

“Minimum Marketability Discounts” – 5th Edition

A Study of Discounts For Lack of Marketability

Based on LEAPS Put Options in November 2009

by

Ronald M. Seaman, FASA

March, 2010

Table of Contents

	Page
LEAPS.....	3
Purpose of The Study.....	3
2010 LEAPS Study.....	4
Discount Calculations.....	5
Analysis and Summary Results.....	6
Effects of Revenue Size On Discounts.....	6
Additional Cost of Price Protection For The Longer Term Option	7
Effects of Asset Size On Discounts.....	7
Effects of Beta On Discounts.....	7
Effects of Latest Year's % NIAT On Discounts.....	8
Effects of Latest Year's Return On Equity On Discounts.....	8
Effects of Debt/Equity Ratio On Discounts.....	9
Effects of The Industry On Discounts.....	9
Exhibits.....	10 – 21
Resume of Author.....	22

“Minimum Marketability Discounts” – 5th Edition

LEAPS

Long-Term Equity Anticipation Securities (LEAPS) are exchange listed options that grant “the buyer (holder) the right, but not the obligation, to buy, in the case of a call, or to sell, in the case of a put, a specified amount of the underlying asset at a predetermined price on or before a given date.”¹ During the option term, which ranges from 6 to 26 months, LEAPS are a form of insurance against price fluctuations in publicly-traded stocks.

LEAPS are listed on several stock exchanges and are actively traded. They are American-style options that may be exercised at any time prior to the expiration date. LEAPS are issued in September, October and November each year and expire on the third Saturday of January either two or three years later. For example, you could have purchased a LEAPS put option on Proctor and Gamble stock at a certain price in November 2009 that expires in January 2011 (approximately 14 months to its expiration) or a longer term option that expires in January 2012 (approximately 26 months to expiration).. LEAPS put options “provide a medium to long-term insurance or hedge for stock owners in the event of a substantial decline in their stock.”²

A LEAPS put option, purchased at an exercise price that is the same as the underlying stock owned, guarantees against loss in value during the option period. The cost of eliminating the risk of loss in value during the holding period clearly is a significant component of the discount for lack of marketability (DLOM).

This study uses the terms “discount(s)” and “cost(s) of price protection” interchangeably. However, as suggested in the title of the study, we will not argue that the cost of a LEAPS put option constitutes the entire amount of a DLOM. Research may prove that there are additional factors to be considered.

Purpose Of The Study

Our objective in studying LEAPS is to contribute to improved substantiation of the discount for lack of marketability, which has long been a concern of both valuation practitioners and courts. The data collected in the study enables us to determine how discounts vary by time, size of company, volatility or risk of the company, profitability, and other factors. The analysis of the costs of LEAPS with different times to expiration provides some insight into the effect of holding period on discounts for lack of marketability.

¹ The Options Clearing Corporation, www.optionsclearing.com/publications/leaps/intro.jsp.

² Chicago Board of Exchange, www.cboe.com/LearnCenter/FaqLEAPS.aspx

2010 LEAPS Study

This latest study is of the costs of LEAPS put options in mid- to late November 2009. Earlier studies are available in their entirety at the website www.dlom-info.com. The total universe of LEAPS in November 2009 was about 875. From this group, we excluded LEAPS on exchange traded funds, LEAPS on a few foreign companies for which no financial information was available, and LEAPS of companies whose stock price was less than \$2.50 per share, the lowest cost of a LEAPS put option. What remained was 728 operating companies with 2011 LEAPS (14-month duration) and 577 companies with 2012 LEAPS (26-month duration). A much larger percentage of smaller companies (than larger companies) did not have the longer term LEAPS; that is, the smaller the company, the less likely it was to have the 2012 LEAPS.

The elements of the DLOM explored in this study are:

- a) discounts by size of a company's total revenues;
- b) discounts by size of a company's total assets;
- c) discounts by a company's beta;
- d) discounts by profit margin (% of net income after taxes to revenues);
- e) discounts by return on equity (% of net income after taxes to shareholders' equity);
- f) discounts by debt/equity ratio (the ratio of total debt to shareholders' equity);
- g) discounts by industry.

For all companies, we obtained the following information:

<u>Data</u>	<u>Source</u>
Option "Asked" Price	Chicago Board of Exchange, Delayed Market Quotes www.cboe.com/DelayedQuoteTable.aspx
Underlying Stock Price	(Same source as for option price.)
Net Revenues (latest full year) ³	Usually from Yahoo! Finance. When not readily available there, from the Security and Exchange Commission's Edgar website.. ⁴

³ In most cases, the latest full year reported ended December 31, 2008.

