Convergence Long/Short Strategy Research

The Unrecognized Benefits of Active Long/Short Investing

One of the most underutilized strategies in equity investing is the long/short strategy. In general, there is a lack of knowledge or comfort with this strategy. This paper will educate the reader about what long/short investing is and why it should be considered as an important allocation in their portfolio. Despite a long history of delivering compelling results, the long/short equity space remains under-allocated.

The long/short strategy consists of investing in a portfolio that invests in one set of equities while simultaneously selling short another set of equities. The objective is to benefit from the price appreciation of the long positions while taking advantage of the price depreciation of the short positions.

Although there are many benefits to this approach, this strategy does not receive the attention it should. Many investors just concern themselves with the long side of the equity markets and ignore the opportunity that the short side offers. To efficiently diversify one's portfolio, a long/short allocation is an important component to include in one's overall asset allocation mix.

Benefits:

- **Shorting stocks provides an extra alpha source.** Even during years with positive returns, indexes have several constituents with negative returns. In our analysis of the Russell 1000 Index, during the last twenty-one years *(December 1999 to December 2020)*, there have been sixteen years with a positive return. The average return of the index for those years is 16.5%. **During these periods, on average almost 31% of the constituents in the index have negative returns.[1]** Long-only managers are not able to take advantage of these opportunities, but long/short managers can.

- **Long/short investing offers equity exposure that is not perfectly correlated to equity indexes while still providing equity exposure.** When looking at the monthly returns of a proxy of worldwide exposure equity returns (MSCI ACWI) compared to a generic index of long/short investing, such as the HFRX Equity Hedge Index from **January of 1998 to September 2021** the correlation between these two series is 0.76.[2] This shows a positive relation to the long side of the equity markets but not entirely. Therefore, an investor can still participate in equity-like returns, without being 100% fully exposed to the index.

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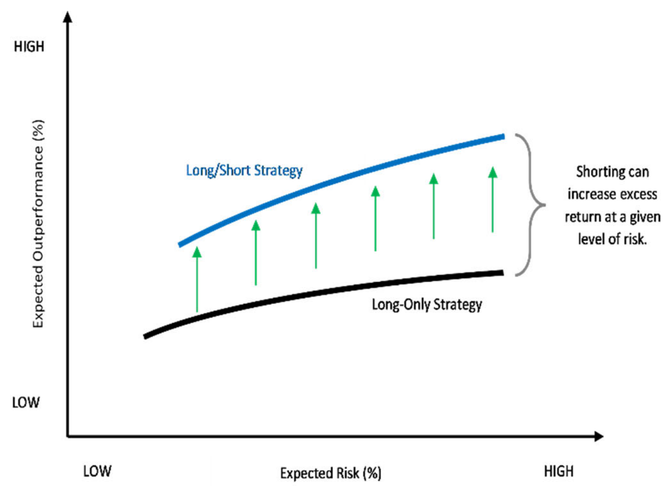
[1] Source: Convergence Investment Partners using data from Russell Investments. For illustrative purposes only. Holdings are subject to change. The Russell 1000® Index is a trademark/service mark of Russell Investments. Russell is a trademark of Russell Investments.

[2] Source: Convergence Investment Partners using data from Zephyr. For illustrative purposes only. Holdings are subject to change. The MSCI® ACWI Index is a trademark/service mark of MSCI. The HFRX Equity Hedge Index is a trademark/service mark of Hedge Fund Research, Inc.

- **Beneficial risk-adjusted returns.** Long/short equity investing tends to have lower volatility. The lower volatility provides downside risk protection. Gains from short holdings will reduce losses which in turn, will dampen volatility.

