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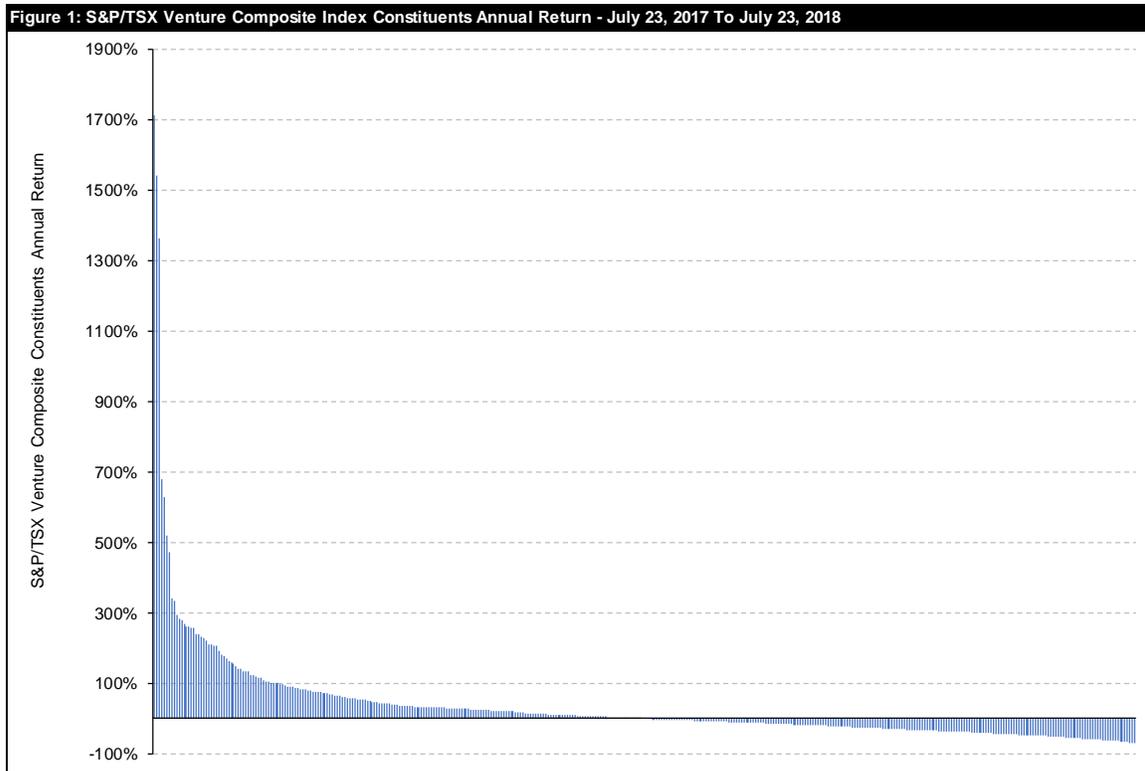
CHASING CONVEX PAYOFFS IN MICRO-CAP STOCKS

Stock traders often make fun of lottery ticket buyers, but the two have much in common. Understanding the behaviour of lottery players helps us answer many questions about the construction of a micro-cap portfolio and the different risk premiums associated with it. This framework is in sharp contrast with the classic mean-variance model that considers investors as rational and risk-averse.

Whether rational or not, people do buy overpriced insurance policies and lottery tickets. Gaming companies and insurance companies can be viewed as volatility traders generating profits on the delta between perceived and realized risks. Factors like fear, hope, camaraderie or fun are often used by lottery and insurance buyers to justify decisions that have a negative expected return. These same factors can explain some of the risk premiums present in micro-cap stocks and justify why junior stocks can be systematically undervalued or overvalued in certain periods. This is particularly true for junior resource companies where the global sentiment around the commodity complex plays an important role in determining the fear discount or the greed premium.

