LEE CAPITAL MANAGEMENT

Lee Adaptive Strategies Update

Monthly Commentary

November 2019

Free Trades

November was a good month. The S&P gained a more than respectable 3.63% on a total return basis. Volatility was muted. The VIX, which had been over 20 as recently as October 8th, ended November at 12.62. The S&P has not moved more than a percent in a day since mid-October. This is the sort of environment that equity investors hope for, a calmly profitable period that makes up for the many stretches of uncertainty and loss.

Headlines were dominated by incremental developments in on-going stories, rather than by market moving events. The UK stumbled towards Brexit, with an election scheduled for mid-December. The US and China remained encouragingly close to a trade deal. The Fed appeared to have lost interest in either raising or lowering rates. The Trump impeachment process meandered through the US House on its way to almost certain death in the Senate. Hong Kong protests continued.

But for those of us involved in retail investing, there was big news in November. TD Ameritrade and Charles Schwab are merging. Schwab is buying TDA and is getting a good price, paying around what TDA was trading for last summer, without the traditional takeover premium.

TDA, you see, is in trouble. It has a cost and revenue model that does not work now that the going rate for equity trading commissions is zero. When TDA's biggest competitor kicked off the zero pricing regime on October 1, TDA's stock immediately lost more than a quarter of its value.

Of course, that competitor was Schwab. A person does not need to be a conspiracy theorist to imagine that perhaps the breaking and then buying of TDA was Schwab's sinister (and brilliant) plan all along. A person might even speculate that once Schwab has consolidated a commanding market share it will re-introduce trade commissions.

Much as we hate to admit it, we are not that cynical. Commissions have been falling for as long as anyone can remember, and for good reason. It is a basic rule of economics that prices will tend to match the marginal cost of production, and with current technology the marginal cost of processing the data that is a small stock trade is essentially zero. More to the point, that tiny cost was until recently offset by two sources of revenue, the now vanished commission paid by the brokerage client, but also a fee paid by the market maker to the broker for right to execute the order. Even with no commissions, brokers still make a profit on every trade. Indeed, it is logical to speculate about negative commissions, that is, that brokers could begin to pass on to their clients some of what market makers pay them.

So what was wrong with TDA? Schwab makes more than half of its revenue in a way traditional to financial institutions throughout history. It borrows money at a low interest rate and lends it out at a higher rate. For a broker, this means paying the client very little on their cash balances and charging them rather a bit more on their margin balances. What it lacks in originality it makes up for in profitability.

In principle, TDA ought to have been making similar profits in the same way. It did not, and so was much more dependent on those disappearing commissions, because of a financing deal with its controlling shareholder, TD Bank, in which the bank captured much of the borrow-low-lend-high profit. Under the merger agreement, that deal is ending. In retrospect, all TDA needed to become viable was to change owners, and Schwab was the most logical new owner.

There are those who consider the shift from commissions that are practically zero to commissions that are literally zero to be a meaningful change in the investing landscape. This is not our view. Paying $5 to trade $50,000 worth of stock (a fee of 0.01%) is for all practical purposes the same as paying $0 to do it. Is there an investor who would do the trade with a $0 commission but not with a $5 one?

We bring this up because the advent of literally zero commissions has become a supporting argument for direct indexing, an investing heresy presently enjoying some buzz. Basically, the idea is that instead of investing in an index fund or ETF, you just directly buy the underlying stocks in the index yourself, cutting out the middleman and his management fee. Zero commissions, the argument goes, makes this even easier as you can now make the dozens or hundreds of necessary trades for free.

But zero commissions do not mean trading is free. Buy 1000 shares of XYZ and then immediately sell them (or sell and then buy) and you are all but guaranteed to end up with less money than you started with, even without commissions. As we all should know, stocks trade using a bid ask spread. So XYZ might be quoted 99.98 x 100.02, meaning you can sell at $99.98 or buy at $100.02. Round trip 1000 shares and you will spend $40.

