67.97%	77.89%
Long term EPS growth (%)	-	-	-	-	-	-	60.69%

Source: Opto Circuits Annual Reports

Although on a small base, the track record is inspiring. Long term sales growth is over 45% with long

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term EPS growth galloping along at over 60%. It has consistently increased Dividends per share and has a unique track record of rewarding shareholders with bonus shares every year for the 7th straight year!

What are the sources of its growth?

We can't just look at a series of past growth rates and assume that they will predict the future - if investing were that easy, money managers would be paid much less, and this stock analysis would be much shorter. It's critical to investigate the [Sources of a company's growth](#).

Non-Invasive business –Strong foundation

Opto Circuits was originally a player in the manufacturing and supplying electronic medical sensors used in patient monitoring systems such as pulse oximeters (which measure the blood oxygen saturation), cholesterol detectors, etc. Its major clients were global original equipment manufacturers (OEMs) such as Philips, Tyco-Nellcor and Epic Medical Equipment. After establishing a strong foothold in the sensor segment, the company forward integrated into the manufacture of patient monitoring systems by acquiring the patient monitoring division of Palco Labs, USA in 2003, which is now named as Mediaid Inc. and operates as a wholly owned marketing subsidiary of Opto Circuits India Ltd.

These two categories (sensors and patient monitors) form Opto Circuit's non-invasive business and contribute 75% of the company's overall revenues. FY08 Revenues from the non-invasive segment were at ~Rs.350 Cr.

Invasive business –Stents-the growth engine

In order to diversify its presence and leverage its global distributor network, Opto Circuits acquired EuroCor GmbH in February 2006, marking its entry into the invasive segment. EuroCor primarily manufactures cardiac and peripheral stents. Its products have the CE mark and are sold in 36 markets across Asia (including India) and Europe, excluding the USA and Japan.

Cardiac stents are primarily of two types: bare metal stents (BMS), which are made of cobalt-chromium or steel and drug eluting stents (DES), which are coated with drugs like paclitaxel and sirolimus that prevent the growth of scar-like tissue. With higher chances of restenosis of the coronary artery with the BMS, cardiologists are increasingly preferring the use of DES, which has drastically reduced the incidence of restenosis in cardiac patients. Opto manufactures both types of stents, with the BMS forming 40% of sales in volume terms and only 20% in value terms. DES, on

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the other hand forms around 60% of the company's total stent volume but contributes 80% in value terms.

With FY08 Revenues being about Rs. 69Cr, the Invasive business contributes ~ 15% to the company's overall revenues.

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Strategic acquisitions –product line extensions while driving synergies

Opto Circuits has effectively used the inorganic route to enhance its product portfolio and geographical reach over the past few years. It has made seven acquisitions in India and abroad since 2001. These include the acquisition of the majority stake in AMDL that has a well-developed distribution network in India, followed by the takeover of the digital thermometer manufacturing unit of Hindustan Lever in 2002. With each acquisition, it has looked to build on market reach and penetration while taking advantage of its low-cost manufacturing base in India.

The Palco Labs, USA acquisition extended its product line into Pulse Oximeters, other vital sign and patient monitoring systems and provided it a strong US distribution network.

Opto Circuits Subsidiaries Snapshot (Rs.Cr.)	Country	Year of Acquisition	FY 08 Revenues	FY 08 Net Profit
Mediaid Inc	USA	FY 04	69.46	2.67
EuroCor GmbH	Germany	FY 06	68.99	9.06
Advanced Micronic Devices*	India	FY 02	52.61	1.04
Altron Industires Private Lts	India	FY 05	0.13	-0.11
Devon Innovations Private Ltd	India	FY 08	3.43	0.53
Ormed Medical technology Ltd	India	FY 08	2.96	0.31
Criticare Systems	USA	FY 09	-	-

* 60% stake

Source: Opto Circuits Annual Reports

EuroCor acquisition marked Opto's entry into the invasive segment. EuroCor primarily manufactures cardiac and peripheral stents. Its products are CE approved and has a strong distribution network in 36 countries (except US & Japan). Altron is an ISO 9001 company engaged in Electronics Manufacturing Services (EMS) having its state-of-the-art manufacturing facility at Electronic City, Bangalore. Opto expanded its medical technologies portfolio by acquiring domestic manufacturing companies Devon Innovations Pvt. Ltd. and Ormed Medical Technology Ltd which manufacture products like catheters, stone graspers, stone baskets and dilator sets mainly in the areas of urology, gastroenterology and gynecology and orthopedics.

Opto has recently completed (April 2008) the \$70 million acquisition of Criticare, a US-based publicly listed company specialising in vital signs and gas monitoring instruments. The Criticare acquisition

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will expand Opto's product portfolio further in the non-invasive segment to include anaesthesia monitors and central station systems, etc. Criticare reported revenues of \$19.4 million in H1FY2008 with an OPM of around 10%. Criticare has established customer relationships with respectable OEMs such as Medrad and Cardinal Health in USA and has its own international distribution network.