⁴ For financial institutions (primarily banks), total revenues were calculated as interest income (before

Total Assets (latest year end)	Same source as for Revenues.
Shareholders' Equity (latest year end)	Same source as for Revenues.
Net Income	Same source as for Revenues. Defined as "net income available to common shareholders."
Beta (latest available date)	Yahoo! Finance
Total Debt	Same source as for Revenues. Defined as "Total Liabilities," long-term, short-term, and current.
Industry	As defined in Yahoo! Finance

Discount Calculations

The percentage costs of the put options were calculated as the cost of the option divided by the stock price. Because long-term options are usually sold in (cost) increments of \$2.50 or \$5.00, very few stock prices are precisely equivalent. For example, on November 3, 2009, Minnesota Mining and Manufacturing (MMM) stock sold for \$74.36 per share. One could buy a 2012 LEAPS put option at \$70.00 for \$7.70 per share, or a \$75.00 option at \$10.10 per share. We calculate a hypothetical option cost to match the \$74.36 stock price exactly, using what we call a "Distance Weighted Option Cost." Simply, it is the same proportion of the increased option cost as the relationship between the actual stock price and the next higher and lower option prices.

For example, using the MMM prices on November 3, we calculated the cost of a put option for \$74.36 as a straight-line percentage increase in the actual option cost difference between \$70.00 and \$75.00. Thus, the stock price, \$74.36, is \$4.36 above the \$70.00 strike price, or 87.2% of the \$5.00 difference in strike prices ($\$4.36 \div \5.00). The difference in put option costs is \$2.40 ($\$10.10 - \7.70). So we add 87.2% of the difference ($\$2.40 \times .872 = \2.09) to the lower option cost (\$7.70) to arrive at a "Distance Weighted Option Cost" of \$9.79. Dividing that number by the stock price results in a percentage cost of 13.2% ($\$9.79 \div \74.36).

Expressed in a formula, the calculation is:

$$\text{Step 1} \quad \frac{\text{Share Price} - \text{Strike 1 Option Price}}{\text{-----}} = \text{a decimal number}$$

expenses) plus non-interest income.

Strike 2 Option Price – Strike 1 Option Price

Step 2 (Option 2 Price – Option 1 Price) x decimal number from Step 1
 + Option 1 Price = new put option cost

The new put option cost divided by the share price is the cost of price protection.

Analysis and Summary Results

Our objective in this study was to determine what factors influenced the size of the discounts and to what extent. Our analysis was limited to means, medians and ranges of the middle 50% of occurrences. The results are quite clear and corroborated our intuitive beliefs:

- a) Company size has a clear and major affect on discounts.
 The smaller the company, in revenues or assets, the larger the discount.
- b) Company risk has a major affect on discounts.
 The greater the risk, as measured by a company's beta, the greater the discount.
- c) Latest year profit margin (% net income after tax to revenues) has some affect on discounts but not a major one.
- d) The latest year's return on equity has some affect on discounts, particularly at the lower end of returns (losses). For positive returns on equity, the affect on discounts is minor.
- e) Analyses of discounts by industry support the results of earlier studies: that discounts, or costs of price protection, vary by industry, but they vary even more by individual company. So, it is important for a LEAPS analysis of the DLOM to be as detailed as is possible.

Following sections of this report show the study data and discuss conclusions in greater detail.

Effects of Revenue Size On Discounts

The Study has the same results as earlier studies: that revenue size has a major effect on the cost of price protection: the smaller the revenues of a company, the greater the cost of price protection or discount. That fact is consistent for both the 2011 option (14 months to expiration) and the 2012 option (26 months to expiration). For example, the median cost of a 2012 put option is 50% greater for a company with revenues under \$500 million than it is for a company with revenues over \$10 billion. Exhibit I, page 10, shows the detailed survey results.

Exhibit II, page 11, shows year to year comparisons of the costs of price protection for the three years we have studied. The Exhibit proves what is now obvious: that the costs of price

protection are not constant but vary significantly over time. Economic conditions in November 2008 (recession) caused discounts to double or more over the August 2006 period. By November 2009 economic conditions had moderated. The costs of price protection had gone down by about one-third but were still from 30% to 50% above August 2006 levels.