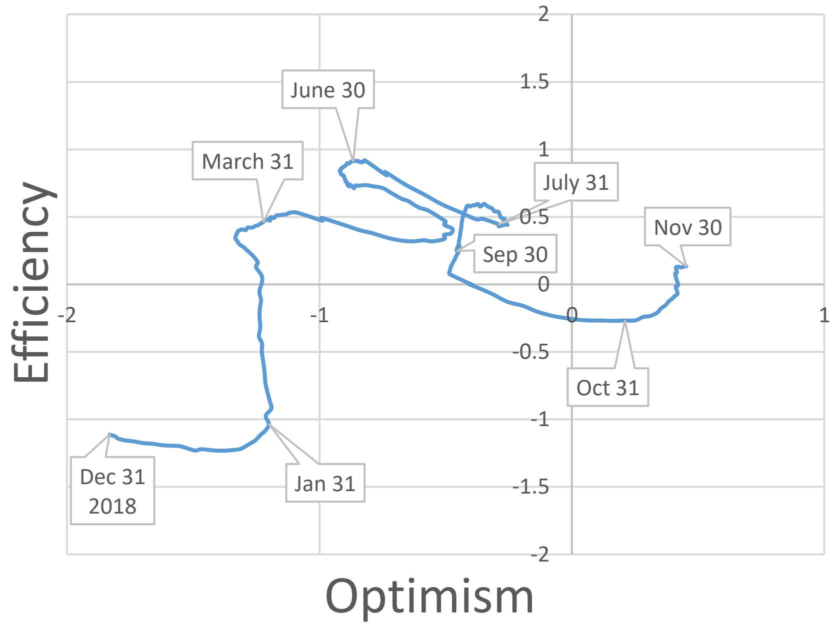
The size of the bid ask spread is based on the liquidity and volatility of the stock. The large and best known ETFs have tiny spreads. SPY's spread is almost always one cent, or about 0.0032% of the share price. Stocks such as Apple or Microsoft will usually have similarly small spreads, but for the bulk of the membership of the S&P 500 spreads will be much higher, closer to the level of our fictional XYZ Corp. That means that even without commissions buying all 500 members of the index will cost considerably more in transaction costs than just buying SPY.

How much more? That would be a complex calculation, but for context consider that SPY's annual management fee, the thing you are trying to avoid paying, is 0.09%. (Its otherwise identical iShares rival IVV is 0.04%; Vanguard's VOO is 0.03%.) If you are a large institution with a billion dollars to put to work, where a single basis point is $100,000, it is conceivable, but not probable, that direct indexing could be worth the bother. But if you have a mere million, a single basis point is $100 and direct indexing is very unlikely to pay off.

An advocate for direct indexing might concede that yes, brewing your own S&P 500 fund might not make economic sense, but as the home brewer you can choose the recipe, customizing the portfolio to fit your own opinions, values, or interests. You might want to exclude stocks of companies you consider unethical, or double down on technology stocks. To this we retort that with more than 1700 US based ETFs and 9000 mutual funds available, any point of view in the general vicinity of mainstream should have a non-direct option.

And if what you have in mind is unique enough that there is no ETF or fund that can help? Then buy the stocks you like and avoid the ones you do not. There is a term for this. It is called investing.

The Market Sentiment Framework



We use our Market Sentiment Framework to adapt the mechanics and weightings of our full quantitative models to changing market conditions. The Sentiment Framework gauges the current state of market psychology on two dimensions. Efficiency measures the crowdedness of the market, the volume of participants seeking investment opportunities. Lower levels of efficiency imply more market mispricing. Optimism measures the willingness of investors to take on risk in exchange for distant and uncertain rewards. Higher levels of optimism imply a better outlook for risky asset classes.

November saw both Efficiency and Optimism rise modestly.

Optimism had a strong spring, a back and forth summer, and now a positive fall. During October it crossed into positive territory for the first time since 2017, and it then added to its gains in November, going from 0.21 to 0.45.

Although not high in absolute terms, Optimism is far above its levels of late 2018, implying a meaningfully rosier outlook, or at a minimum a less pessimistic outlook, than we had a year ago.