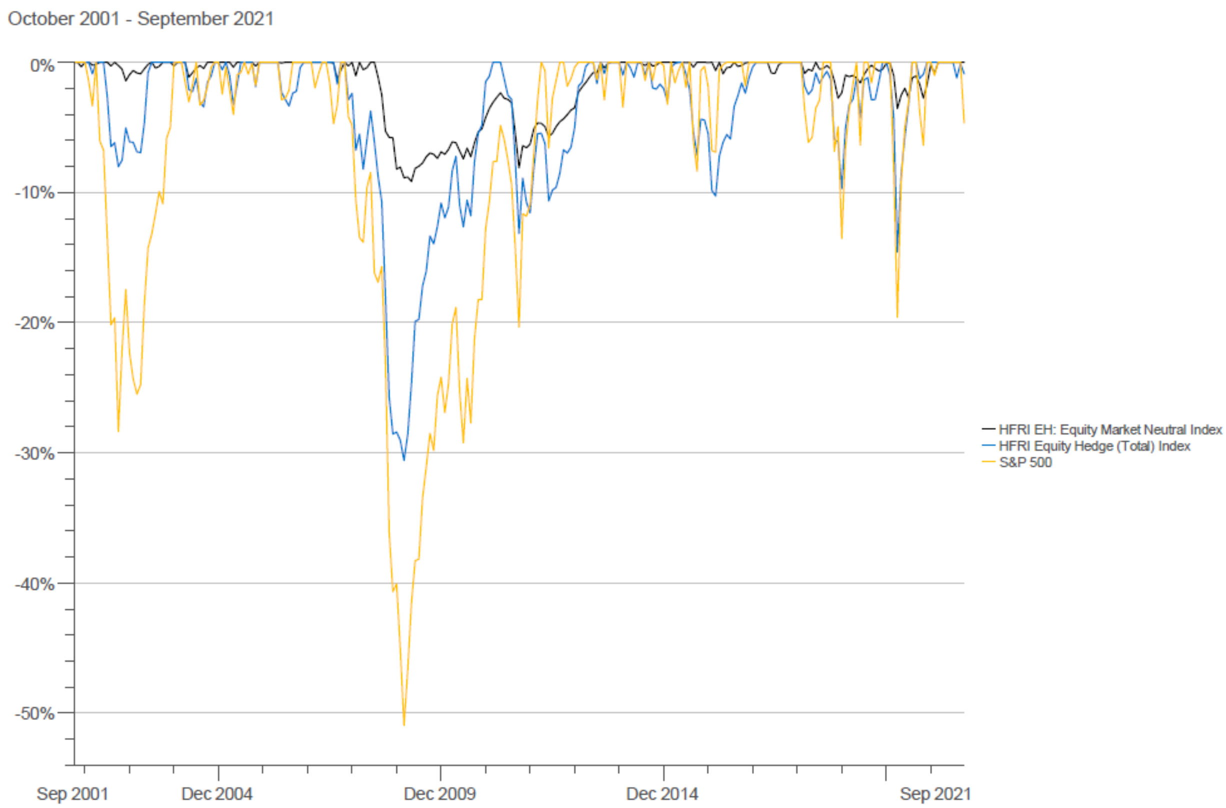


*Shown for illustrative purposes only and not indicative of the Convergence Long/Short Strategy.
Source: Convergence Investment Partners

Evidence of these benefits will show up in the portfolio's Sharpe Ratio. For example, when comparing the risk-adjusted returns between a long-only and long/short index, one will see improvement of risk-adjusted returns. When looking at a long/short proxy like the HFRX Equity Hedge Index from **January of 1998 to September of 2021** (and assuming a 0% risk-free rate), the index produced a Sharpe Ratio of 18.9%. The unhedged long-only MSCI ACWI only had a Share Ratio of 15.3%. Another long/short proxy, the Morningstar Long/Short Equity Category had a Sharpe Ratio of 18.8%, outperforming the long-only benchmark.[3] This could be even more pronounced during bear markets.

3 Source: Convergence Investment Partners using data from Zephyr. For illustrative purposes only. Holdings are subject to change. The MSCI® ACWI Index is a trademark/service mark of MSCI. The HFRX Equity Hedge Index is a trademark/service mark of Hedge Fund Research, Inc.

- **Downside protection.** In periods of down markets, long/short investing can help protect capital until the markets recover. With the downside protection from the short-selling side, investors can profit on some of their holdings while they wait for the markets to turn around. Instead of just watching their portfolio decrease in value during bear markets, they will be able to take advantage of the environment.