Another indicator of economic conditions is that the number of companies that had the longer term LEAPS (i.e., 2+ years) decreased from 897 in August 2006, to 623 in November 2008, to 577 in November 2009. (See Exhibit II). The majority of the decrease in each year is in companies with revenues under \$1 billion in revenues. The number of companies that had the shorter term LEAPS (i.e., 1+ years) did not decrease as much: from 906 in August 2006, to 1036 in November 2008, to 728 in November 2009. We suspect the decrease in longer term LEAPS is a reflection of the perceived continuing market risk and/or the dangers of forecasting specific company risks for periods longer than one year. A LEAPS broker tells us that the lower number in November 2009 was due partially to the lack of liquidity in the market in the prior year; in other words, the brokers stopped offering some LEAPS because there wasn't enough buying and selling for them to make money.

Additional Cost of Price Protection For The Longer Term Option

In the right hand column of Exhibit I (headed "Increase '12 > '11"), we observed the cost of price protection for an additional 12 months (a total of 26 months) compared to the first 14 months. Clearly, the additional cost increases as companies' revenues decrease. Exhibit III, page 12, is an analysis of the difference in costs between the longer term option (26 to 30 months) and the shorter term option (14 to 18 months) in each of our three studies; i.e., how much more does the longer term option cost than the shorter term option and why is that so? The answer to the "how much" question is easy to see. The "how much" increases dramatically in the November 2008 study compared to August 2006 and declines somewhat by November 2009. Certainly, a portion of the increase is due to the longer time period – 12 months – for which the seller of the option must guarantee the strike price. Another portion of the increase obviously is due to changes in market risk and/or specific company risk. It is impossible to tell concretely the contributions of each factor (or of other factors).

Effects of Asset Size On Discounts

The conclusions are identical to those of prior years' studies and to the conclusions for revenue size: that asset size has a major effect on the cost of price protection: the smaller the total assets of a company, the greater the cost of price protection or discount. As Exhibit IV, page 13, shows, the discount percentages changed slightly from the revenue percentages due to changes in the numbers of companies included in each size category, but the changes in discount size are insignificant. Exhibits II and III (on revenue size) have not been replicated for asset sizes because those analyses of asset size produce no significantly different information.

Effects of Beta On Discounts

Exhibit V, page 14, shows that the results of this year's study are identical to those of prior years. A company's beta has a major effect on the cost of price protection: the higher the beta, the greater the cost of price protection or discount. In each measurement category, average, median, 25th percentile and 75th percentile, the cost of price protection/discount decreases in each quintile, from the first quintile (betas of 1.99 or higher) through the fifth quintile (betas of 0.77 to negative).

Effects of Latest Year's % NIAT On Discounts

A company's latest year-end percentage of net income after taxes (NIAT) to total revenues has some effect on the size of that company's cost of price protection/discount as demonstrated by the cost of its LEAPS put option. (See Exhibit VI, page 15.) The effect appears more prominently in companies that have losses. In the first three quintiles of percentage profit to sales (profits of about 3.5% or more), the averages, medians and ranges of the middle 50% for the 2012 option are quite similar. In quintile four (profits of 3.5% to 6.6%), discounts increase somewhat. However, in quintile five (losses of 6.7% of sales or greater), there is a marked increase in discounts, although both the difference between the median discount (32.6%) and the average discount (35.2%), and the difference between the 25th percentile (39.6%) and the 75th percentile (27.9%) widen noticeably, indicating a weak cause and effect relationship.

Judging from the result of this analysis and the earlier analysis of the effects of beta on discounts, it is likely that the LEAPS market makers take a broader or longer term view of a company's risk than simply its latest year-end percentage of profit to sales.

Effects of Latest Year's Return On Equity On Discounts⁵

This breakdown studied the effect on discounts (or the costs of price protection) of a company's latest year's return on equity, defined as shareholders' equity divided by net income after taxes (NIAT). As Exhibit VII, page 16, shows, the results are quite similar to those of the prior breakdown (Latest Year's % NIAT); that is, the effects of return on equity are not particularly strong on the size of the discount, except for companies with losses. Returns on equity in quintiles 1, 2 and 3 (returns of 7.0% or greater) have roughly similar discounts (from within a middle 50% range of 19% to 28%). Quintile 4 (returns of 6.9% to losses of 11.4%) shows a clear increase in size of discount from the lower quintiles, and quintile 5 (losses of 11.4% or greater) shows an even greater increase in discounts.

