## Meet Cy

Combining Human Advice with Advanced Mathematics

> "Math will show you the truth and give you the best answers."

DON SCHREIBER, JR.



A NEW VISION FOR INVESTING BROUGHT TO YOU BY WBI

# A new vision for investing



#### What Investors Want

All the market gains with none of the bear market losses. This would be perfect. Right? Unfortunately, this type of investment perfection does not exist.

#### What Investors Need

A solution that optimizes the capture of bull market returns while minimizing bear market losses. Simply stated, investors need more of the up and less of the down.

#### What Advisors Need

To increase their value proposition by delivering solutions that can garner the return clients need to accomplish their objectives with a loss profile within their risk tolerance.

### Cy's Mission

To assist advisors in designing investment outcomes based on each client's need for loss protection and return. The goal is to deliver a winning investment experience for your clients by using quantitative research and advanced mathematics to optimize manager selection and portfolio construction.

# Delivering value is a challenge.

Providing measurable value has become particularly problematic for advisors over the past decade as Fed monetary policy has supported a low risk, elongated bull market that has made investing look easy to investors. As major market indexes have appreciated in lockstep for years, we believe it has caused investors to question the value of paying for investment advice. The media's focus on low-cost passive indexing has only exacerbated the problem.

Passive portfolio modeling using low cost index products is widely available from Robo purveyors for little to no cost. This means that advisors who build their businesses on delivering similar services may find it difficult, if not impossible to demonstrate a tangible value proposition.

What many investors don't realize is the vaunted S&P 500 index has only provided a 5.40% percent annual return since 2000\*, not enough to help them achieve their objectives. While returns have been higher in the recent bull market, the 2000's dual bear market declines have dramatically lowered S&P 500 index returns.

We are taught that diversification and buy and hold are the secrets to investing success, but many investors bail and fail trying to ride the market's scary rollercoaster ups and downs. Our research has found investors don't hold — they sell at market bottoms as fear takes over decision making.<sup>1</sup> The problem with buy and hold approaches is too many investors fail to identify how much loss they are willing to endure to achieve their goals. And traditional portfolio modeling approaches have not been good at designing solutions that can limit losses to keep clients comfortably invested in bear markets.

#### If you and your clients have experienced this type of failure in the past, it's time to chart a new course.

If advisors are to be successful in providing real value in their investment offerings, they need to build effective solutions that can meet client needs for both loss protection and return. With the Fed removing monetary support, there is a dire need for advisors to keep clients focused on their investment plan, while keeping emotion out of the equation.

#### That's where Cy comes in.

## Meet Cy

Cy is a revolutionary portfolio optimization software platform that searches for managers with the best combination of up market return and down market loss participation.

By identifying managers who have demonstrated superior risk and return outcomes over several full market cycles, Cy uses proprietary quantitative algorithms to optimize portfolios that are designed to provide less loss and more return than traditional approaches.

Cy sifts through thousands of available managers and strategies to develop portfolios designed to meet client benchmarks. And because the portfolios are built to meet the needs of the client for loss and return, they should reduce the need to respond emotionally to changing market dynamics.

The foundation of Cy's process is to help investors identify their loss and return profile. We believe getting the loss target right is the single most important factor in helping clients achieve greater success. Additionally, it's important to accurately determine the rate of return required to achieve the client's retirement goals.

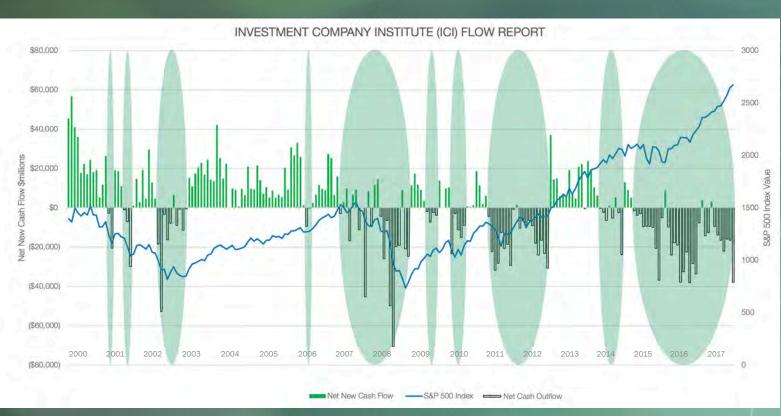
Cy's process is based on the client's investment assets, income, qualified plans, government benefits as well as their projected retirement income need. Inflation assumptions are integrated in our pursuit to ensure investors don't outlive their income streams. Cy's optimized client portfolio performance gives clients a powerful historical viewpoint on how the strategy would have performed in both bull and bear markets. This analysis also clearly illustrates the advisor's value proposition in using Cy when compared to indexing or staying with existing strategies.