Strong Distribution Network

Opto Circuits drives its US market operations through Mediaid and boasts of a distribution network worldwide of around 200 plus dealers, of which around 160 plus are in the US alone. Opto Circuits has opened offices in Europe, South-East Asia, Latin America and the Middle East. Market reach and geographic penetration is increasing. Eurocor has a strong distribution network in 36 countries. The Criticare Systems acquisition further strengthens this network, with its 93-strong independent dealer network in 71 countries.

In FY06 Opto Circuits had bagged a distribution and pricing agreement by Defense Personnel Support Centre (DPSC) in Philadelphia, USA for its extensive line of FDA approved products like Spo2 Sensors and Patient Monitoring Devices.

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Opto Circuits Segmentwise Revenues (Rs.Cr.)	FY 04	FY 05	FY 06	FY 07	FY 08	5yr CAGR
Total Revenues	102.96	122.84	139.8	251.6	468.1	46.02%
Core business	58.97	79.15	116.03	201.65	328.69	53.65%
Asia	12.22	27.49	45.4	82.22	182.78	96.66%
Europe	3.54	3.47	14.28	71.22	5.31	10.67%
America	42.35	46.7	55.47	47.34	140.12	34.87%
Domestic & Others	0.86	1.49	0.88	0.87	0.48	-13.57%
Subsidiaries	43.99	43.69	23.77	49.95	139.41	33.42%
Segment Contribution (%)						
Asia	11.87%	22.38%	32.47%	32.68%	39.05%	
Europe	3.44%	2.82%	10.21%	28.31%	1.13%	
America	41.13%	38.02%	39.68%	18.82%	29.93%	
Domestic & Others	0.84%	1.21%	0.63%	0.35%	0.10%	
Subsidiaries	42.73%	35.57%	17.00%	19.85%	29.78%	

Source: Opto Circuits Annual Reports

Asian region is growing the fastest and contribution has steadily increased to almost 40% of consolidated revenues in FY08. Next in importance is the US market that contributes currently about 30% of consolidated revenues. This is slated to go up significantly in FY09 with Criticare contributions. European market penetration should get a strong fillip as the distribution relationships get fully leveraged with Opto's core products along with Criticare and EuroCor products.

How sustainable is this growth likely to be?

Just as critical as it is to investigate the sources of a company's growth rate, it's probably of even greater importance that we question the Quality of this growth.

Competitive advantage in Core non-invasive business

The global market for sensors, pulse oximeters and other patient monitoring systems is worth ~\$2 billion, with the USA contributing ~40% to the total market. (Source: Opto Circuits)

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Sensors: Opto has now emerged as the largest supplier of SpO2 sensors

Opto's sensors are approved by the US Food & Drug Administration (FDA) and also have the European CE mark. The patent for the electronic medical sensors was originally held by Tyco-Nellcor, which expired in 2003, opening up a huge market for players like Opto Circuits. Opto Circuits has emerged as the preferred supplier of these sensors to large OEMs. Apart from supplying its sensors to Tyco-Nellcor (which controls around 85% of the market), Opto Circuits also supplies sensors in USA under its own brand (which forms around 4-5% of the market) and to other OEMs like Philips and General Electric (who hold the balance ~10% of the market).

The SpO2 sensors are used with Pulse Oximeters and with Multi parameter monitors. There is a huge market potential for these sensors as these are accessories that need to be periodically replaced (reusable sensors). There is also a shift towards disposable sensors designed for single use (better quality, more hygienic) of late in cases where the hospital/facility prefers to use a patient-charge disposable product - that is also contributing to the burgeoning demand. The large installed base of pulse oximeters has created a significant amount of demand for the sensors. It is important to note that over time the annual dollar revenue of these sensors has exceeded the annual dollar value of the pulse oximeter equipment. This relationship is true to all medical devices where a disposable trail exists.

As per the company, post its FDA approval, Opto has now emerged as the largest supplier of SpO2 sensors. Opto's sensors are sold across the world through over 200 distributors across 36 countries, with around 160 of the distributors in the USA alone. Through its strong distributor network and an increasing trend towards lower-cost substitutes, Opto hopes to expand its market share from the current level of 4-5% to 10% over the next few years, allowing the sensor revenues to grow at 30-35% for the next two-three years. Opto Circuits makes gross margins of around 65-70% on its sensors, while operating margins are around 30-35%.

Patient monitors: New launches to fuel growth

Through the acquisition of the patient monitoring division of Palco Labs in the USA (renamed MediAid Inc.), Opto entered the patient monitors segment, which now forms ~40% of its non-invasive segment revenues. Opto makes patient monitors like pulse oximeters (which measure the blood oxygen saturation), other vital sign monitors, cholesterol monitors, digital thermometers etc. and sells them under its own brands in markets across the world. Tyco-Nellcor is the major player in this segment as well, controlling around 70% of the market, another Chinese player has 15% of the market, Opto controls 2%, while the balance is fragmented amongst various players. Opto also has received Section 510(K) US FDA approval on two of its new generation range of Pulse Oximeters. This enables Opto to market its M30 and M34 Models of Pulse Oximeters in the United States which is the largest market for these products.

