BUY LOW, SELL HIGH

By Mike Chung

"Buy low, sell high" is often quoted in finance. While its wisdom is hard to question, its application is hardly extensive.

To understand why this is so, it is helpful to put ourselves in the shoes of a typical investor. Let's call him Joe. To Joe, "buy low, sell high" probably means: "I'm gonna find the next hot thing and get it early when its stock price is low." While that's not a totally unreasonable target, such an endeavour is deeply flawed.

To start with, for Joe to successfully find the "next hot thing" he needs extensive and specific business knowledge. Unless he is a genuine visionary (of the Steve Jobs type), chances are quite low that he has deep insights.

Those who make a living trying to find the "next hot thing" are called venture capitalists and they expect to lose money on most projects and have a few pay off in a big way. Joe probably doesn't have the required resources to back a large number of investment prospects in the same manner as venture capitalists.

But suppose that Joe does indeed stumble on the next hot thing. What are the odds that he will find it early enough? It would be tempting to say he has a better probability of winning the lottery.

Even worse, by the time Joe buys shares of a hot stock in the open market, he has probably overpaid for them. After all, a hot stock is one that attracts excess attention from the trading public and therefore commands a hefty price premium. Moreover, the competitive advantage that made a hot stock perform in a stellar manner would most likely attract more competition. The economic law of diminishing returns would kick in resulting in a low likelihood of long-term profitability for the underlying business.

For instance, Microsoft was one of the most prominent hot stocks of the 1990's. But since then competitors have caught up with the software giant and market participants are no longer feverishly buying its shares. Ditto for the most recent case of Research in Motion.

Against the Grain

If chasing the next hot thing is akin to the carrot dangling in front of the donkey, what is left for Joe? A little expansion of the title sentence is of order:

Buy *when prices are* Low

Sell *when prices are* High

Economics 101 points out that when there are more sellers than buyers, prices fall. Conversely, prices rise when there are more buyers than sellers. Hence, the expanded meaning of our title sentence becomes:

Buy *when prices are* Low *and there are more sellers than buyers*

Sell *when prices are* High *and there are more buyers than sellers*

Imagine a market situation where there are more sellers than buyers such as the stock market crashes of 2000 and 2008-09. It would be very hard to visualize Joe mustering enough courage to buy during those times of market panic. More likely, by mere human impulse, he would have yielded to fear, followed the herd, and done the exact opposite.

On the other hand, a market with more buyers than sellers can be exemplified by the recent gold market or the internet craze at the end of the 1990s. In these cases, Joe would probably be tempted to jump on the bandwagon and make a grab for the easy money instead of doing the converse and taking advantage of the elevated valuations by selling.

For this reason, famed American investor Warren Buffett wrote: "A simple rule dictates my buying: Be fearful when others are greedy and be greedy when others are fearful." (1) On the basis of such train of thought, "Buy Low, Sell High" is really an instruction to go against the grain. Such course of action has, is, and perhaps will never be easy to follow. In order to successfully implement such principles, one needs to be disciplined enough to resist the natural urge of doing the same thing as everyone else even if the cold hard facts point in the other direction. And the ability to resist such impulses emanates primarily from strength of character.

Mr. Buffett's mentor, Benjamin Graham clearly pointed to such behavioural deficiency more than 60 years ago. In his popular book, *The Intelligent Investor*, Mr. Graham wrote: "The investor cannot enter the arena of the stock market with any real hope of success unless he is armed with mental weapons that distinguish him in kind – not in a fancied superior degree – from the trading public. One possible weapon is indifference to market fluctuations… He must be relatively immune to optimism or pessimism and impervious to business or stock-market forecasts." (2)

Also known as the Dean of Wall Street, Mr. Graham had placed his finger right on the matter. Nowadays, more than half a century later, Joe has it even worse. He is constantly bombarded with all sorts of market noise from financial news, blogs, tweets, and TV.

High IQ is also no guarantee for investment success. Just consider the spectacular failure of Long Term Capital Management (LTCM) towards the end of the 1990s. This hedge fund boasted a constellation of PhD's among its ranks (including two Nobel laureates in Economics) and yet they led LTCM to ultimately become the poster boy for hedge fund blow-ups.

Buy Low

On the assumption that you have the required temperament for successful investing, as advocated by Mr. Graham, the next question is "How does one buy low?"

Stock prices can go down for a variety of reasons, including:

(A) The underlying business of the company is going down the drains.

(B) The company is currently facing tough operating conditions which might turn out to be temporary in the longer run.

(C) The stock of the company is being neglected or overlooked by the market at large (which is perhaps more currently interested in pursuing the next hot thing).

While case scenario (A) is a quasi-guarantee of losing money for the shareholders, scenarios (B) and (C) might provide opportunities of buying low. More specifically, you want to look for opportunities when a company's share price falls to a sufficiently low level compared to its intrinsic value to provide a generous margin of safety.