Efficiency also rose in November, from -0.27 back into positive territory at 0.13. This reverses a slightly downward trend for Efficiency over the past six months, suggesting that the market is healing.

The current positioning of the Sentiment Framework implies a market that is still functioning fairly well but is less efficient than it could be, with moderate opportunities for relative gains from stock picking as well as from momentum. Optimism is at a level that would suggest courage in market exposure.

Performance and Portfolio Positioning as of November 30, 2019:

Lee Adaptive Large Cap Sector (LALCS)

For the month of November 2019, the LALCS composite, on a net of fee basis, was up an estimated +2.72%, behind the S&P 500, which was up +3.63% on a total return basis. The three month return for the LALCS composite, on a net of fee basis, was up an estimated +6.18%, behind the S&P 500, which was up +7.86% on a total return basis.

The strategy began and ended November holding all sectors and did not make any trades.

Lee Adaptive Broad Market Sector (LABMS)

For the month of November 2019, the LABMS composite, on a net of fee basis, was up an estimated +2.84%, behind the Russell 3000, which was up+ 3.80% on a total return basis. The three month return for the LABMS composite, on a net of fee basis, was up an estimated +6.44%, behind the Russell 3000, which was up +7.72% on a total return basis.

The strategy began and ended November holding all sectors and did not make any trades.

Lee Adaptive Global Equity (LAGES)

For the month of November 2019, the LAGES composite gained +2.12%. This was just behind the MSCI All Country World Index, which gained +2.48% on a total return basis. The three month return for the LAGES composite, on a net of fee basis, was up an estimated +6.42%, behind the MSCI All Country World Index, which was up +7.58% on a total return basis.

The portfolio made no trades during November, holding positions that were approximately 48% US, 7% Japan, 11% Emerging Markets, 22% Europe, and 11% Asia ex-Japan.

Lee Adaptive Global Allocation (LAGAS)

For the month of November 2019, the LAGAS composite, on a net of fee basis, gained an estimated +1.22%, behind our blended benchmark, which was up +1.47% on a total return basis. The three month return for the LAGAS composite, on a net of fee basis, was up an estimated +3.96%, behind the blended benchmark, which was up +4.39% on a total return basis.

The strategy remained fully invested during November, making no trades. Fixed income remained somewhat overweighted, at 42%, while US equity was somewhat underweighted at 27%.

Lee Adaptive China (LACS)

For the month of November 2019, the LACS composite, on a net of fee basis, was down an estimated -0.15%. This was behind the MSCI China Index, which was up +1.78% on a total return Net US Dollar basis. For the three month return the LACS composite, on a net of fee basis, was up an estimated +4.47%, behind the MSCI China Index, which was up +5.86 % on a total return Net US Dollar basis.

The portfolio began and ended the month fully invested in equity. It held 50% in KBA, the broad market A Shares ETF, 25% in TAO, the real estate ETF, and 25% in OBOR, the transportation infrastructure ETF.

PAST PERFORMANCE IS NO GUARANTEE OF FUTURE RESULTS OR PROFITABILITY.

Definitions:

Lee Adaptive Large Cap Sector Composite ("LALCS Composite"). A capital weighted performance composite of an investment strategy known as the Lee Adaptive Large Cap Sector strategy (the "LALCS Strategy") that holds some combination of the U.S. large cap sector ETFs and/or cash, as determined by a proprietary quantitative model. The LALCS Composite performance is based on actual trading profits/losses/expenses net of a management fee of 0.50%. Actual expenses of operating the LALCS Strategy may vary, depending on the investment structure in which the Strategy is used, which could result in lower returns than those stated for the LALCS Composite. Such expenses may detract materially from the performance of the LALCS Strategy and, consequently, the results shown above may not be fully indicative of the actual performance results of the LALCS Strategy.

