



# MDB Capital Group LLC

*Seeing Value Others Do Not, Creating Value Others Can Not.*

The IP Investment Bank

## THE “SWEET 16” OF IP INVESTORS

March 24, 2011

### MONEY MANAGERS WHO GET IP

As the world of college basketball is now immersed in “March Madness” and the ongoing NCAA Tournament, MDB Capital would like to take some creative (yet statistical) license in presenting our 2011 “Sweet 16”, sixteen small-cap money managers with the highest portfolio concentration of companies with leading IP as measured by MDB’s PatentVest IP intelligence platform covering more than 4,000 U.S. listed public companies. For more information on PatentVest, please refer to the MDB website: [www.mdb.com](http://www.mdb.com).

#### Our selection of 2011’s “Sweet 16” was accomplished as follows:

- We identified publicly reporting money management firms with ownership of at least three of MDB Capital’s 2011 “Best and Brightest” – 150 public companies which scored in the 90<sup>th</sup> percentile for IP leadership from over 1,500 small-cap companies.
- The analysis included an evaluation of each money manager’s holdings utilizing the three PatentVest IP metrics used to define MDB’s 2011 “Best and Brightest” companies. The metrics used were: Tech Score (a measurement of IP Value), 3-year CAGR of Patent Application (a measurement of IP Growth) and Citation-Weighted PV Ratio (a measurement of IP Market Value). These metrics have shown the ability to identify leading IP and their linkage to business performance and outsized investment returns. The full definitions of these metrics can be found at the end of this report.
- The final seedings for this year’s “Sweet 16” were then determined by weighting the three PatentVest IP metrics and ranking the money managers based on the total dollar value of their “Best & Brightest” holdings as a percentage of their overall portfolio. In addition to the “Sweet 16”, the top sixteen money managers for each of the three PatentVest IP metrics have been ranked as well.

### 2011 “SWEET 16”

Institution	# of Holdings	Total \$Value (000s) of Holdings	% of Portfolio	Avg. Tech Score	Avg. CAGR	Avg. Citation-Weighted PV
Goldman Capital Management	4	\$24,774	17.54%	1.98	14.62%	1.89
Marathon Capital Management (MD)	6	\$14,459	14.13%	2.58	13.04%	1.04
Burnham Asset Management	6	\$53,049	9.28%	2.55	16.51%	2.07
Diker Management	7	\$26,030	9.01%	1.72	15.33%	0.88
Kopp Investment Advisors	4	\$23,761	6.61%	1.34	15.54%	1.44
Perkins Capital Management	12	\$13,387	6.49%	1.82	15.51%	2.38
GRT Capital Partners	12	\$6,661	2.96%	2.16	20.39%	1.82
Senvest Partners	10	\$14,424	2.34%	2.44	14.37%	1.76
Cortina Asset Management	4	\$29,655	1.64%	2.52	21.09%	2.41
Punch & Associates	6	\$4,961	1.59%	2.35	18.39%	1.89
Manatuck Hill Partners	3	\$9,268	1.17%	2.29	15.59%	2.00
OrbiMed Advisors	3	\$37,859	1.16%	2.37	26.01%	5.08
Great Oaks Capital Management	18	\$4,891	1.03%	1.78	16.31%	1.21
Royce & Associates	45	\$364,782	1.01%	1.73	17.01%	2.78
Fuller & Thaler Asset Management	9	\$9,429	0.80%	1.54	19.41%	2.40
Granahan Investment Management	8	\$20,218	0.66%	2.38	20.51%	2.23
<b>Median</b>	<b>6.5</b>	<b>\$17,339</b>	<b>1.99%</b>	<b>2.22</b>	<b>16.41%</b>	<b>1.95</b>