As of 9/30/2021
Source: Convergence Investment Partners, using data provided by Zephyr, Standard and Poor's.
Shown for illustrative purposes only. Hedge Fund Research Index (HFRI) returns were sourced through Zephyr. Zephyr is an outside vendor whose software has been used to create this exhibit. Convergence Investment Partners pays a fee for this software. Convergence has made efforts to confirm accuracy/reliability of the data provided by Zephyr but we disclaim responsibility for its accuracy or completeness. Universes: HFRI EH: Equity Market Neutral Index and HFRI Equity Hedge (Total) Index. Maximum drawdown is the peak-to-trough decline during a specific record period. Please see notes to disclosure for important disclosures. Subject to change. An investment cannot be made directly in an index.

- **Flexibility against indexing.** Index investing can have hidden costs that active managers can avoid. For example, as Arnott, Kalesnik and Wu have shown in their paper *"Buy High and Sell Low with Index Funds!"*, that there is a performance cost when providers change the constituents of their index. For example, they sited that ***"On average, from October 1989 through December 2017, additions (to the index) underperformed the market by 128 bps in the 12 months after the effective data, and discretionary deletions outperformed by 2,044 bps. An investor could have adopted the very simple strategy of implementing the additions and deletions to the S&P 500 with a delay of 12 months and in doing so would have outpaced the S&P 500 by 25 bps a year!"***[4] Investors should realize that index investing has active management elements that can work against them.

[4] Rob Arnott, Vitali Kalesnik, PhD, and Lillian Wu. "Buy High and Sell Low with Index Funds!", researchaffiliates.com, June 2018, page 3.

The Convergence Long/Short Strategy

The Convergence Long/Short Strategy has a long track that should be of interest to investors. With the unique investment process employed at Convergence Investment Partners, the Convergence Long/Short Strategy has had a history of helping investors meet their objectives. This includes:

- Outperforming its peers. *(12.89% annual return versus 5.22% annual return for Morningstar Long-Short Equity category).*[5]
- Stability with a lengthy track record for this type of strategy.
- Appropriate balance of long and short investments.

Why Convergence believes in shorting stocks

Shorting is an extremely important part of Convergence's investment process. We believe that managers that only take long positions in their portfolios are leaving out a tremendous investment opportunity. A long-only manager can only decide **not** to own a bad stock. There are always opportunities on the short side of the investment spectrum. For example, in 2017 the average return of the 100 best-performing stocks in the Russell 1000 Index was 74.0% while the bottom 100 averaged -33.1%. Even though the index averaged 21.7%, there were quite a few attractive shorts that long-only managers could not exploit.[6]

The Convergence Long/Short process and ranking methodology

Long positions within the Convergence process tend to represent companies with strong and improving fundamentals in many different areas. The process seeks out quality companies with strong balance sheets, good capital discipline, and strong growth in revenues, cash flows, and earnings. These companies also tend to be favorably valued relative to their industry peers.

Conversely, a typical short position consists of a company that has weakening fundamentals in its operations. Examples include declining revenues, cash flows, and earnings. It also could include deteriorating balance sheets or extreme valuations. Companies that are destroying shareholder value through unproductive utilization of their resources tend to become good shorting opportunities.

Convergence identifies long and short candidates by first looking at factors that the market rewards or penalizes. Then, Convergence creates a ranking system within each industry group. This process of measuring and ranking the various performance metrics of each equity is conducted continuously and within each stock's respective industry group.

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[5] Source: Convergence Investment Partners using data from Zephyr. For illustrative purposes only. Holdings are subject to change. The Morningstar Long-Short Equity category is a trademark/service mark of Morningstar, Inc. Trailing 10-year analysis ended 09/30/2021.

[6] Source: Convergence Investment Partners using data from Russell Investments. For illustrative purposes only. Holdings are subject to change. The Russell 1000® Index is a trademark/service mark of Russell Investments. Russell is a trademark of Russell Investments.