On the subject of intrinsic value, Mr. Graham wrote: "In general terms, it is understood to be that value which is justified by the facts, e.g. assets, earnings, dividends, definite prospects, as distinct, let us say, from market quotations established by artificial manipulation or distorted by psychological excesses." [3] Thus, one path towards a successful investment operation can be said to hinge upon separating the wheat from the chaff, i.e. distinguishing case scenarios (B) and/or (C) from scenario (A).

In the last edition of The Intelligent Investor, Mr. Graham provided a set of criteria with respect to (inter alia) earnings stability and growth, leverage, liquidity, dividend payments, which, if met by a company's fundamentals, increase the odds of that company becoming a turnaround story instead of going down the drains. [4]

How do you calculate intrinsic value?

The answer is more art than science. In the classic investment text Security Analysis, Mr. Graham wrote: "We must recognize, however, that intrinsic value is an elusive concept… it is a great mistake to imagine that intrinsic value is as definite and as determinable as is the market price." (5)

Despite being elusive, the intrinsic value concept has not resulted in a dearth of investors who have operated successfully by buying at prices thought to be lower than intrinsic value. In the Chairman's letter to Berkshire Hathaway shareholders for the year ending December 31, 2009, Mr. Buffett dropped a very useful hint on how to get an approximate grasp of intrinsic value: "Alas, that (intrinsic) value cannot be calculated with anything close to precision, so we instead use a crude proxy for it: per-share book value… Even so, Charlie (Munger) and I believe that our book value… supplies the most useful tracking device for changes in intrinsic value… In other words, the percentage change in book value in any given year is likely to be reasonably close to that year's change in intrinsic value." (6)

An analogy can be drawn between a country's economic activity as measured by Gross Domestic Product (GDP) and a company's intrinsic value as proxied by book value. Reaching a precise measurement of a country's GDP is probably as elusive as precisely counting the number of sand grains on a particular beach. For a country, like Canada, it is hard to nail down GDP with an accuracy even to the nearest one million dollars. And yet, GDP remains one of the most common measures of economic activity however imprecise it might be.

The percentage change in GDP from one period to the next is of the most interest for economists. This change in GDP should be a good approximation of the actual change in the level of economic activity just like Mr. Buffett put forward the change in intrinsic value being approximated by the change in book value.

The evolution of a company's Price to Book Value ratio (P/B) over time can be regarded as a good proxy for how much the market price is charging in comparison to the shares' intrinsic value. A company exhibiting a declining P/B ratio to a sufficiently low level (7), is improving the odds for a buyer of its shares to acquire them at a price that is less than their intrinsic value; provided analysis of the company's fundamentals points to a case of scenario (B) or (C) as laid out above. As Mr. Graham put it in a related manner: "… he (the analyst) appears to be concerned with the intrinsic value of the security and more particularly with the discovery of discrepancies between the intrinsic value and the market price." (8)

The above discourse of buying low as represented by a sufficiently low P/B ratio is backed by the academic paper "Contrarian Investment, Extrapolation, and Risk" (9) In this study, deciles of portfolios were created with Value stocks at one end and Glamour stocks at the other. The Value stocks were defined by low ratios such as Price to Book, Price to Earnings or Price to Cash Flows whereas the portfolios of Glamour stocks had high such ratios. The study provided evidence that the Value strategies yield higher returns even without being fundamentally riskier because these low ratio strategies took advantage of suboptimal behaviour of the typical investor.

Catch Up and Sell

Most of the time the market price of a share gravitates around its intrinsic value. But sometimes, this relationship can substantially dislocate due to market over-reaction to a particular factor and give rise to undervaluation (or overvaluation).

After an investor takes a long position in a perceivably undervalued situation, he must be patient and allow the market to catch up with the stock's intrinsic value. As Mr. Graham once said: “That is one of the mysteries of our business, and it is a mystery to me as well as to everybody else. We know from experience that eventually the market catches up with value. It realized it in one way or the other.” (10) And during the process of catching up with intrinsic value, the increase in market value should normally provide a satisfactory return on investment.

Consider a stock that has historically traded like the broad market at a P/B of 2.3 (the long term average for the median P/B ratio of a broad based U.S. Equity Index). If the stock market offers you an opportunity to buy it at a P/B of 1.5 (the maximum advocated by Mr. Graham in The Intelligent Investor) and the market eventually catches up with its intrinsic value which is proxied by its average P/B ratio of 2.3 then the capital appreciation would already be slightly above 50%.

And this is not counting the potential intervening increase in book value which would further enhance the gain. In practice, professional investors who hunt for undervalued issues tend to have an average holding period of 3 to 5 years. Through the added power of compounding over such a period of time, it is possible to end up with an overall annual compounded rate of return north of 10%. (11) As the broad equity market in the U.S. has gained about 7% per year over the long term, an investment operation illustrated just above can be said to hold ample potential for a satisfactory return.