Cy's highly efficient approach to portfolio design, rebalancing, and ongoing due diligence enhances TAMP UMA offerings like never before. The main idea is to build better client solutions leading to higher success rates, thereby increasing the advisor's value proposition, income, and business value.

Cy's quantitative approach is very flexible allowing the advisor and client to choose the risk benchmark and return profile that makes the most sense for them. Risk profile, return needs, and financial data can be quickly updated to generate a new portfolio optimization as needed. Portfolio changes and trading can be authorized to take effect often by close of business the same day. If you are ready to take your business to the next level, Cy stands ready to partner with you to get the job done. We believe the vast majority of DIY investors seduced to go digital and low cost will fail because they can't take the emotion out of the investing equation. Even investors with human advisors can let emotion derail an investment plan when bear market losses become intolerable.

It seems that investors fail to learn that the foundation of conventional approaches and Modern Portfolio Theory (MPT) are built on shifting sands as opposed to bedrock.

Investor behavior over the past 20 years, through both bull and bear markets, would indicate these MPT-based approaches dependent on passive allocation, diversification, and buy and hold are likely to fail. Investment Company Institute (ICI) fund flow data confirms that investors generally don't buy and hold in the face of bear market declines of 50% or more. They tend to buy and fold and then sit on the sidelines too long missing out on the most powerful bull market returns as markets recover.



Source: Investment Company Institute, 2017. For illustrative purposes only. Not indicative of any WBI product past performance. Does not guarantee future results

The problem with conventional approaches

- ICI fund flow reports confirm that most investors don't buy and hold.
- The idea that investors should ignore losses so they don't miss out on bull market gains fails to recognize that losses can be more powerful than gains in determining investor success.<sup>1</sup>
- When investors take large losses, even if they buy and hold, they reduce their ability to compound effectively.

And, as Albert Einstein said, compounding is the most powerful financial force in the universe.

## Cy's Portfolio Optimization

Cy optimizes manager selection based on client inputs for loss tolerance and indicated return requirement.

Client Investment Parameters						
Initial Investment: \$1,000,000	Date Range: 2000-2017	Market Benchmark: S&P 500				
Risk Period Selection: Worst Calendar Year	Loss Tolerance: -10.00%	ROR Requirement: 8.00%				

Туре	Global Category	Weight	Up Capture	Down Capture	Annualized Return	Max Drawdown	Worst 4 QTR Return	Worst Calendar Year Return	Best 4 QTR Return	Final Wealth
Separate Account	Moderate Allocation	10.0%	52.6%	33.4%	6.3%	-20.5%	-19.3%	-19.3%	39.1%	\$ 658,845
Open-End Fund	Market Neutral	10.2%	27.6%	7.7%	5.0%	-13.0%	-12.1%	-4.4%	19.3%	\$ 673,043
Open-End Fund	Cautious Allocation	10.0%	36.4%	9.9%	6.7%	-9.4%	-8.7%	-4.2%	19.4%	\$ 659,266
Open-End Fund	Healthcare Sector Equity	10.0%	96.1%	42.7%	14.6%	-33.5%	-26.2%	-22.7%	52.3%	\$ 632,884
Open-End Fund	Financials Sector Equity	22.6%	100.0%	38.6%	16.3%	-39.4%	-29.3%	-13.4%	89.0%	\$ 1,449,100
Separate Account	Market Neutral	15.4%	14.6%	0.5%	3.2%	-7.1%	-6.1%	-6.1%	15.7%	\$ 1,012,807
Separate Account	US Equity Small Cap	21.8%	122.9%	76.2%	14.9%	-37.5%	-27.9%	-21.6%	78.7%	\$ 1,419,876
					$\frown$	$\frown$	$\frown$	$\frown$		$\frown$
Cy O <sub>l</sub>	ptimized Portfolio	100.0%	73.0%	34.8%	11.0%	-19.9%	-15.6%	-9.8%	36.3%	\$ 6,505,820
	S&P 500 Index		100.0%	100.0%	5.4%	-50.9%	-43.3%	-37.0%	53.6%	\$ 2,579,593
					More Retur	n	Less Risl			More Capita

#### Cy Sample Output

In this example, the client's risk period selection is worst calendar year with a loss tolerance of -10%. The client's calculated rate of return requirement is 8.00%. Cy's algorithms select managers individually and then in combination to find the desired blend of up and down market participation, risk profile, and return set to build the client's optimized portfolio solution. Over the performance period from 2000-2017, the Cy optimized portfolio generates an annualized rate of return of 11.00%, exceeding the client's 8.00% requirement and significantly better than the S&P 500's return of 5.40%. The portfolio also stayed within the client's loss tolerance profile of -10% by posting a worst calendar year loss of -9.80%. All of the risk measures were significantly better than the outcomes provided by the S&P 500 Index. The net effect of Cy's optimized portfolio in this example is less risk, higher return, and significantly better capital development.