⁵ In this analysis, we eliminated approximately 25 companies that had negative equity at the beginning of the latest year.

It might appear, then, that the effect of return on equity on discount size is significant until we rank the size discount against the absolute dollar size of the equity (see Exhibit VIII, page 17). The quintile discounts in Exhibit VIII are not greatly different than Exhibit VII, which raises the question of which factor has greater influence on a discount for lack of marketability, the latest year's return on equity, or the absolute dollar size of the equity. Exhibit IX, page 18, shows the discounts from both analyses. Again, they are similar, except that the medians by equity size (Exhibit VIII) show much more consistent laddering, the increase from lower to higher quintiles. The lowest three quintiles of Exhibit VII (% NIAT to Equity) are quite uniform in their conclusions. It is possible that analyses of profitability (whether as percentages of revenues or shareholders' equity) are skewed by the unusual economic climate in 2009. On the other hand, our study in 2006 of discounts by profit margin showed a similarly weak relationship to size of discounts. The results in Exhibit VIII mirror almost exactly the results of the revenue size effect in Exhibit I; that is, larger companies have smaller discounts and smaller companies have larger discounts.

Effects of Debt/Equity Ratio On Discounts

This breakdown studied the effect on discounts (or the costs of price protection) of a company's debt/equity ratio. "Debt" is defined as Total Liabilities on the company's balance sheet at the latest year-end. "Equity" is defined as the equity available to common shareholders at the same year-end. The results are shown in Exhibit X, page 19. They show no strong relationship to discounts, except for some influence at either extreme, meaning very little debt or a very high ratio.

A reason why the debt/equity ratio has no significant bearing on discounts may be the common understanding that it is typical of companies in some industries to have similar levels of debt regardless of other factors.

Effects of The Industry On Discounts

This analysis identifies the differences in discounts by industry. It parallels the findings of the earlier study: that discounts differ significantly by industry, and within industries. Exhibit XI, page 20, shows the differences in LEAPS discounts among the nine broad industry categories defined by Yahoo Finance. While the median discount for the 2012 LEAPS put option (26 months to expiration) for all 577 companies is 26.1%, medians for the nine industries vary from 20.6% (conglomerates) to 28.3% (financial).

Exhibit XII, page 21, shows the 32 sub-categories within the "Technology" industry.⁶ The median discount for the industry is 25.6%. Medians for the sub-categories range from 17.9%

⁶ Where a sub-category is missing (# 4, 10, 11, 12, etc.) no LEAPS are available for companies in those segments.

to 33.1%. The range of the lowest 25th percentile discount to the highest 75% discount is from 18.5% (application software) to 36.7% (semiconductor –specialized).

The results highlight the need for an appraiser to find the closest, reasonable, guideline public group on which to base a discount. If several companies with LEAPS are available as a guideline base, that is ideal. If not, a sub-category or entire industry is available, but the differences must be recognized and acknowledged.

Exhibit I

Cost of Price Protection By Revenue Size
(as of November 2009)

Months To Expiration	2011 Option (14 mon.)	2012 Option (26 mon.)	Increase '12 >'11
<u>All Companies</u>			
Count	728	577	
Average	21.7%	27.9%	6.2%
Median	20.3%	26.1%	5.8%
25th Percentile	16.8%	21.8%	4.9%
75th Percentile	24.6%	31.8%	7.2%
<u>Revenues of \$10 Billion or Greater</u>			
Count	251	218	
Average	18.1%	23.8%	5.6%
Median	17.2%	22.8%	5.6%
25th Percentile	14.5%	19.8%	5.2%
75th Percentile	20.7%	26.6%	5.9%
<u>Revenues of \$1 Billion to \$10 Billion</u>			
Count	340	274	
Average	22.2%	28.6%	6.5%
Median	21.1%	28.0%	6.9%
25th Percentile	17.9%	23.3%	5.4%
75th Percentile	24.7%	32.5%	7.8%
<u>Revenues of \$1 Billion or Less</u>			
Count	137	85	
Average	27.0%	35.8%	8.8%
Median	25.3%	32.3%	7.0%
25th Percentile	20.8%	27.7%	6.9%
75th Percentile	30.5%	38.1%	7.6%
<u>Revenues of \$500 Million or Less</u>			
Count	83	52	
Average	28.6%	38.9%	10.3%
Median	25.9%	34.5%	8.6%
25th Percentile	21.4%	28.9%	7.5%
75th Percentile	32.5%	41.8%	9.2%
<u>Revenues of \$100 Million or Less</u>			
Count	24	17	
Average	36.9%	50.4%	13.5%
Median	35.5%	47.6%	12.1%
25th Percentile	29.2%	34.4%	5.2%
75th Percentile	41.8%	56.8%	15.0%

