AN INTRODUCTION TO ALPHA ARCHITECT
Alpha Architect Overview

**Boutique Asset Management Firm (AUM: $825mm+)\(^1\)**
- Founded in 2010 as a quantitative consultant
- Launched asset management business in 2012

**Research Focus**
- Multiple academic book and peer-reviewed article publications
- Multiple team members have advanced degrees and qualifications (e.g., CFA or Masters/PhD)

**Employee-Owned and Operated**
- Employees own approximately 92% of the firm; seed investor owns a 5% royalty
- Strategic investors own approximately 8% of the firm

**Minority & Disabled Veteran Owned**
- Wesley (CEO): Choctaw Nation of Oklahoma (Roll No. 1202) & US Marine (disabled*)
- Patrick (CCO/COO): US Marine (disabled)

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\(^1\) As of 9/30/2019.

*Pending paperwork finalized with the VA
WE EMPOWER INVESTORS THROUGH EDUCATION

In order to
Develop Sustainable Investors
Investors Embrace Client Education and Our Philosophy

Blog attracts $Bn+ family office

We launch our ETF business

Word gets out...

July ‘10
AUM ($M): $0

Oct ‘14
AUM ($M): ~$100

May ‘18
AUM > $1B

Investors like our approach

No Sales Reps. No Gimmicks. Pure Education.
Education Develops Sustainable Investors

Our Approach: Sustainable Process

Our Clients: Sustainable Investors

Our Goal: Expected Long-Term Performance

Education is critical for cultivating long-term, sustainable investors

“Alpha” is Earned via Patience & Discipline
Why Does Sustainability Matter? Ask Warren Buffett!

Disciplined investors earn risk premiums from less disciplined investors

9-Months of Extreme Relative Performance Pain

- Berkshire Hathaway
- QQQ

Buffett: -39%
QQQ: 110%
Return Spread = 149%

“Charlie, should we buy tech?”

“Warren Buffett may be losing his magic touch.”

Source: Factset. 6/1/1999 to 2/29/2000. The results are hypothetical results and are NOT an indicator of future results and do NOT represent returns that any investor actually attained. Please see disclosures for additional information. Additional information regarding the construction of these results is available upon request.
Our Core Beliefs Reinforce Our Mission

**OUR BELIEFS**

1. Transparency, no Black-Boxes
2. Evidence-Based, not Story-Based
3. Systematic, not Ad-Hoc
4. Win-Win, not Win-Lose

**WHY IMPORTANT**

1. Transparency increases trust for the process
2. Evidence increases chance of success
3. Systematic eliminates human bias & costs
4. Win-Win culture builds long-term partnerships

**MISSION**

1. Sustainable investors understand the plan
2. Sustainable investors use data, not emotion
3. Sustainable investors stay the course
4. Sustainable investors build a winning team

Sustainable Investors can Exploit Sustainable Processes
What we Do: Affordable Alpha
What we do?

Active management works better...if it’s affordable

Why our value proposition works

Affordable

• Our products are bought, not sold, which minimizes distribution costs
• We do more with less via low overhead and technology
• We are tax-aware and focus on tax-efficient investment solutions

Alpha

• We conduct exhaustive research
• Our portfolios have high active-share (i.e. not closet-indexing)
Our Business Model Helps Clients Win

We are built for tax-sensitive, independent, long-term investors...we are NOT for everyone

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<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Passive Index</td>
<td>No</td>
<td>Likely – Very cheap</td>
<td>Low</td>
<td>Yes</td>
<td>Good for the masses</td>
</tr>
<tr>
<td>Closet Index or “Smart Beta”</td>
<td>No</td>
<td>Maybe</td>
<td>High</td>
<td>Yes</td>
<td>Good at the right price</td>
</tr>
<tr>
<td>Active</td>
<td>Yes</td>
<td>Unlikely – Too expensive</td>
<td>High</td>
<td>Limited</td>
<td>Not sustainable after-tax and fees</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>Yes</td>
<td>Low</td>
<td>Limited</td>
<td>Sustainable</td>
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</table>

Active Investing that Seeks to Achieve a Win-Win
Our Business Model Helps Clients Win

We are built for tax-sensitive, independent, long-term investors. We are NOT for everyone

Managed Futures

Leverage

Risk Management

Long-Only Focused Factors

Different Tools for Different Goals

*Managed futures are only available for Qualified Eligible Persons.
Strategy details

- **Focused Factor Investing** → Concentrated Value and Momentum (No closet indexing) → ETFs and Managed Accounts
- **Tax-Efficient Alternatives** → Long/Short Equity & Managed Futures (Multi-strategy) → ETFs, Hedge Fund, IDF, Managed Accounts
- **Tactical Asset Allocation** → Robust Asset Allocation (A turnkey tactical portfolio solution) → Automated Managed Accounts