WBI Technologies LLC and WBI Investments, Inc., 2018. The sample output presented above with respect to the Cy Optimized Portfolio represents a hypothetical illustration of the interface, operation, and outputs of the Cy algorithmic optimization tool. The hypothetical illustration above is not representative of any actual WBI client's experience and is shown for informational purposes only. These illustrations do not predict or project the performance of an actual or available investment or investment strategy. Actual performance would be presented net of applicable platform and advisory fees. Please see "IMPORTANT INFORMATION" at the end of this brochure for a glossary of certain terms and additional information with respect to the risks associated with and the limitations of the Cy optimization tool.

## Successful investing is never easy. Cy is here to help.

#### IMPORTANT DISCLOSURES

About the service. Cy is a proprietary algorithmic investment tool developed by WBI Investments, Inc. ("WBI") in conjunction with WBI Technologies LLC. The hypothetical Cy optimized portfolio and related output presented in this brochure is a sample output provided for illustrative purposes only, in order to provide an example of Cy's process, methodology and outputs. The target objectives applied for the sample optimized portfolio performance (worst calendar return of -10% and required rate of return of 8%) were selected as a common retirement investor preference, but may onto be suitable objectives for all investors. Actual results may differ materially from those portrayed herein. Therefore, it should not be assumed that the future results of any specific investment strategies analyzed by Cy will be profitable or equal the results portrayed herein. Moreover, the analysis provided by the Cy optimization tool may vary with each use and over time.

For financial intermediary use only. Cy is solely for use by licensed investment advisors, licensed insurance agents or qualified administrators employed by a licensed entity or individual licensed to sell or offer securities or insurance products under applicable law. Investment decisions you make for your clients in reliance on information you receive from Cy are made at your own risk and based on your own independent judgment. WBI does not independently evaluate the suitability of or recommend any investments or investment managers for your clients. The information contained herein should not be construed as personalized investment advice as to any individual investor. Financial intermediaries are responsible for effecting underlying investment transactions for all accounts under their management and supervision.

Model risk. Cy is a proprietary algorithmic investment model that seeks to develop a portfolio with the characteristics selected by an adviser using current and historical investment manager data. The models and techniques used by WBI in developing and designing the algorithms underlying Cy are based on the information and data available to Cy as well as on assumptions, assessments and estimates, all of which are subject to error. As a result, the algorithmic model may not account for all relevant factors or may not account for any such factors correctly. There can be no assurance that Cy's models or techniques will be effective. There is no assurance that the model will be successful in identifying a portfolio that provides the desired risk/return level, and the model may produce unexpected results, which can result in losses for an investor. The Cy algorithmic model, including the assumptions and parameters embedded in the model, is subject to review and adjustment from time to time in our sole discretion, and we will not provide notice of any changes to our model.

*Risks Associated with Underlying Managers.* As with all securities analyses, past performance does not guarantee future results. A manager who has been successful may not be able to replicate that success in the future. In addition, WBI does not control the underlying managers and there is a risk that a manager may deviate from the stated investment strategy that was the basis of Cy's analysis. Cy's analysis is also limited to the investment managers on a given platform and other investment managers not considered by Cy may have characteristics similar or superior to those being analyzed.

*Risks of Third Party Data.* Cy's analysis relies on the assumption that the managers or other data providers on a given platform are providing accurate, reliable and unbiased data and information. WBI makes no representations or warranties with respect to the third-party information utilized by Cy, and to the extent permitted by law we specifically disclaim and will not accept any responsibility for loss or damage arising out of use or reliance by you or any other person upon incorrect, incomplete, inaccurate, or misleading third party data accessed through Cy.

Affiliated investments. WBI serves as a subadviser to certain exchange-traded funds, and may separately offer its advisory services on any given platform (such funds and services referred to herein as ("WBI Proprietary Products"). Cy does not exclude WBI's Proprietary Products when analyzing the managers available on a particular platform. As such WBI may be subject to a conflict of interest with respect to potentially recommending WBI Proprietary Products. However, Cy's mathematical models analyze WBI Proprietary Product performance using the same methodology as any other adviser on a platform.

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Up and Down Capture Ratios: used to evaluate how well a manager performed relative to an index during periods when the index is up or down. Maximum Drawdown: measures the peak-to-trough loss of an investment, indicating capital preservation.

<sup>1</sup> Schreiber, Don. The Ugly Truth About Buy and Hold. 2018.





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