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Acquisition of Criticare to widen product portfolio in non-invasive segment

The Criticare acquisition expands Opto's product portfolio further in the non-invasive segment to include anesthesia monitors and central station systems etc. Criticare has established customer relationships with respectable OEMs such as Medrad and Cardinal Health in the USA. During fiscal 2007 Criticare sold its products, principally to hospitals, in over 71 countries through over 93 independent dealers. Criticare reported revenues of \$19.4 million in H1FY2008 with an OPM of around 10%. Through shift of manufacturing (currently outsourced to Taiwan & Ireland) and rationalisation of Criticare's distribution force, Opto hopes to bring the margins of Criticare in line with its own margins within a year. Through the launch of patient monitors in USA and through the execution of various new international orders, Opto expects Criticare to grow by 30-35% for the next few years. Opto also plans to incur Rs. 30 Cr. in capital expenditure (capex) on Criticare in the first year following the acquisition.

With similar margins and cost structure as for the sensor business, Opto expects this business to grow strongly on the back of innovative new product launches and an increased market penetration.

Invasive Business – future growth engine

The global market for stents is estimated at \$10 billion annually, with coronary stents contributing 80% and peripheral stents forming the remainder 20%. The market is growing at 14-15% and is estimated to reach \$16 billion by 2012.

(Source: Opto Circuits)

While USA is the largest market forming 50% of the total global market, Europe (30%) and the rest of world (ROW;10%) also present a huge market opportunity. The major global players are Johnson & Johnson (J&J), Boston Scientific, Abbott and Medtronic. However, only J&J and Boston Scientific have their stents approved in the USA. While Boston Scientific controls 60% of the USA market, the balance is with J&J.

The Indian market, dominated by J&J and Medtronic reported sales of around 80,000 stents in 2006, representing a market of ~Rs. 400-500 Cr. Apart from the afore-mentioned players, Bangalore-based Vascular Concepts has a significant presence in the domestic market. Opto currently has a market share of ~5% in the domestic market and through attractive pricing discounts hopes to garner a market share of 15-20% in the next two years.

Opto's stents are of superior quality

Opto's stents are also sold in 25 European countries and other ROW markets such as the Middle East, South America, Latin America and Asia. Opto's DES stents are reportedly quality wise superior as compared to other stents in the market, as they are more biocompatible, less allergic and do not cause

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metallic bleeding and are hence gaining increasing acceptance by cardiologists. Opto has also been conducting live workshops, conferences and seminars to promote its stents. These events are also being used as launch pads for some of its new products.

DIOR: a revolutionary product –launched Feb 2007

Opto Circuits has a number of products in the invasive segment. Most of these products are yet to be introduced and hold substantial potential especially in the semi-regulated markets. Notable amongst these is DIOR, a drug eluting balloon catheter used in the treatment of coronary in-stent restenosis. Restenosis is usually treated by placing a new stent within the existing one. The use of DIOR eliminates the use of the second stent, thereby improving the long-term prognosis.

Opto is the only company in the world to have obtained the CE mark for DIOR, enabling it to sell DIOR in the European countries and capture a large market. With no competition expected in the short-term, the revenue potential for DIOR is very large, as the product awareness and acceptance increases. Opto also plans to launch DIOR in USA and has initiated clinical trials on DIOR, which are required to obtain the US FDA approval. The company plans to spend \$20 million on these clinical trials and will write off the expenses over a five-year period once the product gets commercialised in the USA around 2010.

Huge Domestic market potential

Given India's growing population and the fact that there are close to a million hospital beds in India (marginally more than the US) for a population which is over four times the US population, there exists immense scope to supply patient monitoring devices, sensor probes and other medical equipment to the Indian hospitals. Besides, the domestic market for stents is promising. The Indian market, dominated by J&J and Medtronic reported sales of around 80,000 stents in 2006, representing a market of ~Rs. 400-500 Cr. Opto currently has a market share of ~5% in the domestic market and through attractive pricing discounts hopes to garner a market share of 15-20% in the next two years.

Opto's domestic market product sales are driven through its subsidiary Advanced Micronic Devices Limited (AMDL), a listed Indian company. AMDL has a 250 member marketing and sales team spanning across the country and Opto leverages this extensive network to drive sales.

Growing Innovation focus - R&D, licenses, trials and Patents protection

The two significant overseas acquisitions EurCor in 2006 and Criticare in 2008 establishes Opto circuits firmly on the path of product innovation through focused R&D.

In FY 2007 and FY 2008, the company spent an amount of Rs. 12.6 Cr and Rs.18.5 Cr towards product development, appraisal, authentication, deliveries, patents, licenses, trials and studies at

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EuroCor GmbH, MediAid, Advanced Micronic Devices and Opto Circuits (India) Ltd. for getting the necessary approvals with competent authority which were capitalized as intangible assets and amortized over the estimated useful life of five years. That's a significant 4-5 percent of annual sales. EuroCor has received a patent for its Taxcor DES product which the company claims is far superior to that of its competitors. The patent is for 20 years, due to expire in 2023. The company is currently working on development of a fully biodegradable coronary stent implant (RESORB project) & Renal stenting (a new drug coated renal stent)

The recent Criticare acquisition provides significant contributions on this front. Criticare has been spending on research product development and engineering on an average 7-10% of annual sales. Criticare has 20 issued U.S. patents and 1 U.S. patent pending. The Company's U.S. patents expire between 2007 and 2022. Criticare also has 14 issued foreign patents and 9 foreign patent applications pending.