The IP Investment Bank

<b>Ranked by Avg. Tech Score</b>						
<b>Institution</b>	<b># of Holdings</b>	<b>Total \$Value (000s) of Holdings</b>	<b>% of Portfolio</b>	<b>Avg. Tech Score</b>	<b>Avg. CAGR</b>	<b>Avg. Citation-Weighted PV</b>
Heartland Advisors	6	\$92,424	2.14%	<b>3.28</b>	12.20%	1.45
Shufro, Rose & Company	3	\$334	0.04%	<b>2.86</b>	25.21%	2.11
Marathon Capital Management	6	\$14,459	14.13%	<b>2.58</b>	13.04%	1.04
Burnham Asset Management	6	\$53,049	9.28%	<b>2.55</b>	16.51%	2.07
Cortina Asset Management	4	\$29,655	1.64%	<b>2.52</b>	21.09%	2.41
Senvest Partners	10	\$14,424	2.34%	<b>2.44</b>	14.37%	1.76
Granahan Investment Management	8	\$20,218	0.66%	<b>2.38</b>	20.51%	2.23
OrbiMed Advisors	3	\$37,859	1.16%	<b>2.37</b>	26.01%	5.08
Punch & Associates	6	\$4,961	1.59%	<b>2.35</b>	18.39%	1.89
Manatuck Hill Partners	3	\$9,268	1.17%	<b>2.29</b>	15.59%	2.00
GRT Capital Partners	12	\$6,661	2.96%	<b>2.16</b>	20.39%	1.82
AWM Investment Company	12	\$89,970	10.63%	<b>2.05</b>	12.58%	1.76
Putnam Investment Management	12	\$25,397	0.06%	<b>1.99</b>	15.28%	1.89
Goldman Capital Management	4	\$24,774	17.54%	<b>1.98</b>	14.62%	1.89
Perkins Capital Management	12	\$13,387	6.49%	<b>1.82</b>	15.51%	2.38
Great Oaks Capital Management	18	\$4,891	1.03%	<b>1.78</b>	16.31%	1.21

<b>Ranked by Avg. CAGR</b>						
<b>Institution</b>	<b># of Holdings</b>	<b>Total \$Value (000s) of Holdings</b>	<b>% of Portfolio</b>	<b>Avg. Tech Score</b>	<b>Avg. CAGR</b>	<b>Avg. Citation-Weighted PV</b>
OrbiMed Advisors	3	\$37,859	1.16%	2.37	<b>26.01%</b>	5.08
Shufro, Rose & Company	3	\$334	0.04%	2.86	<b>25.21%</b>	2.11
Cortina Asset Management	4	\$29,655	1.64%	2.52	<b>21.09%</b>	2.41
Granahan Investment Management	8	\$20,218	0.66%	2.38	<b>20.51%</b>	2.23
GRT Capital Partners	12	\$6,661	2.96%	2.16	<b>20.39%</b>	1.82
Fuller & Thaler Asset Management	9	\$9,429	0.80%	1.54	<b>19.41%</b>	2.40
Wellington Management Company	22	\$110,092	0.04%	1.25	<b>18.88%</b>	2.64
Robeco Investment Management	11	\$38,003	0.21%	1.69	<b>18.83%</b>	2.50
Oppenheimer Funds	23	\$5,286	0.01%	1.75	<b>18.53%</b>	2.19
Punch & Associates	6	\$4,961	1.59%	2.35	<b>18.39%</b>	1.89
Fidelity Management & Research Company	39	\$250,336	0.04%	1.73	<b>17.85%</b>	2.36
Tocqueville Asset Management	4	\$13,736	0.17%	1.40	<b>17.15%</b>	0.69
Royce & Associates	45	\$364,782	1.01%	1.73	<b>17.01%</b>	2.78
Burnham Asset Management	6	\$53,049	9.28%	2.55	<b>16.51%</b>	2.07
Great Oaks Capital Management	18	\$4,891	1.03%	1.78	<b>16.31%</b>	1.21
Manatuck Hill Partners	3	\$9,268	1.17%	2.29	<b>15.59%</b>	2.00