This is a rather simplistic model designed primarily at showing the type of return that might be expected from investing in low P/B stocks. In reality, other factors have to be considered when trying to establish the intrinsic value of a stock. For instance, a company's earnings history can be used as a proxy for its earnings power which itself ought to be part of a more comprehensive set of factors to be taken into account while determining intrinsic value.

But once the market value of a stock has reached its perceivable intrinsic value, there are 3 scenarios that can subsequently ensue:

1. the stock price can stagnate at its current level.
2. the stock price can surge further forward and possibly make the stock become overvalued.
3. the stock price can retreat back and maybe make the stock become undervalued once again.

In my opinion, there is no way of predicting which scenario will prevail. Hence, the appropriate course of action should be underpinned more by common sense than by trying to graze through a crystal ball.

A main message of this essay is that the odds of capital appreciation for typical investors are better served by buying undervalued issues than fairly valued ones (let alone overvalued ones). Thus, once a stock is deemed to have reached its intrinsic value, it would logically be better to sell it and use the proceeds to buy an undervalued stock because this course of action would, in principle, increase the odds of capital gains.

The stock just sold could, of course, continue to advance further. But without the ability of predicting the future, there is no way of knowing which particular stock will do so once it is fairly valued. Therefore, it is wiser to increase the odds of capital appreciation by reallocating capital from a fairly valued stock into an undervalued one instead of relying on Lady Luck to push the fairly valued issue into overvalued territory.

Diversification

However, buying one stock with a low P/B ratio is certainly no guarantee of investment success. To start with, the analysis of a particular stock may not be error free. Moreover, things can change over time so that the conditions prevailing at the time of the initial analysis no longer apply. Hence, the importance of diversification. An analogy to the principle underlying the insurance industry might be helpful here. When someone buys auto insurance, he has no idea when he will make a future claim. It can be the next day, the next week, the next month, the next year, or perhaps never. If the policy holder has no idea about such timing, the insurance company would be even less illuminated for that particular customer. But what the insurance company knows is that if it gets a sufficiently large number of such policy holders, the law of large numbers will apply and it can therefore price its policies accordingly using actuarial principles.

Likewise, an investor who buys a stock on the principle of low valuation, as laid out above, will be hard pressed to predict when the market price of that particular stock will wake up to its fundamentals. But, by diversifying into a sufficiently large number of such stocks, the investor is making the law of large numbers work in his favour and putting better odds on his side. Mr. Graham suggested holding 20 to 30 stocks.

Thus, the often quoted advice to “Buy Low and Sell High” is not a concept that can be easily and straightforwardly implemented. It demands more mental discipline and strength of character than is exhibited by most people. It has been estimated that only 5% of professionally managed money is done using the precepts of Value Investing. [(12)] For this reason value investing will continue to provide satisfactory results as it has over the past 75 years or so because the majority of the trading public will continue to behave like our friend Joe. After all, they are only human.

References:

(1) "Buy American. I am." Warren Buffett. Op-Ed contributor New York Times, October, 17, 2008.

(2) The Intelligent Investor. Benjamin Graham. Harper Collins 1949.

(3) Security Analysis. Benjamin Graham. McGraw Hill 1934.

(4) The Intelligent Investor, 4th edition. Benjamin Graham. Harper Collins 1973.

(5) Security Analysis. Benjamin Graham. McGraw Hill 1934.

(6) Berkshire Hathaway Inc. 2009 Annual Report. Chairman's Letter by Warren Buffett.

(7) In The Intelligent Investor 4th edition (1973), Benjamin Graham provided a limit for P/B ratio of no more than 1.5.

(8) Security Analysis. Benjamin Graham. McGraw Hill 1934.

(9) "Contrarian Investment, Extrapolation, and Risk." Josef Lakonishok, Andrei Shleifer & Robert Vishny. Journal of Finance, December 1994.

(10) Testimony Before the Committee on Banking and Currency, United States Senate (March 1955). The Rediscovered Benjamin Graham, Janet Lowe. John Wiley and Sons 1999.

(11) Using figures from the Bureau of Economic Analysis of the U.S. Department of Commerce, the annual compounded rate of GDP growth in the U.S. has been of 2.6% over the past 20 years. If this 2.6% is taken as a conservative estimate for the annual growth rate in book value of a typical company, such book value would have gone up by about 14% $\{(1+2.6\%)^5=113.7\%\}$ after 5 years. On top of that, by adding the effect of an increase in P/B ratio from 1.5 to 2.3, the resulting market price would be about 1.7 times ($113.7\% \times 2.3 \div 1.5 = 174\%$) the starting market price or an approximate annual compounded gain of 12% over the course of those 5 years. Naturally, such growth rate will be higher if the catch up with intrinsic value occurs over a shorter time frame.

(12) "Searching for Rational Investors in a Perfect Storm." Louis Lowenstein, Columbia Law School. Working Paper October 2004.

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Disclaimer: *The main intent of this essay is to discuss the suboptimal behaviour of stock market participants. Thus, the above should not solely be used as investment advice given that an investment operation essentially requires a deeper and more complete analytical process.*