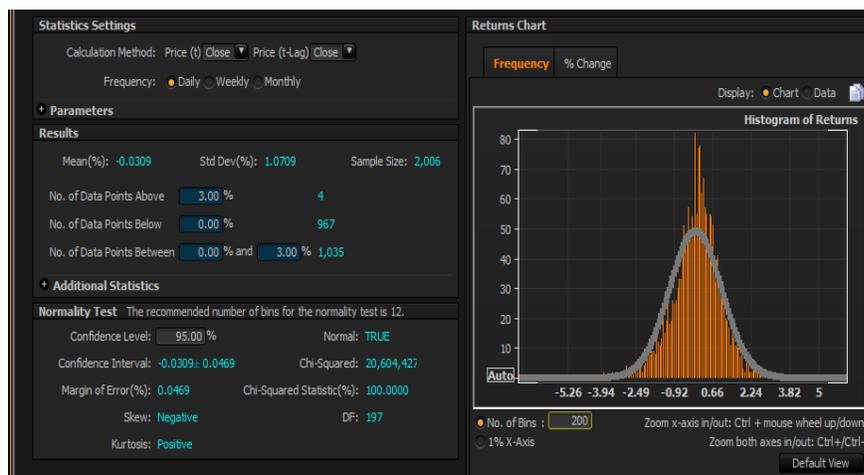
The parallel between micro-cap stocks and lottery tickets becomes apparent when looking at the annual return distribution of the S&P/TSX Venture Composite Index constituents. The extreme positive excess kurtosis of the return distribution underscores the magnitude of the fat tails. It helps investors to understand the importance of convexity in mitigating losing positions. Like VC funds, micro-cap investors must also deal with a sharply skewed return distribution and a significant positive excess kurtosis.





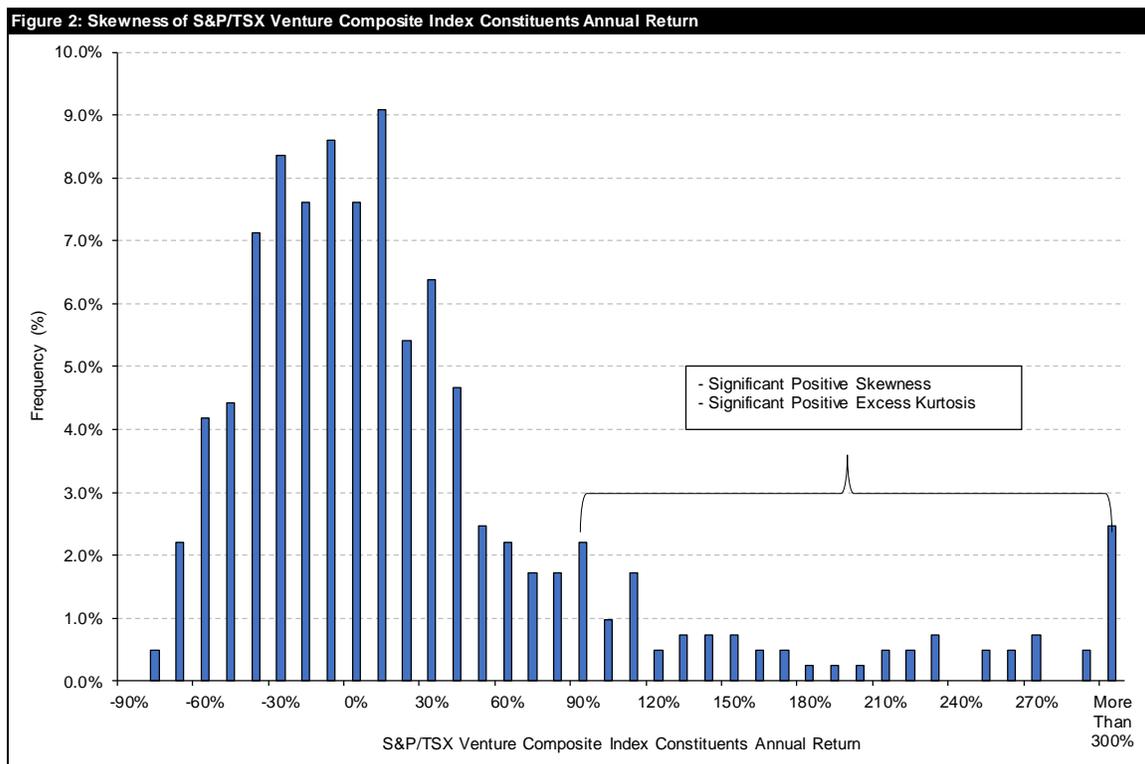
Note: Annual return as at July 23, 2018
 Source: Thomson Reuters Eikon, Spartan Fund Management