Niche Segments -Competitive barriers work to Opto's favour

Opto Circuit seems likely to sustain its growth rate because of its focus on niche segments in the Invasive and non-Invasive Medical Electronics industry. Certain specialized skill sets in terms of technology, design, licenses, trials and regulatory approvals are needed in these businesses and the gestation period is long –which serve as major entry barriers. Getting USFDA and CE approvals for several products (core business and that of subsidiaries) has been big advantages for Opto Circuits. For example any new entrant entering the industry today with all the technological skills, will usually take a minimum of 18-24 months before FDA regulatory approvals can be obtained and supply started in the US markets.

And unlike the established competitors from developed markets, Opto Circuits also has the advantage of a low cost manufacturing base. Opto has been strategically working to augment its manufacturing capacities and capabilities towards creating an efficient and productive manufacturing base. In addition to its two existing manufacturing facilities (both enjoying 100% EOU status), Opto acquired Alton Industries Pvt. Ltd. in 2004. Altron is an ISO 9001 company engaged in Electronics Manufacturing Services (EMS) having its state-of-the-art manufacturing facility in Bangalore.

In FY 2007 Opto Circuits got a formal approval from the Government of India to setup sector specific SEZ for manufacture of electronic hardware near Mysore over an area of about 200 acres. The activities proposed in this SEZ are Electronic Hardware manufacturing with a focus on Medical Electronics. Opto Circuits has also proposed its 2nd SEZ for electronic hardware in the town of Hassan in Karnataka. There is a visible trend among the OEMs in this sector to outsource the design and manufacture of opto-electronic devices and value-added subsystems to fully integrated, independent manufacturers. If this trend gathers momentum a niche manufacturer like Opto Circuits

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could be a significant beneficiary and is well-placed to take advantage of emerging outsourcing opportunities.

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Profitability

Profitability is the second, and in many ways, the most crucial, part of our Analysis framework. How much profit is the company generating relative to the amount of money invested in the business - the returns? This is the real key to separating a great company from average ones -the higher that return, the more attractive that business.

Net profit Margins and comparing cash flow from operations to reported earnings per share are good ways to get a rough idea of the company's profitability (because cash flow from Operations represents real profits!). But neither account for the amount of capital that's tied up in the business, and that's something we cant ignore. We need to know how much economic profit the company is able to generate per dollar/rupee of capital employed because it will have more excess profits to re-invest which will give it an advantage over less-efficient competitors.

Opto Circuits Profitability Snapshot

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Opto Circuits Profitability Snapshot	FY 02	FY 03	FY 04	FY 05	FY 06	FY 07	FY 08
Operating Margin (%)	17.71%	17.47%	17.91%	21.25%	33.73%	33.89%	32.54%
Net Margin (%)	12.39%	11.11%	13.28%	16.25%	27.65%	29.11%	28.05%
Asset Turnover (x)	1.14	0.96	1.21	1.28	0.85	0.88	1.05
Return on Assets (%)	14.07%	10.63%	16.06%	20.80%	23.49%	25.72%	29.57%
Financial Leverage (x)	1.40	1.76	1.77	1.58	2.07	1.34	1.34
Return on Equity (%)	19.71%	18.66%	28.41%	32.87%	48.63%	34.47%	39.73%
Cash Flow from Operations (Rs. Cr.)			7.95	12.71	1.99	-8.8	39.64
Capital Expenditure (Rs. Cr.)			3.18	4.54	-1.33	10.59	10.68
Free Cash Flow (Rs. Cr.)			4.77	8.17	3.32	-19.39	28.96
Free Cash Flow/Sales (%)			4.63%	6.65%	2.37%	-7.71%	6.19%
Invested Capital (Rs. Cr.)	35.89	51.59	53.56	48.07	89.37	203.19	303.90
Return on Invested Capital (%)	25.02%	19.65%	31.37%	49.20%	49.10%	39.70%	46.79%
Equity Dividend (Rs.Cr.)		3.41	4.65	6.78	12.54	31.23	48.33
Dividend per share (Rs.)		2.99	3.39	3.81	4.68	5.07	5.13
Dividend Payout (%)		45.11%	34.02%	33.97%	32.45%	42.63%	36.80%

Source: Opto Circuits Annual reports

There are these 3 levers that can boost Return on Equity (ROE) - net margins, asset turnover, and financial leverage. (Because $ROE = \text{Net Margin} \times \text{Asset Turnover} \times \text{Financial Leverage}$).

Opto Circuits has shown steady improvements on Net Margin front but recorded a quantum jump from ~16% in FY05 to over 27% in FY06. It has since maintained Net margins at around 27-29%. While Asset Turnover has dipped in recent years before recovering somewhat in FY08, high net margins have compensated for [Return on Assets](#) steadily improving from around 14% in FY 2002 to almost 30% today.

Opto Circuits has done even better with respect to the efficiency of using shareholders equity with [Return on Equity](#) improving from about 20% in FY02 to ~ 40% today. What has boosted ROE in the last few years is consistent net margin improvements and decent use of [Financial Leverage](#). None of the big Medical Electronics companies (including overseas players like Nihon Koden, Boston

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Scientific, and Medtronics), currently boast of ROEs anywhere near that, with the closest being Medtronics at just around 20% ROE. Check out [Medical Electronics Profitability Matrix](#).

