Is it time to buy Infosys?

by Mohnish Pabrai

I've been a long time admirer of Infosys and its outstanding management, specifically Mr. N. R. Narayana Murthy and Mr. Nilekani. The corporate culture, talent pool, world-class client base, and deep management strength are formidable. These are big barriers that allow Infosys to have a near-permanent lock on its current clients and very well positioned to get new ones. Hewitt named it the best company to work for in all of India while the Far East Economic Review rated Infosys as the No. 1 company in India!

However, over the last few months as revenues and earnings have continued to grow at a triple digit rate, the stock has gone from $375 to $48. Its market capitalization has fallen from about $25 billion to $3.2 Billion in the last 18 months – a drop of over 87%! Might it be time to start buying Infosys? Can Infosys go any lower than it already has?

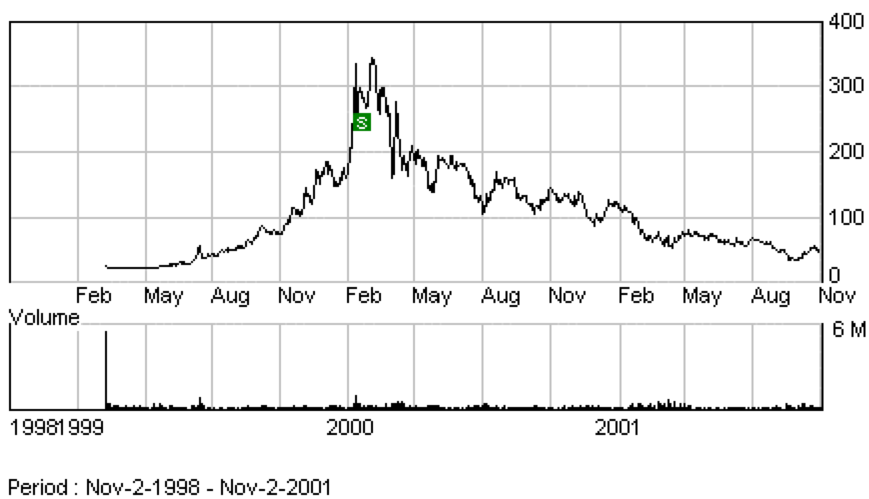

Figure 1: Infosys - off 87% - Is it time to buy?

Before investors call their brokers to buy Infosys, they should ask themselves: What is

Infosys really worth? What annualized rate of return can be expected if the stock were bought today? To answer these questions, one needs to understand how to calculate Intrinsic Value. ***The intrinsic value of any business is the sum of free cash flow it will generate from now to eternity, discounted to present value using a reasonable interest rate.*** (John Burr Williams, Ben Graham, Warren Buffett et. al.) For further insight into Intrinsic Value please see the article entitled ***Intrinsic Value*** in the July, 2001 issue of *Silicon India*.

So it's fairly simple. If one can project the future cash flow that Infosys will generate, then its intrinsic value can be easily derived. Infosys had revenue and net income of $131 Million and $39 Million respectively for the quarter ended 6/30/01. While the company has grown at an annualized rate of 65+% for the last 7 years, it projects just 30% growth in the coming year.

High growth companies appear to have growth engines that will continue to propel them unabated for decades to come. However history has taught us that even one-time market dominating, rapidly growing companies eventually mature to sedate or even negative growth levels. In the early 1970s, Xerox was a high growth, high P/E, high-flying stock that investors loved (part of the nifty-fifty). Investors were right in their assessment that photocopying was in its infancy and Xerox dominated copiers with strong patent protection and a big technological lead. Xerox's stock price in the early 1970s represents a historical high for the company. That price was never met or exceeded after 30 years of growth! A buyer of the early 1970s Xerox shares would have found out that that while document duplication has gone through an unprecedented growth curve in the last 30 years, Xerox has come to the brink of bankruptcy! For more recent examples, one can look at the growth rate projected for Oracle, Cisco and Dell five years ago and compare it to their projected growth rate for the next five years.