Built For Tax-sensitive, Independent, Long-term Investors
## We Attract **E.D.U.C.A.T.E.D.** Clients

<table>
<thead>
<tr>
<th>E</th>
<th>Empirical</th>
<th>Evidence-based. Show me the data</th>
</tr>
</thead>
<tbody>
<tr>
<td>D</td>
<td>Disciplined</td>
<td>Long-term investors. Avoid short-term fads</td>
</tr>
<tr>
<td>U</td>
<td>Unassuming</td>
<td>Billionaires that drive Honda Civics. Disdain for flash</td>
</tr>
<tr>
<td>C</td>
<td>Committed</td>
<td>Long-term horizon. Not afraid of short-term volatility</td>
</tr>
<tr>
<td>A</td>
<td>Active</td>
<td>Not satisfied with passive index performance</td>
</tr>
<tr>
<td>T</td>
<td>Tax Aware</td>
<td>Looks for after tax results. Incorporates tax planning</td>
</tr>
<tr>
<td>E</td>
<td>Economical</td>
<td>Understands price is what you pay. Value is what you get</td>
</tr>
<tr>
<td>D</td>
<td>Do It Yourself</td>
<td>An entrepreneurial spirit. Avoids the status quo</td>
</tr>
</tbody>
</table>

**We are NOT for everyone: Are you the right client?**
Appendix
<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
<th>Recent Experience</th>
<th>Education</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wes Gray</td>
<td>CEO</td>
<td>Alpha Architect (2010-Present)</td>
<td>Ph.D./M.B.A. Finance, University of Chicago Booth School of Business</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Drexel Finance Professor (2010-2014)</td>
<td>B.S. The Wharton School of the University of Pennsylvania, magna cum laude</td>
</tr>
<tr>
<td></td>
<td></td>
<td>US Marine Corps Captain (2004-2008)</td>
<td>Series 65 and 3 licenses</td>
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<tr>
<td></td>
<td></td>
<td>Mathematics Instructor (2008-2009)</td>
<td>M.S. Mathematics, Drexel University</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>B.S. Mathematics, University of Scranton, summa cum laude</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Series 65 license and 3 licenses</td>
</tr>
<tr>
<td>Tao Wang</td>
<td>Portfolio Manager</td>
<td>Alpha Architect (2012-Present)</td>
<td>M.S., Finance, Drexel University</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>B.A., B.L., Shanghai University of Finance &amp; Economics</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Series 65 and 3 licenses</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>CFA Charter Holder</td>
</tr>
<tr>
<td>Patrick Cleary</td>
<td>COO/CCO</td>
<td>Alpha Architect (2014-Present)</td>
<td>M.B.A Harvard University</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Algeco Scotsman (2014)</td>
<td>B.S. The Wharton School of the University of Pennsylvania, cum laude</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>CFA Level III Candidate</td>
</tr>
<tr>
<td>Brandon Koepke</td>
<td>CTO / Capital Markets</td>
<td>Alpha Architect (2017-Present)</td>
<td>B.S. Computer Science, University of Calgary</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Strawhouse Labs (2017)</td>
<td>B.C. Finance, University of Calgary</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Amazon (2015-2016)</td>
<td>CFA Passed Level III</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Disney (2014-2015)</td>
<td>Series 65 and 3 licenses</td>
</tr>
<tr>
<td>Ryan Kirlin</td>
<td>Head of Capital Markets</td>
<td>Alpha Architect (2017-present)</td>
<td>B.A. Economics, Fordham University</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Revenue Shares (2013-2017)</td>
<td>CFA Level II Candidate</td>
</tr>
<tr>
<td></td>
<td></td>
<td>NYSE (2009-2013)</td>
<td>Series 65 license</td>
</tr>
</tbody>
</table>
We are Thought Leaders in Quant and Factor Investing

- We Publish Peer-reviewed Research
- Contribute To National Outlets
- And Our Approach Is Making News
There are risks involved with investing, including loss of principal. There is no assurance that the objectives of any strategy or fund will be achieved or will be successful. No investment strategy, including diversification, can protect against market risk or loss. Current and future portfolio holdings are subject to risk. Past performance does not guarantee future results.

There is a risk of substantial loss associated with trading commodities, futures, options and other financial instruments. Before trading, investors should carefully consider their financial position and risk tolerance to determine if the proposed trading style is appropriate. Investors should realize that when trading futures, commodities and/or granting/writing options one could lose the full balance of their account. It is also possible to lose more than the initial deposit when trading futures and/or granting/writing options. All funds committed to such a trading strategy should be purely risk capital.

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Index returns are for illustrative purposes only and do not represent actual fund performance. References to an index do not imply that the portfolio will achieve returns, volatility or other results similar to that index. The composition of the index may not reflect the manner in which a portfolio is constructed in relation to expected or achieved returns, portfolio guidelines, restrictions, sectors, correlations, concentrations, volatility or tracking error targets, all of which are subject to change. Index performance returns do not reflect any management fees, transaction costs, or expenses, which would reduce returns.