Exhibit II

Costs of Price Protection By Revenue Size
Year to Year Comparisons

	<u>2009 Option</u>	<u>2011 Option</u>	<u>2012 Option</u>
Date of Survey Data	August 2006	November 2008	November 2009
Months To Expiration	30	26	26
<u>All Companies</u>			
Number of Companies	897	623	577
Median	17.4%	40.6%	26.1%
Range of Middle 50%	13.4%-23.9%	34.0%-49.2%	21.8%-31.8%
<u>Revenues of \$10 Billion or More</u>			
Number of Companies	231	216	218
Median	13.4%	35.0%	22.8%
Range of Middle 50%	11.3%-16.3%	29.0%-42.0%	19.8%-26.6%
<u>Revenues of \$1 Billion to \$10 Billion</u>			
Number of Companies	407	281	274
Median	16.6%	41.4%	28.0%
Range of Middle 50%	13.6%-21.3%	35.8%-50.1%	23.3%-32.5%
<u>Revenues of Less Than \$1 Billion</u>			
Number of Companies	259	126	85
Median	25.9%	47.9%	32.3%
Range of Middle 50%	20.3%-33.5%	39.3%-62.3%	27.7%-38.1%
<u>Revenues of \$500M or Less</u>			
Number of Companies	171	79	52
Median	28.6%	50.1%	34.5%
Range of Middle 50%	22.8%-35.9%	40.8%-61.5%	28.9%-41.8%

Exhibit III

Increased Costs of A Second Year of Price Protection By Revenue Size (1)
Year to Year Comparisons

	<u>2009 Option >2008 Option</u>	<u>2011 Option >2010 Option</u>	<u>2012 Option >2011 Option</u>
Date of Survey Data	August 2006	November 2008	November 2009
Months To Expiration	30	26	26
<u>All Companies</u>			
Number of Companies	897	623	577
Median	3.5%	7.2%	5.8%
Average	4.2%	6.9%	6.2%
<u>Revenues of \$10 Billion or More</u>			
Number of Companies	231	216	218
Median	2.9%	6.6%	5.6%
Average	3.1%	6.3%	5.6%
<u>Revenues of \$1 Billion to \$10 Billion</u>			
Number of Companies	407	281	274
Median	3.0%	7.8%	6.9%
Average	3.7%	8.2%	6.5%
<u>Revenues of Less Than \$1 Billion</u>			
Number of Companies	259	126	85
Median	5.4%	9.9%	7.0%
Average	5.8%	10.4%	8.8%
<u>Revenues of \$500M or Less</u>			
Number of Companies	171	79	52
Median	4.4%	10.5%	8.6%
Average	6.7%	11.2%	10.3%

(1) The additional percentage cost (as a percent of the stock price) of the second 12 months of price protection over the cost of the first 14 months of price protection.

Exhibit IV

Cost of Price Protection By Asset Size
(As of November 2009)

Months To Expiration	2011 Option (14 mon.)	2012 Option (26 mon.)	Increase '12 > '11
<u>All Companies</u>			
Count	724	574	
Average	21.7%	27.9%	6.2%
Median	20.3%	26.1%	5.8%
25th Percentile	16.8%	21.8%	4.9%
75th Percentile	24.6%	31.8%	7.2%
<u>Assets of \$10 Billion or Greater</u>			
Count	291	251	
Average	18.7%	24.7%	6.0%
Median	17.8%	23.4%	5.6%
25th Percentile	14.9%	20.4%	5.5%
75th Percentile	21.1%	27.9%	6.8%
<u>Assets of \$1 Billion to \$10 Billion</u>			
Count	323	257	
Average	22.3%	28.7%	6.4%
Median	21.1%	27.8%	6.7%
25th Percentile	18.1%	23.3%	5.2%
75th Percentile	25.0%	32.4%	7.4%
<u>Assets of \$1 Billion or Less</u>			
Count	110	66	
Average	27.8%	37.0%	9.2%
Median	25.7%	33.4%	7.7%
25th Percentile	21.2%	28.2%	7.0%
75th Percentile	32.4%	38.9%	6.5%
<u>Assets of \$500 Million or Less</u>			
Count	52	31	
Average	32.5%	44.1%	11.6%
Median	29.8%	37.6%	7.8%
25th Percentile	25.8%	33.8%	8.0%
75th Percentile	38.2%	48.6%	10.4%