Opto Circuits fares well on the [Return on Invested Capital](#) (ROIC) front. ROIC is overall a better measure of profitability than ROA and ROE, because it removes any distortionary effects caused by a company's financing decisions (for highly leveraged companies), with the focus remaining as closely as possible on the profitability of the core business. From around 25% in FY02, Opto Circuits's ROIC has climbed to just over 45% by FY08. The record hasn't been consistent though, with the pattern dipping in FY07 before recovering again in FY08, mostly due to significantly better Cash Flow from Operations.

Opto Circuits still has a long way to go before it can show loads of excess cash on its books. [Free Cash Flow](#) has been in the range of 4-6% generally with FY07 registering negative free cash flow, but recovering back in FY08. Opto Circuits is clearly on a high growth trajectory. It has been investing somewhat aggressively in business expansion in the last few years. In fact Opto Circuits more than doubled its Capex investments in FY07 to around 10 Cr from about 4 Cr in FY05. It is slated to go significantly up again in FY09 because of investments committed for expanding acquired businesses like Criticare Systems Inc and EuroCor GmbH. It is not generating much free cash because it is using all the cash the business generates - and then some - to invest in expansion. No surprise, Opto Circuits is among the lowest placed, on the Free Cash Flow scale, in the [Medical Electronics Profitability Matrix](#) with Medtronics scoring the highest on that score.

Sources of Profitability

Can we dig deeper to see what else we can understand about how Opto Circuits makes money. A good way is to look at the common size profit and loss statement. Common size statements are great tools for evaluating companies because they put every line item in context by looking at each of them as a percentage of Sales.

Opto Circuits common size P&L statement	FY 02	FY 03	FY 04	FY 05	FY 06	FY 07	FY 08
Sales (%)	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Cost of Goods sold (%)	66.18%	61.21%	66.29%	60.52%	52.43%	53.00%	59.45%
Gross Margin (%)	33.82%	38.79%	33.71%	39.48%	47.57%	47.00%	40.55%
Selling and Operating expenses (%)	8.60%	11.77%	16.70%	17.89%	17.90%	15.38%	11.87%
Operating Margin (%)	17.71%	17.47%	17.91%	21.25%	33.73%	33.89%	32.54%

Source: Opto Circuits Annual Reports

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The numbers show some consistent trends. Gross Margins have improved over the years from over 33 percent in FY02 to over 40 percent in FY 08. Spending on overheads - Selling and operating expenses- after rising in the initial years is now showing signs of increasing efficiencies –perhaps due to increasing synergies and rationalization in Opto's distribution network- declining to about 12 percent in FY08 from about 18 percent in FY05.

Overall we see a company that is achieving increasing control over cost of goods sold and showing signs of becoming more efficient in terms of overhead spending.

Economic Moat -What's the Evidence?

While Opto Circuits has been in general generating free cash flow as percentage of sales between 4-6%, FY07 saw negative free cash flow. In fact Cash flow was negative at the Operating level and is a cause of concern. This is something investors should watch closely for catching early signs of improvement and/or worsening of its business operations. Overall, considering that Opto Circuits posts solid ROEs and ROICs with high margins and is in sound financial health, it's perhaps an indication that Opto Circuits is re-investing the cash wisely.

Minus the poor record on free cash-flows, which is not too bad a thing for a company growing as aggressively as Opto Circuits (long-term sales growing at over 45%, and long-term net profits growing at ~ 60%), Opto Circuits has been posting excellent financial results -that serious investors are happy to note. It remains to be seen whether Opto Circuits can consistently sustain the high levels of returns and margins achieved, and show sustained positive free cash flows growing at 15-20% in the coming years.

Till then, Opto Circuits would seem to enjoy only an above-average economic moat.