The Convergence Long/Short success story

Convergence Investment Partners has a unique approach to long/short investing. The firm operates at the "convergence" of quantitative and fundamental investing, bringing together the best qualities of both investing styles. Convergence utilizes a team approach with individuals who have worked together for over twenty-five years. This team believes that companies with strong and improving financial characteristics will outperform, while those with declining fundamentals will underperform.

To do this, Convergence employs a systematic ranking method in a factor-based investing approach. The ranking scores equities within their industry groups on relative attractiveness. The Strategy invests in equities that have favorable quantitative scores while selling short those that have weak scores.

The Convergence Long/Short Strategy maintains a net long exposure. Under normal market conditions, the Strategy's long positions may range from approximately 90% to 150% while its short positions may range from 20% to 70%. The Strategy maintains a net long exposure of 50% to 90% most of the time. The equities in the portfolio are highly liquid, investing in those stocks that are in the top half of the Russell 3000 Index in terms of market capitalization.

Convergence Investment Partners has been managing its Convergence Long/Short Equity Strategy since December of 2009. Over this time, the strategy has handily outperformed its peers. In addition, the Strategy has accomplished all this while reducing volatility. Since inception, the Convergence Long/Short Strategy has realized a lower volatility level than its benchmark (as measured by standard deviation and beta).

DIVERSIFIED ALPHA SOURCE

The Strategy has been able to achieve these results by staying true to its systematic, quantitative approach in identifying fundamentals. As one can see from the Strategy's portfolio statistics, the long side of the portfolio consists of solid companies with strong fundamentals while the short side consists of companies that are overvalued and/or unprofitable. Throughout the Strategy's history, these are the portfolio characteristics that investors have tended to see.

Portfolio Statistics (09/30/2021)

Convergence Long/Short Equity Strategy

Sector Weight %	Total Portfolio	Long	Short	Russell 3000
Communication Services	6.2	9.6	3.4	10.1
Consumer Discretionary	8.9	12.9	4.0	12.2
Consumer Staples	2.8	4.7	1.8	5.3
Energy	3.6	4.5	0.9	2.8
Financials	7.0	11.0	4.1	11.9
Health Care	9.8	14.4	4.6	13.6
Industrials	7.1	10.1	3.1	9.0
Information Technology	18.9	28.1	9.2	27.1
Materials	2.3	3.0	0.7	2.4
Real Estate	2.1	3.2	1.1	3.4
Utilities	0.5	1.3	0.8	2.4
Total	69.1	102.9	33.8	100.0
Price/Earnings Ratio	15.2	23.4	-181.2	33.1
Price to Book	4.25	3.66	2.86	4.14
Beta	0.67	1.03	1.37	1.00
Return on Assets	10.5%	5.5%	-4.9%	6.4%
EPS Growth*	10.4%	9.7%	7.9%	13.9%
Capitalization(millions)	$315,865	$219,489	$22,362	$437,493
Number of Holdings	305	132	173	3049

*5 year trailing. Earnings Growth is not a measure of future performance.

Source: Convergence Investment Partners, using data provided by Zephyr. Convergence has made efforts to confirm accuracy/reliability of the data provided by Zephyr but we disclaim responsibility for its accuracy or completeness.

For example, when looking at the overall portfolio statistics, one will see that long side portfolio has P/E ratio of 23.4. The short side's ratio is -181.2. Also, the average Return on Asset of a long holding is 5.5% while for the short it is -4.9%.

Unlike many long/short managers, the Convergence Long/Short Equity Strategy utilizes shorting as an active alpha source rather than simply as a portfolio hedge. We believe that companies can be mispriced within public markets, creating investing opportunities for both favorably ranked long holdings and short holdings. Investments of both long and short holdings have a positive risk-adjusted alpha expectation.

RISK MANAGEMENT OF SHORT PORTFOLIO

Proposed short holdings that exhibit fundamental scores consistent with favorable shorting metrics must also pass multiple criteria of risk controls built within the Convergence investment process.