If Infosys grew 50% annually for the next 10 years, it would have a head count of 400,000 in 2011. That is a larger headcount than IBM, Cisco and Microsoft – combined! Clearly the 50% annualized is way off. I'd propose that it might be reasonable (even optimistic) to assume the company grows 30% next year (as management has guided) followed by 20% growth for the next 3 years, followed by 15% growth for the next three years followed by 10% growth in years 8-10. Further, let's assume that the company is sold in 2011 for its cash on hand plus 10 times its 2011 earnings.

I'd don't think I'd be too far off in speculating that the average *Silicon India* reader is not interested in making investments in companies like Infosys to earn a 5 or 10% annualized rate of return. Presumably, the reader is looking for 15-20% annually (or more). We now have all the data necessary to figure out if shares of Infosys out to be bought at $48. Table 1 shows the present value of all the future cash flow Infosys will generate under the aforementioned assumptions.

Year	**Free Cash Flow (In Millions)**	**Present Value of Future Cash Flow (20% discount rate; in Millions)**

2002	$204	$170
2003	$245	$170
2004	$294	$170
2005	$352	$170
2006	$405	$163
2007	$466	$156
2008	$536	$150
2009	$590	$137
2010	$649	$126
2011	$714	$115
2011 (sale)	$7,136	$1,152
2011 Cash on hand	$4,455	$719
2011 Sale Price	**$11.6 Billion**	**$1.9 Billion**

Table 1. Infosys' Projected Free Cash Flow For The Next Ten Years

Infosys has 66.1 Million shares outstanding at present. The company has an excellent stock option program for its employees. Assuming a 3% annual dilution in shares outstanding leads to 88.8 Million shares outstanding in 2011. This yields a price of $21.40/share. In other words, if all of our assumptions came true, an investor buying Infosys today at $21/share can expect a 20% annualized rate of return over the next 10 years.

Ben Graham suggested a substantial margin of safety when investing in any common stock. We don't know what the future holds. To get downside protection, Infosys should be bought at a minimum 50% discount (margin of safety) to Intrinsic Value or $11/share. If one desired a 15% annualized rate of return, then one should buy Infosys for under $17/share with a 50% margin of safety. Conversely, if one were (like me) looking for a 30% annualized rate of return with a 50% margin of safety, Infosys should be bought at no more than $5/share – a tenth of its present price! Buying the stock at $48 with a 50% margin of safety would yield the investor an annualized return of just 3%. In all of the above mentioned calculations, I've assumed that cash balances earn no interest. With the fed discount rate at 2% and further devaluations in the rupee highly likely over the next decade, this may not be too far off.

Intrinsic Value is a simple concept, but very difficult to precisely calculate for most companies. The best that one can do is to make conservative assumptions and then add a significant margin of safety. The missive of this article is not to suggest the price at which Infosys should be bought or sold, but rather to give the reader a simple toolset to evaluate whether to invest in any given publicly traded company. To start, investors must have a good idea of the rate of return they'd like from a given stock. They should know the company well enough to access its future prospects. In growing companies, one needs to remember that no tree grows to the sky. Be conservative on future growth prospects. Finally, add a substantial margin of safety.

But, one might argue, this is rated the #1 company to work for in India! What about the value of all the intangibles of great management, brand, client base etc? What about the value of the terrific talent Murthy and his team bring to the table? The answer is simple.

All the intangibles are very relevant, but they are the reason the company will do so well in the future. I would not be optimistic that a Tier 2 or Tier 3 IT Services firm in India will even be around 10 years from now. American Express, Boeing and IBM all have exceptional brands and intangibles. These intangibles are very relevant to shareholders and they do lead to sustainable competitive advantages that finally trickle down to cash flow that the company generates. All of Infosys' intangibles are fully appreciated and have been implicitly factored into its future cash flow projections. If a competitive advantage does not eventually translate into cash flow then it is not a competitive advantage that's relevant to investors.

It might be an interesting exercise for the reader to calculate the intrinsic value and future return expectations of all the stocks in their portfolios. The results will probably be surprising. Investors would be well served to look for great businesses within their circle of competence and then calculate intrinsic values for those businesses based on their annualized return expectations. The data would indicate that one take a pass on most companies. Occasionally, however, Mr. Market will throw out a fat pitch. You know what to do then.

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