Exhibit V

Cost of Price Protection By Yahoo Beta
(As of November 2009)

Months To Expiration:	2011 Option (14 mon.)	2012 Option (26 mon.)	Increase '12 >'11
<u>1st Quintile: 1.99 and Higher</u>			
Count	145	107	
Average	28.0%	35.0%	7.0%
Median	25.9%	33.0%	7.0%
25th Percentile	23.4%	29.9%	6.5%
75th Percentile	31.3%	39.3%	8.0%
<u>2nd Quintile: 1.99 to 1.49</u>			
Count	144	107	
Average	22.8%	29.6%	6.8%
Median	21.4%	28.8%	7.4%
25th Percentile	19.3%	25.2%	5.9%
75th Percentile	24.3%	32.3%	8.0%
<u>3rd Quintile: 1.49 to 1.12</u>			
Count	144	120	
Average	20.7%	26.6%	5.9%
Median	19.5%	25.2%	5.7%
25th Percentile	17.7%	23.2%	5.5%
75th Percentile	22.1%	28.7%	6.6%
<u>4th Quintile: 1.12 to 0.77</u>			
Count	145	120	
Average	19.4%	26.2%	6.7%
Median	17.7%	23.3%	5.6%
25th Percentile	14.7%	20.5%	5.8%
75th Percentile	20.9%	27.7%	6.8%
<u>5th Quintile: 0.77 to Neg.</u>			
Count	145	119	
Average	17.6%	22.9%	5.2%
Median	15.5%	20.4%	4.9%
25th Percentile	13.3%	18.1%	4.8%
75th Percentile	19.7%	25.2%	5.5%

Exhibit VI

Cost of Price Protection By % NIAT To Revenues (1)
(As of November 2009)

	<u>2011</u> <u>Option</u>	<u>2012</u> <u>Option</u>
<u>Quintile 1: % NIAT of 15.4% or More</u>		
Count	144	116
Average	18.7%	24.6%
Median	18.5%	24.0%
25th Percentile	15.5%	20.9%
75th Percentile	21.2%	27.5%
<u>Quintile 2: % NIAT of 8.2% to 15.3%</u>		
Count	143	124
Average	18.3%	24.4%
Median	18.2%	23.6%
25th Percentile	14.4%	19.2%
75th Percentile	21.2%	28.4%
<u>Quintile 3: % NIAT of 3.5% to 8.1%</u>		
Count	144	111
Average	20.1%	25.6%
Median	18.8%	24.3%
25th Percentile	15.9%	21.3%
75th Percentile	22.7%	29.0%
<u>Quintile 4: % NIAT of -6.6% to 3.5%</u>		
Count	145	110
Average	22.9%	29.0%
Median	21.3%	28.4%
25th Percentile	18.7%	23.7%
75th Percentile	25.1%	32.1%
<u>Quintile 5: Losses of 6.7% or More</u>		
Count	145	111
Average	27.4%	35.2%
Median	25.4%	32.6%
25th Percentile	21.2%	27.9%
75th Percentile	31.5%	39.6%

Exhibit VII

Cost of Price Protection By % NIAT To Equity (1)
(As of November 2009)

Months To Expiration:	2011 Option (14 mon.)	2012 Option (26 mon.)
<u>1st Quintile: 25.0% and Higher</u>		
Count	139	116
Average	18.0%	23.9%
Median	17.9%	23.3%
25th Percentile	14.4%	19.1%
75th Percentile	20.9%	27.8%
<u>2nd Quintile: 24.8% to 15.4%</u>		
Count	139	122
Average	19.0%	24.8%
Median	18.5%	24.2%
25th Percentile	15.5%	21.2%
75th Percentile	21.6%	27.5%
<u>3rd Quintile: 15.4% to 7.0%</u>		
Count	139	106
Average	19.5%	25.3%
Median	18.7%	24.2%
25th Percentile	15.4%	20.6%
75th Percentile	21.7%	28.3%
<u>4th Quintile: 6.9% to (11.4%)</u>		
Count	139	100
Average	22.7%	29.2%
Median	21.8%	28.7%
25th Percentile	19.1%	24.9%
75th Percentile	25.2%	32.6%
<u>5th Quintile: (11.4%) or Greater Loss</u>		
Count	139	107
Average	27.8%	35.3%
Median	25.8%	32.7%
25th Percentile	21.2%	27.6%
75th Percentile	31.7%	39.6%