1. Position sizes for short holdings are reduced to mitigate idiosyncratic risk.
2. Stocks with lower borrowing costs are favored over more controversial names with higher borrowing costs.
3. Short holdings are monitored to minimize exposure to names that have a high percentage of short float.

These measures help to mitigate risks as part of the process of shorting companies with weak or declining fundamentals. Also, since the investor is both long and short in this Strategy, they will capture the upside movements within equities.

Despite there being many benefits to long/short investing, this differentiated strategy is often overlooked. The savvy investor can see the advantages this approach offers and travel down a more efficient path of wealth building.

Please consult a financial professional prior to investing. Your capital is at risk and the value of investments can go down as well as up. Past performance is not a guarantee or a reliable indicator of future results.

The information provided herein is for informational purposes only. Investors should seek financial advice regarding the appropriateness of investing in any securities or investment strategies discussed in this documentation and should understand that statements regarding future prospects may not be realized. Investors should note that income from such securities may fluctuate and that each security's price or value may rise or fall. Accordingly, investors may receive back less than originally invested.

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GIPS COMPLIANCE DISCLOSURES

Compliance Statement

Convergence Investment Partners claims compliance with the Global Investment Performance Standards (GIPS®) and has prepared and presented this report in compliance with the GIPS standards.

Verification assesses whether (1) the firm has complied with all the composite construction requirements of the GIPS standards on a firm-wide basis and (2) the firm's policies and procedures are designed to calculate and present performance in compliance with the GIPS standards. Convergence Investment Partners has been independently verified for the periods 1/1/2011 to 6/30/2020. The verification report(s) is/are available upon request. Verification does not ensure the accuracy of any specific composite presentation. The firm maintains a complete list and description of composites, which is available upon request. Results are based on discretionary separate accounts under management, including those accounts no longer with the firm. The results portrayed relate only to the adviser's clients invested in the portfolio that meet the criteria for inclusion in composite performance. The U.S. Dollar is the currency used to express performance returns and assets. Performance results are presented both net and gross of management fees and include the reinvestment of income. From the inception of each composite until 01/01/11, Time Weighted Return was compounded on a monthly basis. Beginning 01/01/11 through present, Time Weighted Return was compounded on a daily basis.

Definition of the Firm

The firm is defined as Convergence Investment Partners, LLC ("Convergence Investment Partners"), a majority-owned subsidiary of Nile Capital Group, LLC effective October 1, 2018. Convergence Investment Partners was founded in November, 2004. From December 2008 to September 2018, Convergence Investment Partners was a majority-owned subsidiary of Montage Investments, LLC. Convergence Investment Partners (CIP) is an investment adviser registered with the Securities and Exchange Commission. Registration of an investment adviser does not imply any specific level of skill or knowledge. Convergence Investment Partners is an active equity manager dedicated to managing U.S equity strategies. Convergence uses its proprietary process to select and rank investments, construct portfolios, and help manage risk in each of its products. Convergence strategies are based on corporate fundamentals supported by compelling empirical research applied within each industry group. The name, Convergence, communicates the firm's philosophy of a fundamental stock picking process that incorporates the intersection of sound investment theory executed in a disciplined environment utilizing advanced technology. The total firm assets will be defined as all discretionary and non-discretionary assets under management within Convergence Investment Partners. This includes primary investment management accounts and sub-advisory investment management accounts, as well as both fee-paying and non-fee paying assets.

Appendix A

Russell 1000 Index Annual Returns and Percentage of Constituents with Negative Returns

YEAR	Russell 1000 RETURN	Percentage of Index with Negative Return
2000	-7.73%	59%
2001	-12.48%	60%
2002	-21.64%	77%
2003	29.87%	10%
2004	11.41%	25%
2005	6.26%	43%
2006	15.47%	31%
2007	5.82%	50%
2008	-37.62%	99%
2009	28.44%	15%
2010	16.10%	19%
2011	1.49%	60%
2012	16.41%	23%
2013	33.10%	11%
2014	13.24%	33%
2015	0.92%	58%
2016	12.05%	31%
2017	21.69%	24%
2018	-4.78%	67%
2019	31.40%	15%
2020	20.94%	42%