The IP Investment Bank

Ranked by Avg. Citation-Weighted PV Ratio						
Institution	# of Holdings	Total \$Value (000s) of Holdings	% of Portfolio	Avg. Tech Score	Avg. CAGR	Avg. Citation-Weighted PV
OrbiMed Advisors	3	\$37,859	1.16%	2.37	26.01%	5.08
Federated Investors	8	\$53,291	0.21%	1.48	15.32%	3.01
Royce & Associates	45	\$364,782	1.01%	1.73	17.01%	2.78
Wellington Management Company	22	\$110,092	0.04%	1.25	18.88%	2.64
Robeco Investment Management	11	\$38,003	0.21%	1.69	18.83%	2.50
Cortina Asset Management	4	\$29,655	1.64%	2.52	21.09%	2.41
Fuller & Thaler Asset Management	9	\$9,429	0.80%	1.54	19.41%	2.40
Perkins Capital Management	12	\$13,387	6.49%	1.82	15.51%	2.38
Fidelity Management & Research Company	39	\$250,336	0.04%	1.73	17.85%	2.36
Granahan Investment Management	8	\$20,218	0.66%	2.38	20.51%	2.23
Oppenheimer Funds, Inc.	23	\$5,286	0.01%	1.75	18.53%	2.19
Shufro, Rose & Company	3	\$334	0.04%	2.86	25.21%	2.11
Burnham Asset Management	6	\$53,049	9.28%	2.55	16.51%	2.07
Manatuck Hill Partners	3	\$9,268	1.17%	2.29	15.59%	2.00
Punch & Associates	6	\$4,961	1.59%	2.35	18.39%	1.89
Goldman Capital Management	4	\$24,774	17.54%	1.98	14.62%	1.89

**The PatentVest metrics are detailed below:**

- **Tech Score:** Measuring IP value, this metric is a quality indicator of a company’s competitive position. This metric is based upon an analysis of the citation ratio of a company’s patents relative to a cohort group of patents (by age and number) and reflects leadership and value of a company’s patent estate.

The mean PV Tech Score is 1.0, the median score is 0.90 from more than 4,000 companies rated by PatentVest. A higher PV Tech Score is better, signifying technology leadership; while a score of 0.90 - 1.0 reflects parity with the cohort group. For example a score of 2.0 would indicate that a company's patents rank 2x higher than the cohort group. Currently, the top quintile has a Tech Score of 2.0 or higher while the bottom quintile has a Tech Score of 0.30 or lower.

- **3-Year Patent Application CAGR:** Measuring IP growth, this metric is the year-over-year, compound annual growth rate of the number of patent applications filed during the last 3 years. PatentVest only considers applications published more than 3 years ago when calculating the rate. This means that, on average, each application will be at least 4.5 years from its filing date. If it has not been granted at that point, it is considered abandoned for purposes of conversion rate. The median 3-Year Application CAGR for 4,000 companies rated by PatentVest is +1.0%. Currently, the top quintile has an Application CAGR of +16.0%.
- **Citation-Weighted PV Ratio:** This IP value and leadership metric incorporates a measure of patent quality based on the number of reverse citations of patents from unaffiliated entities. Citation-Weighted PV Ratio reflects current market-cap per net patent grant and application, weighted for citation ratios and quantifies a “Net Present Unit Value” of IP.



The IP Investment Bank

## IMPORTANT NOTE TO INVESTORS

The commentary above has been published by MDB Capital Group, LLC (MDB) for informational purposes only. This communication contains insufficient information to make a completely informed investment decision, and is not to be construed as an offer or the solicitation of an offer to buy or sell the securities herein mentioned. This communication may contain projections or forward-looking statements; such statements apply only to the time at which they are made, are based on certain expectations and assumptions existing at that time, and are necessarily subject to certain risks and uncertainties.

MDB, its affiliates and their respective officers, directors, partners and employees, including persons involved in the preparation of this commentary, may from time to time maintain a long or short position in, or purchase or sell as market makers or advisors, brokers or commercial and/or investment bankers in relation to the securities (or related securities, financial products, options, warrants, rights or derivatives), of companies mentioned in this document or be represented on the board of such companies. MDB may have underwritten securities for or otherwise have an investment banking relationship with, companies referenced in this document. The information contained herein is as of the date referenced and MDB does not undertake any obligation to update or correct such information. MDB has obtained all data from sources believed to be reliable, although its accuracy and completeness cannot be guaranteed. Such information is subject to change without notice. None of MDB, any of its affiliates or any officer or employee of MDB or any of its affiliates accepts any liability whatsoever for any direct, indirect or consequential damages or losses from any use of the information contained in this document.

Services provided by MDB Capital Group, LLC (MDB), a registered broker-dealer, member of FINRA/SIPC.

© 2011 MDB Capital Group, LLC. All rights reserved.