Exhibit VIII

Cost of Price Protection By Equity Size
(As of November 2009)

Months To Expiration:	2011 Option (14 mon.)	2012 Option (26 mon.)
<u>1st Quintile: Equity of \$9.6 Billion and Higher</u>		
Count	139	125
Average	17.0%	22.4%
Median	16.7%	21.9%
25th Percentile	14.2%	19.2%
75th Percentile	19.1%	25.1%
<u>2nd Quintile: Equity of \$3.8 Billion to \$9.5 Billion</u>		
Count	138	121
Average	19.2%	25.8%
Median	18.7%	24.6%
25th Percentile	15.3%	21.2%
75th Percentile	21.9%	29.6%
<u>3rd Quintile: Equity of \$1.7 Billion to \$3.7 Billion</u>		
Count	139	114
Average	20.8%	27.2%
Median	20.5%	27.4%
25th Percentile	17.7%	23.6%
75th Percentile	23.0%	30.9%
<u>4th Quintile: Equity of \$675 Million to \$1.6 Billion</u>		
Count	140	112
Average	22.7%	29.1%
Median	21.9%	28.7%
25th Percentile	18.5%	24.5%
75th Percentile	26.0%	33.1%
<u>5th Quintile: Equity of \$9.3 Million to \$674 Million</u>		
Count	139	79
Average	27.3%	36.6%
Median	25.8%	33.4%
25th Percentile	21.2%	27.9%
75th Percentile	31.7%	39.2%

Exhibit IX

Comparison of Costs of Price Protection
By Return on Equity and by Equity Size

From Exhibit VII
Cost of Price Protection By % NIAT To Equity
2012 Option

	<u>Average</u>	<u>Median</u>	<u>25%</u>	<u>75%</u>
Quintile 1	23.9%	23.3%	19.1%	27.8%
Quintile 2	24.8%	24.2%	21.2%	27.5%
Quintile 3	25.3%	24.2%	20.6%	28.3%
Quintile 4	29.2%	28.7%	24.9%	32.6%
Quintile 5	35.3%	32.7%	27.6%	39.6%

From Exhibit VIII
Cost of Price Protection By Equity Size
2012 Option

	<u>Average</u>	<u>Median</u>	<u>25%</u>	<u>75%</u>
Quintile 1	22.4%	21.9%	19.2%	25.1%
Quintile 2	25.8%	24.6%	21.2%	29.6%
Quintile 3	27.2%	27.4%	23.6%	30.9%
Quintile 4	29.1%	28.7%	24.5%	33.1%
Quintile 5	36.6%	33.4%	27.9%	39.2%

Exhibit X

Cost of Price Protection By Debt/Equity Ratio (1)
(As of November 2009)

Months To Expiration:	2011 Option (14 mon.)	2012 Option (26 mon.)
<u>1st Quintile: Debt/Equity Ratio of 0 to 0.6</u>		
Count	140	106
Average	21.9%	28.9%
Median	20.2%	26.3%
25th Percentile	17.8%	23.3%
75th Percentile	24.4%	30.7%
<u>2nd Quintile: Debt/Equity Ratio of 0.6 to 1.2</u>		
Count	140	116
Average	20.1%	25.0%
Median	18.8%	24.0%
25th Percentile	15.2%	20.2%
75th Percentile	22.3%	28.3%
<u>3rd Quintile: Debt/Equity Ratio of 1.2 to 1.9</u>		
Count	140	112
Average	20.9%	26.9%
Median	20.2%	25.5%
25th Percentile	16.3%	21.7%
75th Percentile	23.3%	31.8%
<u>4th Quintile: Debt/Equity Ratio of 1.9 to 3.7</u>		
Count	140	108
Average	21.2%	27.3%
Median	19.6%	25.0%
25th Percentile	15.3%	20.6%
75th Percentile	24.7%	31.5%
<u>5th Quintile: Debt/Equity Ratio of 3.8 to 100.0</u>		
Count	140	114
Average	23.1%	30.1%
Median	22.3%	29.0%
25th Percentile	18.1%	23.6%
75th Percentile	26.7%	33.7%

(1) Debt = Total Liabilities at latest year-end.
Equity = Total Equity available to common shareholders at latest year-end.