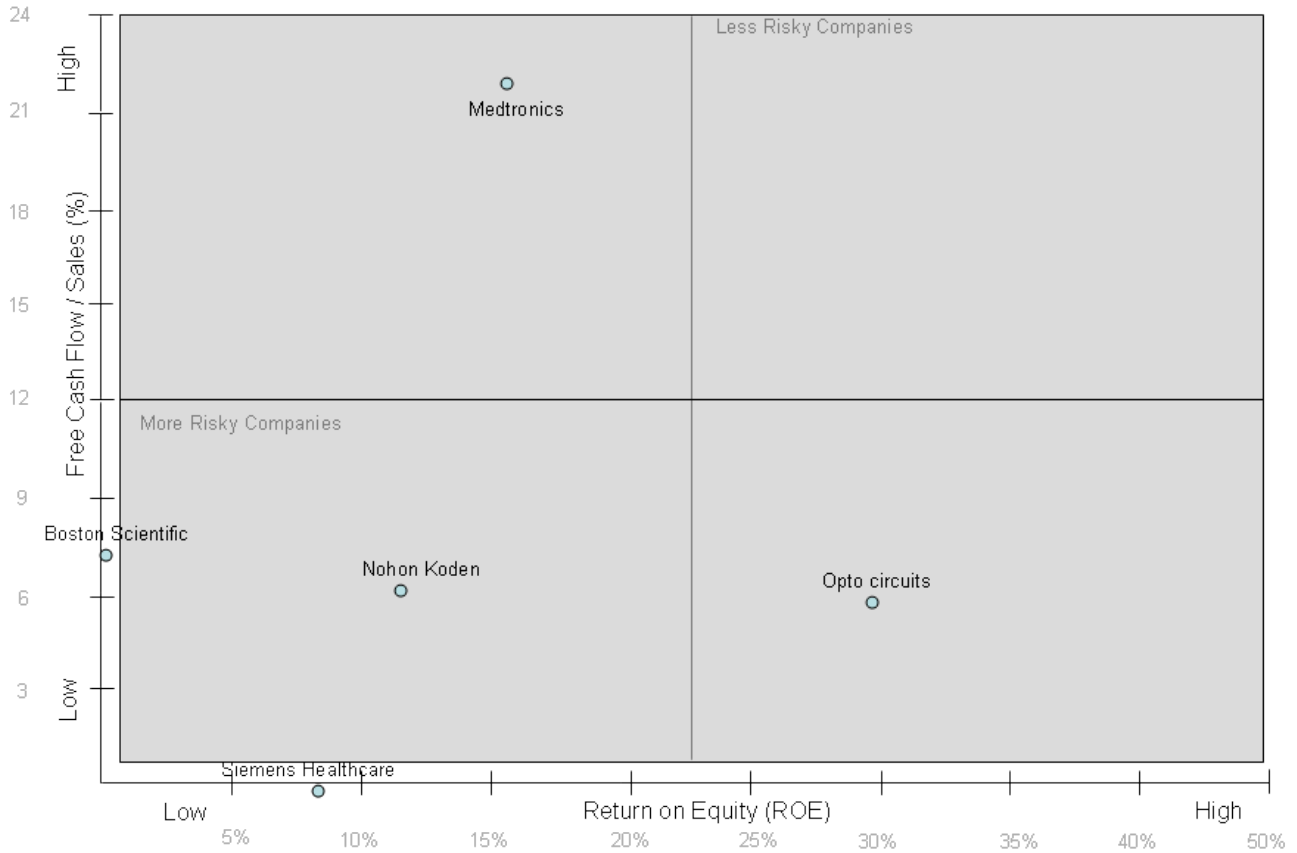
Medical Electronics Companies Profitability Matrix - ROE vs. Free Cash Flow

One good way to think about the returns a company is generating is to use the [Profitability Matrix](#), which looks at a company's ROE relative to the amount of free cash flow it's generating. Profitability Matrix can tell us a great deal about the kind of company we are analysing. It can help us separate our long shots from our core holdings.

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Source: Opto Circuits and Competitors' Annual Reports

Opto Circuits Peer Comparison Snapshot

There are few medical electronics companies in India. Hence this comparison includes 3 overseas companies in the Medical Electronics industry, namely Nihon Kodon (Japan), Boston Scientific Corporation and Medtronics USA. Keeping things simple, 1\$ has been taken as =Rs. 45.

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Opto Circuits Peer Comparison Snapshot	Opto Circuits	Siemens Healthcare Diagnostics	Nihon Kohden	Boston Scientific Corp (BSX)	Medtronics Inc. (MDT)
	FY08/CY07	FY08/CY07	FY08/CY07	FY08/CY07	FY08/CY07
Sales (Rs. Cr.)	468.1	54.6	4708.224	37606.5	60817.5
Operating Margin (%)	32.54%	18.39%	9.37%	22.77%	30.52%
Net Margin (%)	28.05%	6.92%	5.37%	-5.92%	16.51%
Asset Turnover (x)	1.05	1.08	1.30	0.27	0.61
Return on Assets (%)	29.57%	7.47%	6.98%	-1.59%	10.05%
Return on Equity (%)	39.73%	7.91%	11.05%	-3.28%	18.87%
Financial Ratios					
Financial Leverage (x)	1.34	1.06	1.58	2.07	1.88
Debt to Equity (x)	0.31	0.06	0.03	0.54	0.59
Interest Coverage (x)	13.43	44.08	147.00	2.25	12.31
Current Ratio (x)	4.57	2.58	2.26	1.82	2.07
Quick Ratio (x)	3.26	2.02	1.74	1.60	1.71
Cash/Total Assets (%)	15.38%	12.82%	17.12%	4.65%	7.27%
Other Metrics					
Cash Flow from Operations (Rs. Cr.)	39.64	7.51	387.252	4203	15700.5
Capital Expenditure (Rs. Cr.)	11.90	7.90	80.31	1633.50	2308.50
Free Cash Flow (Rs. Cr.)	27.74	-0.39	306.95	2569.50	13392.00
Free Cash Flow/Sales (%)	5.93%	-0.71%	6.52%	6.83%	22.02%
Invested Capital (Rs. Cr.)	305.12	39.31	2046.04	123192.00	70591.50
Return on Invested Capital (%)	46.60%	9.95%	12.62%	4.96%	15.85%

Source: Opto Circuits Annual reports

Opto Circuits is much smaller than its overseas competitors. Nihon Koden is roughly 10 times Opto's size, while Boston Scientific Corp and Medtronics are ~ 90x to 150x bigger than Opto. However Opto Circuits stands up well to scrutiny and in fact bests its bigger competitors by far on the margins and returns front. Net margins at 28% is almost double that of Medtronics at 16%, others fare poorly on that front. Similarly on the Return on Assets (~30%) and Return on Equity (~40%) metrics Opto's

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record is much better than all its competitors. Medtronics, which has the best record on this front among the overseas companies, comes a poor second with an ROA of 10% and ROE at ~19%.