THE LALCS COMPOSITE IS BEING SHOWN FOR ILLUSTRATION PURPOSES ONLY AND SHOULD NOT BE RELIED UPON. NO REPRESENTATION OR ASSURANCE IS MADE THAT ANY INVESTOR WILL OR IS LIKELY TO ACHIEVE RESULTS COMPARABLE TO THOSE SHOWN ABOVE OR WILL MAKE ANY PROFIT OR WILL BE ABLE TO AVOID INCURRING SUBSTANTIAL LOSSES.
PAST PERFORMANCE OF THE STRATEGY AND THE LALCS COMPOSITE ARE NOT INDICATIVE, OR A GUARANTEE, OF FUTURE RESULTS. IT SHOULD NOT BE EXPECTED THAT THE LALCS STRATEGY'S ACTUAL RETURNS WILL REPLICATE THE RETURNS SHOWN IN THE PERFORMANCE MODEL.

Lee Adaptive Broad Market Composite ("LABMS Composite"). A capital weighted performance composite of an investment strategy known as the Lee Adaptive Broad Market Strategy (the "LABMS Strategy") that holds some combination of the U.S. large cap sector ETFs, a small cap ETF and/or cash, as determined by a proprietary quantitative model. The LABMS Composite performance is based on actual trading profits/losses/expenses net of a management fee of 0.50%. Actual expenses of operating the LABMS Strategy may vary, depending on the investment structure in which the Strategy is used, which could result in lower returns than those stated for the LAUSE Composite. Such expenses may detract materially from the performance of the LABMS Strategy and, consequently, the results shown above may not be fully indicative of the actual performance results of the LABMS Strategy.

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Lee Adaptive Global Equity Composite ("LAGE Composite") Performance. A capital weighted performance composite of the of an investment strategy known as the Lee Adaptive Global Equity strategy (the "LAGE Strategy"). The LAGE Strategy is currently offered by LCM to certain qualified investors through certain accounts managed by LCM on a discretionary basis ("LAGE Managed Accounts"). The LAGE Managed Accounts use the same investment program as the LAGE Strategy. The LAGE Composite performance is based on actual trading profits/losses/expenses net of a management fee of 0.50%. Actual expenses of operating the LAGE Strategy may vary, depending on the investment structure in which the LAGE Strategy is used, which could result in lower returns than those stated for the LAGE Composite. Such expenses may detract materially from the performance of the LAGE Strategy and, consequently, the results shown above may not be fully indicative of the actual performance results of the LAGE Strategy.

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Lee Adaptive Global Allocation ("LAGA Composite"). A capital weighted performance composite of the of an investment strategy known as the Lee Adaptive Global Equity strategy (the "LAGA Strategy"). The LAGA Strategy is currently offered by LCM to certain qualified investors through certain accounts managed by LCM on a discretionary basis ("LAGA Managed Accounts"). The LAGA Managed Accounts use the same investment program as the LAGA Strategy. The LAGA Composite performance is based on actual trading profits/losses/expenses net of a management fee of 0.50%. Actual expenses of operating the LAGA Strategy may vary, depending on the investment structure in which the LAGA Strategy is used, which could result in lower returns than those stated for the LAGA Composite. Such expenses may detract materially from the performance of the LAGA Strategy and, consequently, the results shown above may not be fully indicative of the actual performance results of the LAGA Strategy.

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Lee Adaptive China Equity Composite ("LACS Composite") Performance. A capital weighted performance composite of the of an investment strategy known as the Lee Adaptive China strategy (the "LACS Strategy"). The LACS Strategy is currently offered by LCM to certain qualified investors through certain accounts managed by LCM on a discretionary basis ("LACS Managed Accounts"). The LACS Managed Accounts use the same investment program as the LACS Strategy. The Composite performance is based on actual trading profits/losses/expenses net of a management fee of 0.35%. Actual expenses of operating the LACS Strategy may vary, depending on the investment structure in which the LACS Strategy is used, which could result in lower returns than those stated for the LACS Composite. Such expenses may detract materially from the performance of the LACS Strategy and, consequently, the results shown above may not be fully indicative of the actual performance results of the LACS Strategy.

