

Patents win in the search for investment value

Where investors are concerned, value identification took a hard knock during the technology slump. The crazy P/E ratios spawned by the boom were savagely exposed and the search was on for another way of identifying real value.

According to CHI Research Inc, a New Jersey-based IP consulting firm, the strength and quality of a company's technology assets will become increasingly important factors in its market valuation. Senior analyst Patrick Thomas explains: "It has already been shown that the bigger role technology plays, the less influence current financial information has on companies' market performance. Instead of IP being consigned to the boffin category by investors, it's time to realise that it has become the currency of the new economy. In the 21st century, the strength and quality of a company's technology assets will become increasingly important factors in its market valuation."

The 2,000-plus new patent documents that are published every business day together constitute a powerful engine driving growth across the world's advanced economies. For many companies, patents form the technological foundation for the products and services on which their commercial success depends. Evaluating the quality of companies' patent portfolios can therefore act as a leading indicator of their future potential.

CHI Research has been in the business of IP evaluation for over 30 years, and the company now believes it has broken new ground in exploring the relationship between the quality of companies' patented technology and their stock market performance. With its Investor Tech-Line® product, it claims to have developed techniques for identifying companies with high-quality, undervalued patent portfolios, based on its proprietary Patent Quality Indicators. These indicators, says Thomas, provide vital insights into the technological strengths, performance, and potential of companies.

Investor Tech-Line, is based on the idea that an investment opportunity occurs when a company has strong patented technology whose value is not recognised by the stock market. CHI has developed a two-stage process to identify such undervalued companies. In the first stage, it produces a market-to-book (MTB) forecast for a company at a given point in time, based solely on the quality of its patented technology. This Technology MTB valuation is derived from a combination (optimised using multiple regression analysis) of five quantitative, industry-normalised patent indicators:

Number of US patents: The number of US patents granted to a company, including its subsidiaries, in the previous year. This is a

measure of the technological productivity of a company.

Patent growth: The percentage growth in the number of US patents granted to a company in the previous year, compared to the year before. This indicator shows trends in a company's commitment to technological innovation.

Current Impact Index (CII): The CII shows the impact of a company's patents on the latest technological developments. The CII is a measure of how often the previous five years of a company's patents are cited by patents issued in the most recent year, relative to all US patents. If a company's patents from recent years have a strong impact on technological innovations, this is reflected in a high CII value.

Science linkage (SL): This is a measure of the extent to which a company's technology builds on cutting-edge scientific research. It is calculated based on the average number of references on a company's patents to scientific papers, as distinct from references to previous patents. Companies whose patents cite a large number of scientific papers are working closely with the latest scientific developments.

Technology Cycle Time (TCT): In general, companies that innovate rapidly are more successful in product development than companies relying on older technologies. This leads to another citation indicator, the Technology Cycle Time (TCT). TCT

is a measure of the median age of the US patents cited on the front page of a company's patents. A tendency to cite older patents is an indication that a company utilises older technology.

In the second stage, CHI compares companies' Technology MTB valuations with their Actual MTB valuations in the stock market. Companies whose Technology MTB exceed their Actual MTB by the largest amount are the most undervalued, and therefore represent investment opportunities. These companies have high quality patent portfolios whose value is not recognised by the stock market. Conversely, companies whose Technology MTB is lower than their Actual MTB, are overvalued. These companies have market valuations that cannot be justified on the basis of their patented technology, and may be candidates for short-selling.

In 2000, against a background of market uncertainty, Investor Tech-Line, returned over 23% for the year. Its strong performance continued in 2001 with a return of 12%, and it outperformed both the NASDAQ and S&P500 in 2002. Underlining its confidence in this research, in June 1999 CHI started managing part of its own pension fund based on the stocks identified by Investor Tech-Line. This portion of the pension fund has outperformed all of the standard market averages by a wide margin since that time, says Thomas.

Putting CHI to the test

Because CHI is selling a subscription product, the most current data available from the company dates to 1st January 2003. A quick check through its 10 top-rated undervalued companies then makes interesting reading, with an average percentage increase in value over the last six months of 112.9%. Even factoring in the surge in tech stock valuations this year, this is an impressive return.

Company name/Symbol	CHI investment potential (out of 100)	Price 31/12/02 (US\$)	Price 17/06/03 (US\$)	Percentage increase/decrease over this period
Caliper Technologies Corp (CALP)	100	2.96	4.32	+ 45.9%
Neorx Corp (NERX)	100	0.43	3.34	+ 676.7%
Emisphere Technologies Inc (EMIS)	99	3.48	4.65	+ 33.6%
Immersion Corp (IMMR)	99	1.17	1.94	+ 65.8%
Ciena Corp (CIEN)	99	5.14	5.05	- 1.7%
Brooks-PRI Automation Inc (BRKS)	99	11.46	10.87	- 5.1%
Micro Therapeutics Inc (MTIX)	98	2.15	4.56	+ 112.1%
Guilford Pharmaceuticals (GLFD)	98	3.98	4.82	+ 21.1%
JDS Uniphase Corp (JDSU)	98	2.47	3.83	+ 55.1%
Amkor Technology Inc (AMKR)	98	4.76	10.75	+ 125.8%