Opto Circuits's Financial Health is in fine fettle. Has low debt to equity at 0.31, and maintains high liquidity with high Current (4.57 times) and Quick ratios (3.26 times) and interest coverage at a decent 13 times. It maintains a healthy 15% Cash as percentage of Total assets which is next only to Nihon Koden. It appears on the financial health front, Opto Circuits does as well, if not better, than its overseas competitors, several times bigger than itself.

Even though Opto Circuits has been growing at a scorching pace and has been spending aggressively on business expansion, it is interesting to note that Opto Circuits generates about 6% free cash flow as percentage of sales, roughly the same levels as its much bigger competitors, except for Medtronics which leads away from the pack at 22%. Any company that generates [Free Cash flow by Sales at more than 10 percent](#) is doing a very good job. Most of its competitors seem to be doing a fair job at generating decent free cash flow. However it is in the Return on Invested Capital (46 percent) that Opto seems to best all its overseas competitors by a huge margin. The nearest is Medtronics at ~16 percent.

Financial Health

Once we have figured out how fast (and why) a company has grown and how profitable it is, we need to look at its financial health. Even the most beautiful home needs a solid foundation, after all.

Opto Circuits Financial Health Snapshot

Opto Circuits Financial Health Snapshot	FY 02	FY 03	FY 04	FY 05	FY 06	FY 07	FY 08
Financial Leverage (x)	1.40	1.76	1.77	1.58	2.07	1.34	1.34
Debt to Equity (x)	0.40	0.75	0.72	0.58	0.98	0.30	0.31
Interest Coverage (x)	4.67	4.23	5.49	6.59	8.57	11.18	13.43
Current Ratio (x)	3.47	3.55	3.11	2.68	2.49	3.01	4.57
Quick Ratio (x)	2.40	2.53	1.88	1.55	1.38	1.97	3.26
Cash/Total Assets (%)	11.38%	14.99%	9.98%	10.65%	6.17%	13.52%	15.38%

Source: Opto Circuits Annual reports

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In its bid for growth Opto Circuits seems to have used **Financial Leverage** judiciously to its advantage, in the last 5 years or so. From a relatively high financial leverage (Assets/Equity) of 2.07 in FY06, Opto Circuits has brought this down to more conservative levels of 1.34 in FY08. It is when we see financial leverage ratios of 4, 5, or more that companies start to get really risky.

Opto Circuits has always maintained comfortable levels of **Interest Coverage**, FY08 figure stands at a very comfortable 13.5x Interest expense. In fact Interest Coverage figures have grown 3 times in the last 7 years, steadily climbing year on year from about 4.67x levels in FY02. This points to a steadily improving financial health condition. **Debt to Equity** at 0.31 in FY08, is also now at comfortable levels after hovering on the higher side in FY06.

Opto Circuits also consistently maintains very healthy liquidity levels. FY08 **Current Ratio** at 4.5x and **Quick Ratio** at 3x, indicate that Opto Circuits can always raise enough cash, if it had to say, pay off its liabilities all at once.

Risks/Bear Case

*After assessing growth, profitability, and financial health, your next task is to look at the **Bear Case** for the stock you are analysing. Your bear case will be a great reference point even if you do decide to buy the stock- enabling you to spot trouble early, and make for better hold and/or exit decisions.*

Litigation Risks

So far Opto Circuits hasn't faced/made any provisions for litigations. However with its EuroCor and Criticare Systems acquisitions, Opto Circuits will be vulnerable to litigation. This is because Criticare has a substantial patents portfolio (approved and pending) and EuroCor too has some patents. Opto Circuits will have to provision for covering risks on patent infringement protection and other related costs, as well as for defending against claims of infringement by others as it engages deeper in the invasive (and non-invasive) segments of healthcare and competes with the bigger players. The invasive stents business, for example, is particularly mired in litigation. Boston Scientific had legal settlement charges of \$75 Mn (CY04), \$780 Mn (CY05) and \$365 Mn in CY07. Similarly Medtronic Inc. incurred legal settlement charges of \$654 Mn (FY05), \$40 Mn (FY07), and \$366 Mn (FY08).

Technological obsolescence

Technology plays a vital role in Medical Electronics industry in which Opto Circuits operates where it is required to constantly upgrade and innovate in terms of the technology employed. The threat of technological obsolescence is omnipresent in this environment, which may lead to substantial expenditure in order to stay competitive.

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Debtor days on the higher side

The working capital requirements for Opto Circuits have jumped over the last two years primarily due to higher debtors' collection period and due to large inventory levels. Debtors' collection period for FY08 was on the higher side (approx. 220 days). Opto serves critical care segments, where inventory level is required to be maintained high at the vendor and also at the client level. Relatively higher debtor days, is therefore the norm in the healthcare industry. The shipment of goods takes around 90 days and then payment from hospitals comes in another 120 days. It should be mentioned that Opto Circuits however has a strong client base, which includes mainly leading hospitals and other prominent Original Equipment Makers (OEMs). Hence, the chance of default is probably low for the company. Also Opto is well diversified -not highly dependent on a single customer, single product, or a single market for growth.