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S&P 500 Total Returns Index. The returns for the S&P 500 index on a total return basis, that is, with dividends included and does not reflect the deduction of fees and expenses. You cannot invest directly in this index. The returns for the S&P 500 Index are provided for comparison purposes only to show how the LALCS Composite compares to a broad-based index of securities. The S&P 500 is comprised of a representative sample of 500 large-cap companies. The index is an unmanaged, float-weighted index with each stock's weight in the index in proportion to its float, as determined by Standard & Poors. The index is one of the most widely used benchmarks of U.S. equity performance. The index is not subject to any of the fees or expenses to which the LALCS Composite is subject. It is not possible to invest in this index. The index is used for comparison purposes only. It should not be assumed that the LALCS Strategy will invest in any specific securities that comprise the index or that the investment program of the LALCS Strategy will track the index. Consequently, the returns of the LALCS Composite may or may not be highly correlated with those of the index.

Russell 3000 Index. The Russell 3000 Index is a market-capitalization-weighted equity index maintained by FTSE Russell that seeks to be a benchmark of the entire U.S. stock market. It measures the performance of the 3,000 largest publicly held companies incorporated in America as measured by total market capitalization and represents approximately 98% of the American public equity market. The returns for the Russell 3000 index are provided for comparison purposes only to show how the LABMS Composite compares to a broad-based index of securities. The index is not subject to any of the fees or expenses to which the LABMS Composite is subject. It is not possible to invest in this index. It should not be assumed that the LABMS Strategy will invest in any specific securities that comprise the index or that the investment program of the LABMS Strategy will track the index. Consequently, the returns of the LABMS Composite may or may not be highly correlated with those of the index.

MSCI All Country World Index. The returns for the MSCI All Country World Index ("ACWI") on a total return basis, that is, with dividends included and does not reflect the deduction of fees and expenses. The returns for the index are provided for comparison purposes only to show how the above composite returns compare to a broad-based index of securities. The MSCI AC World Index is composed of large and mid-capitalization developed and emerging market equities. The index is one of the most widely used benchmarks for global equity performance. You cannot invest directly in this index. It should not be assumed that the strategies above will invest in any specific securities that comprise the index or that the investment program of the strategies above will track the index. Consequently, the returns of the composites above may or may not be highly correlated with those of the index.

MSCI China Index Net. The returns for the MSCI China Index Net on a total return basis, that is, with net dividend tax withholding and does not reflect the deduction of fees and expenses. The returns for the index are provided for comparison purposes only to show how the above composite returns compare to a broad-based index of securities. The MSCI China Index represents large and mid-capitalization across H shares, B shares, Red chips, P chips and foreign listings (e.g. ADRs). With 495 constituents, the index covers about 85% of this China equity universe. Currently, the index also includes Large Cap A shares represented at 5% of their free float adjusted market capitalization**.** It should not be assumed that the LACS strategy will invest in any specific securities that comprise the index or that the investment program of the LACS strategy will track the index. Consequently, the returns of the composite above may or may not be highly correlated with those of the index.

Bloomberg Barclays US Aggregate Bond Index. The returns for the Bloomberg Barclays US Aggregate Bond Index ("US Agg") on a total return basis, that is, with dividends included and does not reflect the deduction of fees and expenses. The returns for the index are provided for comparison purposes only to show how the above composite returns compare to a broad-based index of securities. The US Agg is a broad-based flagship benchmark that measures the investment grade, US dollar-denominated, fixed-rate taxable bond market. The US Agg index includes Treasuries, government-related and corporate securities, MBS (agency fixed-rate and hybrid ARM pass-throughs), ABS and CMBS (agency and non-agency). The index is one of the most widely used benchmarks for fixed income performance. You cannot invest directly in this index. It should not be assumed that the strategies above will invest in any specific securities that comprise the index or that the investment program of the strategies above will track the index. Consequently, the returns of the composites above may or may not be highly correlated with those of the index.

Blended Benchmark. Is a hypothetical index comprised of 60% MSCI AC World Index and 40% the Bloomberg BarCap US Aggregate Bond Index. You cannot invest directly in this index.

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