The significant positive excess kurtosis can also be observed by plotting the daily returns of the TSX Venture Composite Index against a normal distribution. The comparison can be done very easily by using the historical return analysis tool in Thomson Reuters Eikon. While the annual returns of the index constituents are highly skewed, the daily returns of the index fit more closely to a normal distribution.



Source: Thomson Reuters Eikon – Click on Chart to Request a Free Trial

The role of the micro-cap analyst should be to focus on optimizing both tails of the return distribution. Investors should focus on downside protection to minimize the probability of complete write-offs and permanent losses of capital. A framework should then be developed on the other side of the tail to maximize and optimize the probability of success and its potential magnitude. This is much like the potential expected return from the identification of mispriced call options becoming in-the-money due to the realization of low-probability events. The ideal situation is when investors can acquire a long gamma exposure at no cost. These concepts are very familiar to derivatives traders, but not to micro-cap investors.



Note: Annual return as at July 23, 2018

Source: Thomson Reuters Eikon, Spartan Fund Management

Christiansen (1987) estimated that lottery winners receive, on average, only 49% of every dollar paid by all ticket buyers with the balance disappearing in various expenses and profit margins. In general, gaming companies operate profitable businesses. Similarly, micro-cap investors face important agency-costs and asymmetry of information. Investing alongside highly successful management groups with significant skin in the game should drive returns.

While poker players must bear a rake, there are ways for the micro-cap investors to minimize agency costs.

In the first edition of Security Analysis, Benjamin Graham introduced the concept of buying stocks trading below liquidation value with the goal of generating a profit on the delta between market price and liquidation value. In the early 1930s, Graham pointed out that more than 30% of the businesses listed on the NYSE were trading below liquidation value. In more recent history, many of these situations were found at the bottom of cyclical sectors like mining and oil & gas. Due to significant cash balances and liquid assets, the downside risk was often limited and quantifiable.

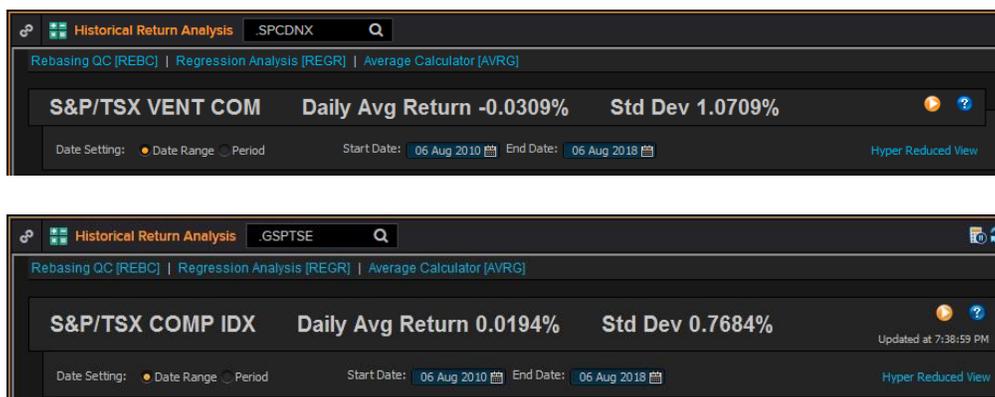
By using the stock screener embedded in Eikon, investors can now find these special situations pretty easily. However, the ability to quickly find stocks trading below liquidation value probably drives their aggregate return lower. During the days of the Graham and Newman partnership, Benjamin Graham was able to find profitable and dividend paying businesses trading below liquidation value. Access to computer power is probably the main reason explaining why these situations are now mostly found at the bottom of cyclical sectors.