Foreign Exchange Risks

Opto Circuits exports over 95% of its annual turnover. There is therefore huge foreign exchange related exposure, which is cause for some concern. However with Opto Circuits being a 100% EOU with large imports (ranging between 40-50% of Sales) enjoys the position of natural hedging for its foreign currency transactions. Therefore, the strengthening/weakness of US dollar may not substantially impact profitability.

Management

Excellent Management can make the difference between a mediocre business and an outstanding one, and poor management can run even a great business into the ground. Your goal is to find management teams that think like shareholders -executives that treat the business as if they owned a piece of it, rather than as hired hands.

Compensation

How does Opto Circuits Management pay itself? [The bottom-line to look for](#) - Is Executive pay rise & fall based on performance of the company?

Opto Circuits Management Compensation Snapshot		Total Remuneration including fees and commission (Rs.)					
Directors	Designation	Nature of Remuneration	FY04	FY05	FY06	FY07	FY08
Vinod Ramnani	Chairman	Remuneration+perks	3,420,000	4,500,000	4,950,000	5,757,192	6,695,166
Usha Ramnani	Director	Remuneration+perks	3,420,000	4,500,000	4,950,000	5,757,192	6,695,166
		Total	6,840,000	9,000,000	9,900,000	11,514,384	13,390,332

Source: Opto Circuits Annual Reports

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Opto Circuits Management seems to be reasonably paid, for the profitability it generates, when compared with peer companies in the global Medical Electronics Industry.

Opto Circuits Peers Management Compensation (Rs. Cr.)	Opto Circuits	Siemens Healthcare Diagnostics	Nihon Kohden	Boston Scientific Corp (BSX)	Medtronic Inc. (MDT)
	FY08/CY07	FY08/CY07	FY08/CY07	FY08/CY07	FY08/CY07
Director	0.67	0.00	0.00	2.41	2.70
Chairman	0.67	0.78	0.00	4.32	4.48
Sales (Rs. Cr.)	468	55	4,708	37,607	60,818
Net Margin (%)	28.05%	6.92%	5.37%	-5.92%	16.51%
ROE (%)	39.73%	7.91%	11.05%	-3.28%	18.87%

Source: Opto Circuits Annual Reports/BusinessWeek

Character

Compensation by itself is often a good litmus test for character - anecdotally, there's a pretty strong relationship between management teams that are in it for the money and management teams that treat shareholders poorly. However, there are some other important questions to ask to get a handle on [whether a firm's management deserves your trust](#).

Running the Business

In addition to management who are paid reasonably and are honest, you also want folks [who can run the business well](#). Any signs of the company [doing things differently](#) from its peers and conventional opinion? What's the [follow-through record on new/strategic initiatives](#) announced 3-7 years ago?

Performance

A review of the last 7 years with respect to Opto Circuits Management performance is heartening. Return on Assets has improved from around 14% in FY02 to almost 30% in FY08. Return on Equity in FY08 is ~ 40% - [the highest ROEs in the Medical Electronics industry](#) - from ~ 20% in FY02. That this has been achieved, at Opto Circuits's scorching pace of growth, without resorting to excessive financial leverage is commendable.

Opto Circuits India Ltd - Stock Analysis (Dec'08)

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Edit /Disclaimer added 2015: This was the first ever report compiled by me in my investment journey back in 2008 – when I was a complete greenhorn, and when Opto Circuits business hadn't yet run into rough weather (2011) with an acquisition too many. While this report does justice to business analysis as per PAT Dorsey's 5 Rules for Successful Investing book's template, it does not do enough diligence on examining the BS with equal depth – especially Subsidiaries, Intangibles or Related Party transactions, and the like. The bigger margin of safety was in the Price ☺!!

Self-Confidence

Opto Circuits has done things differently from its peers and conventional opinion. Opto Circuits has been making its mark in the highly competitive Medical Electronics industry by choosing its niches well, and managing judicious acquisitions.

It went after the sensors market which was (still is) dominated by Tyco-Nellor. In 2003 it also forward integrated into pulse oximeters and other patient care systems by acquiring Palco Ltd (now renamed MediAid Inc.) That acquisition also gave Opto Circuits the benefit of a strong US distribution network. Post the sensors patent expiry in 2003, held by Tyco-Nellor, it ramped up manufacturing capacities and quickly consolidated its position, becoming the preferred supplier to large OEMs, and also was successful in getting US FDA approval for itself. Today it has become the largest supplier of Spo2 sensors.

So far it has gone after judicious acquisitions that provide not only product-line extensions but also significant synergies to leverage distribution networks and its lower cost-base manufacturing capacities. With the EuroCor acquisition in 2006 it marked its entry into the more competitive invasive stents business. And with the Criticare systems Inc acquisition in Apr 2008, it has further consolidated its position in the non-invasive business.

-----End-of-Opto Circuits-Stock-Analysis-----