Exhibit XI

Cost of 2012 LEAPS Put Options By Industry Sector

<u>Sector #</u>	<u>Description</u>	<u>Count</u>	<u>Average</u>	<u>Median</u>	<u>25th %</u>	<u>75th %</u>
1	Basic Materials	105	28.3%	27.5%	24.0%	32.0%
2	Conglomerates	5	21.4%	20.6%	18.0%	22.7%
3	Consumer Goods	48	25.3%	23.6%	19.0%	28.9%
4	Financial	61	30.0%	28.3%	24.9%	33.3%
5	Healthcare	68	30.8%	24.6%	19.4%	31.6%
6	Industrial Goods	46	28.1%	27.3%	22.6%	31.5%
7	Services	115	27.0%	25.7%	20.7%	31.6%
8	Technology	117	26.9%	25.6%	21.7%	31.0%
9	Utilities	12	26.3%	22.1%	19.4%	27.3%
	All Companies	577	27.9%	26.1%	21.8%	31.8%

Exhibit XII

Cost of 2012 LEAPS Put Options By Technology Industry Sub-Category

Sub-Cat. #	Description	Count	Average	Median	25th %	75th %
	All Technology Companies	117	26.9%	25.6%	21.7%	31.0%
1	Application Software	11	21.3%	20.7%	18.5%	22.6%
2	Business Software & Services	5	26.1%	22.2%	21.6%	34.5%
3	Communication Equipment	11	29.1%	28.0%	24.5%	31.9%
5	Computer Peripherals	1	22.9%			
6	Data Storage Devices	5	23.9%	24.2%	22.9%	26.4%
7	Diversified Communication Services	1	20.9%			
8	Diversified Computer Systems	4	19.3%	17.9%		
9	Diversified Electronics	1	37.5%			
13	Internet Information Providers	8	24.6%	25.7%	24.6%	26.4%
15	Internet Software & Services	3	32.0%	33.1%		
17	Multimedia & Graphics Software	2	28.3%			
18	Networking & Commun. Devices	4	24.0%	23.9%		
19	Personal Computers	3	28.8%	23.4%		
20	Printed Circuit Boards	2	30.6%			
22	Scientific & Technical Instruments	2	25.5%			
23	Security Software & Services	3	19.5%	20.2%		
24	Semiconductor - Broad Line	7	26.2%	27.1%	21.6%	29.3%
25	Semiconductor - Integrated Circuits	10	30.2%	29.6%	25.9%	31.7%
26	Semiconductor - Specialized	12	31.9%	32.9%	23.7%	36.7%
27	Semiconductor Eqpt. & Materials	7	25.6%	23.9%	23.2%	27.3%
28	Semiconductor - Memory Chips	4	34.2%	31.8%		
29	Technical & System Software	2	26.7%			
30	Telecom Services - Domestic	2	21.1%			
32	Wireless Communications	7	29.2%	29.0%	25.5%	32.5%

Ronald M. Seaman, FASA
(813) 353-0711 - Phone
ronseaman@dlom-info.com

DLQM, INC.
3300 Henderson Blvd., Suite 106A
Tampa, Florida 33609

SOUTHLAND BUSINESS GROUP, INC.

3300 Henderson Blvd., Suite 206A
Tampa, Florida 33609
Phone: (813) 353-0311
Fax: (813) 353-0411

statement of
qualifications

RONALD M. SEAMAN

professional
qualifications

FASA (Fellow, American Society of Appraisers)
Accredited in Business Valuation. Re-certified 2009.

Qualified as an expert witness: Hillsborough, Polk, Pinellas and Okaloosa
County Circuit Courts; U.S. Bankruptcy Court; U.S. District Court,
U.S. Tax Court.

Past International President, American Society of Appraisers.

Former Member (6 years), Business Valuation Committee, American
Society of Appraisers.

Seminar leader and author:

"What's Your (Medical) Practice Worth?"

"Valuation of Undivided Interests In Real Estate"

"LEAPS Provide A Minimum DLOM"

"Minimum Marketability Discounts – 3rd Edition"

business
experience

February 1985 To Present
Founder, Southland Business Group, Inc.

Tampa, FL

Rozier Machinery Co.
General Manager, Lift Truck division

Tampa, FL

Champion Products, Inc.
V. P., Sales and Marketing

Rochester, NY

education

M.B.A., Harvard University, Cambridge, MA

B.A., Hamilton College, Clinton, NY