Identifier	Company Name	Country of Headquarters	AssetLessLiab	Company Market Cap (CAD)
ALQ.CD	ALO Gold Corp	Canada	11,981,200.00	1,183,506.99
GDL.TO	Goodfellow Inc	Canada	65,596,000.00	60,821,861.10
ELR.TO	Eastern Platinum Ltd	Canada	76,430,429.00	26,797,232.69
MCM.V	Matachewan Consolidated Mines Ltd	Canada	2,638,760.00	2,494,157.03
MCS.V	McChip Resources Inc	Canada	4,608,450.00	3,679,062.40
TVR.V	Tri River Ventures Inc	Canada	1,109,920.00	934,340.09
JFC.V	Jaguar Financial Corp	Canada	779,870.00	765,307.66
MM.V	Minco Gold Corp	Canada	17,526,770.00	6,613,094.81
CXA.V	Consolidated HCI Holdings Corp	Canada	6,074,000.00	5,349,725.16
CZQ.V	Continental Precious Minerals Inc	Canada	5,717,050.00	4,569,964.10
BUI.TO	Buhler Industries Inc	Canada	120,956,000.00	90,500,000.00
BXXX.CD	Block X Capital Corp	Canada	4,949,060.00	3,879,335.36
AAB.TO	Aberdeen International Inc	Canada	52,574,540.00	11,976,106.28
PCOV	Phoenix Canada Oil Co Ltd	Canada	9,198,950.00	6,662,690.75
BLR.V	Blackhawk Resource Corp	Canada	5,311,140.00	3,924,401.43
SDV.V	Sumtra Diversified Inc	Canada	297,100.00	249,496.00
MNX.V	Manitex Capital Inc	Canada	4,127,840.00	4,027,928.58

Source: Thomson Reuters Eikon – Click on Chart to Request a Free Trial

When dealing with junior resource companies, liquidation value should be viewed as a source of downside protection and not as a source of return or alpha generation. Because cyclical sectors are strongly affected by mean-reversion, only a small portion of the return will be generated from the convergence of market price and liquidation value. The bulk of the return will probably be created by idiosyncratic events, qualitative variables like a talented management team and by other macroeconomic factors affecting commodity prices and sentiment. It is ironic to note that most of these opportunities that resemble free call options are found in the most volatile sectors. Option theory would suggest a higher implied volatility commanding expensive option premiums.

Based on the historical return analysis function of Eikon, the daily standard deviation or volatility of the TSX Venture Composite Index is around 1.07% which is significantly higher than the 0.77% standard deviation of the TSX Composite Index.



Source: Thomson Reuters Eikon – Click on Chart to Request a Free Trial

The difference in volatility can also be observed by plotting the TSX Venture Composite and TSX Composite Index daily prices. In short, micro-cap investors with long gamma exposure should embrace volatility and cyclicity which are core attributes of the TSX Venture Index.



Source: Thomson Reuters Eikon – Click on Chart to Request a Free Trial

In conclusion, success in micro-cap stocks is often about sacrificing first order and linear effects for the power of higher order or non-linear movements. The goal should be to profit from extreme outcomes while focusing on minimizing roll losses. A new generation of value investors will focus on finding value in higher order movements where the markets are less efficient.

Sources

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About the Author



David Desjardins was an Equity Research associate at National Bank before joining the Teraz Fund in 2017. He is particularly drawn to the work of Benjamin Graham as it is applied to special situations and deep value in the micro- and small-cap sectors. He has published over 70 related articles on the seekingalpha.com blog and has gained media attention for articles written on his personal blog, www.netcashvalue.com.

David received his BComm from the Université du Québec à Chicoutimi where he founded the student investment club, and is both a CFA Level II candidate and a CAIA Level II candidate.

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