Indexes are unmanaged and one cannot invest directly in an index. There are no active components of indexes; therefore, using them as a proxy can be of limited value because there is no guarantee that the portfolio would have been managed to match the index. Realized returns and/or volatility may come in higher or lower than expected.

Annual performance is calculated based on monthly return streams, geometrically linked as of the end of the specified month end.

Results, unless cited otherwise, are shown gross of fees and do not reflect the effect of investment fees which would lower performance. Performance reflects the reinvestment of dividends and other earnings. The following hypothetical illustrates the compound effect fees have on investment return: For an account charged 1% with a stated annual return of 10%, the net total return before taxes would be reduced from 10% to 9%. A ten year investment of $100,000 at 10% would grow to $259,374, and at 9%, to $236,736 before taxes. For a complete description of all fees and expenses, please refer to Alpha Architect’s Form ADV Part 2A.
IMPORTANT INFORMATION - DISCLOSURES

Performance figures contained herein are hypothetical, unaudited and prepared by Alpha Architect, LLC; hypothetical results are intended for illustrative purposes only.

Past performance is not indicative of future results, which may vary.

Hypothetical performance results (e.g., quantitative backtests) have many inherent limitations, some of which, but not all, are described herein. No representation is being made that any fund or account will or is likely to achieve profits or losses similar to those shown herein. In fact, there are frequently sharp differences between hypothetical performance results and the actual results subsequently realized by any particular trading program. One of the limitations of hypothetical performance results is that they are generally prepared with the benefit of hindsight. In addition, hypothetical trading does not involve financial risk, and no hypothetical trading record can completely account for the impact of financial risk in actual trading. For example, the ability to withstand losses or adhere to a particular trading program in spite of trading losses are material points which can adversely affect actual trading results. The hypothetical performance results contained herein represent the application of the quantitative models as currently in effect on the date first written above and there can be no assurance that the models will remain the same in the future or that an application of the current models in the future will produce similar results because the relevant market and economic conditions that prevailed during the hypothetical performance period will not necessarily recur. There are numerous other factors related to the markets in general or to the implementation of any specific trading program which cannot be fully accounted for in the preparation of hypothetical performance results, all of which can adversely affect actual trading results. Hypothetical performance results are presented for illustrative purposes only.

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Simulated Historical Performance: All returns are total returns and include the reinvestment of distributions (e.g., dividends).

Index Characteristics Data Source: Characteristics are from FactSet and derived via the ETFs that track the respective Indexes. Characteristics are holdings-weighted. The data for the performance and factor attribution analysis are from Alpha Architect and Solactive.

The S&P 500 Index (SP500) is a capitalization-weighted index that measures the performance of the broad U.S. equity market.

The MSCI EAFE Index (EAFE) is a capitalization-weighted index that measures the performance of developed market equities, excluding the U.S. and Canada.

The MSCI World Index is a capitalization-weighted index that measures the performance of developed market equities.

EBIT/TEV is defined as earnings before interest and taxes divided by total enterprise value.

Momentum (2-12) is defined as the cumulative total return for the past 12 months, excluding the last (12th) month.

Size is defined as the total market value of the company’s listed equity.

Return on assets is defined as net income divided by total assets.

Compound annualized growth rate, or CAGR, is defined as the annualized growth of an initial investment to the ending investment value if you assume that the investment has been compounding over the time period.

Standard Deviation: Sample standard deviation

Downside Deviation: Sample standard deviation, but only monthly observations below 41.67bps (5%/12) are included in the calculation

Sharpe Ratio (annualized): Average monthly return minus treasury bills divided by standard deviation

Sortino Ratio (annualized): Average monthly return minus treasury bills divided by downside deviation

Appraisal Ratio (annualized): CAPM regression intercept estimate divided by regression residual volatility

Worst Drawdown: Worst peak to trough performance (measured based on monthly returns)

Rolling X-Year Win %: Percentage of rolling X periods that a strategy outperforms

Sum (5-Year Rolling MaxDD): Sum of all 5-Year rolling drawdowns

Down %: The Down Number Ratio is a measure of the number of periods that the investment was down when the benchmark was down, divided by the number of periods that the benchmark was down. The smaller the ratio, the better

Up %: The Up Number Ratio is a measure of the number of periods that the investment was up when the benchmark was up, divided by the number of periods that the benchmark was up. The larger the ratio, the better

Tracking Error: Tracking Error is measured by taking the square root of the average of the squared deviations between the investment’s returns and the benchmark’s returns

Negative Correlation: Correlation of returns relative to benchmark returns when the benchmark is negative

Positive Correlation: Correlation of returns relative to benchmark returns when the benchmark is positive

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