



# STRATEGY GUIDE

## VALUATION 50

Valuation and Wealth Creation is Timeless™

Q4 2021

## ABOUT APPLIED FINANCE

Applied Finance is an investment management firm dedicated to delivering superior results for investors through a proprietary, repeatable, and sustainable investment discipline.

Our journey began in 1995, as we set out to construct a rigorous company analysis framework, Economic Margin®, that would remove accounting distortions and properly evaluate corporate performance.

Initially, we applied our research as consultants to help companies better understand how corporate actions translated into intrinsic value. Today, having systematically performed over 20 million company valuations, our Economic Margin® framework continues providing unique insights that we harness across our firm for a unified investment philosophy and process.

- Founded in 1995.
- Total assets managed through all affiliated entities is approximately \$1.4 billion.
- 100% employee owned with an average tenure of 18 years with Applied Finance.
- Investment strategies available across large-cap stocks and small-cap value stocks.
- Investment vehicles available include separately managed accounts, mutual funds, and an ETF.

### Valuation and Wealth Creation is Timeless™

Our investment philosophy is to buy companies below their intrinsic value, run by management teams that pursue wealth creation for shareholders. This combination sets our clients up to be long-term owners of successful businesses through price and intrinsic value appreciation.

### Objective and Repeatable Security Analysis Process

While our approach is deeply rooted in traditional security analysis, it's equally important to note that our process is objective and repeatable.

Since 1995, we have calculated over 20 million out-of-sample, point-in-time, company valuations. In addition, each week, we add approximately 20,000 additional intrinsic value estimates to expand our knowledge on what drives market prices and improve our strategies.

Empirical Evidence from our research indicates that a company's ability to generate economic profit, how they invest their capital, risk and competition are the main drivers of future returns.

Notable Innovations:

- Created a complete valuation framework used in asset management and corporate consulting.
- Pioneered Quantitative Security Analysis to bridge the gap between fundamental and systematic analysis.
- Innovated Value Expectations to reverse engineer expectations embedded in stock prices.
- Longest and largest running database of over 20 million, live, out-of-sample intrinsic value estimates.

## VALUATION 50 INVESTMENT STRATEGY

The Valuation 50 investment strategy is comprised of 50 stocks with the goal to preserve capital and outperform its benchmark in a low turnover, tax efficient manner.

We apply a differentiated systematic and fundamental process that leverages insights from our management consulting roots to own companies we believe are trading at discount to intrinsic value, and run by management teams that pursue wealth creation principles for shareholders.

### **Investment Objectives:**

- Capital Appreciation
- Tax Efficiency
- Capital Preservation

### **Proprietary Stock Selection Process Combines:**

- Systematic Intrinsic Value Analysis
- Fundamental Analysis

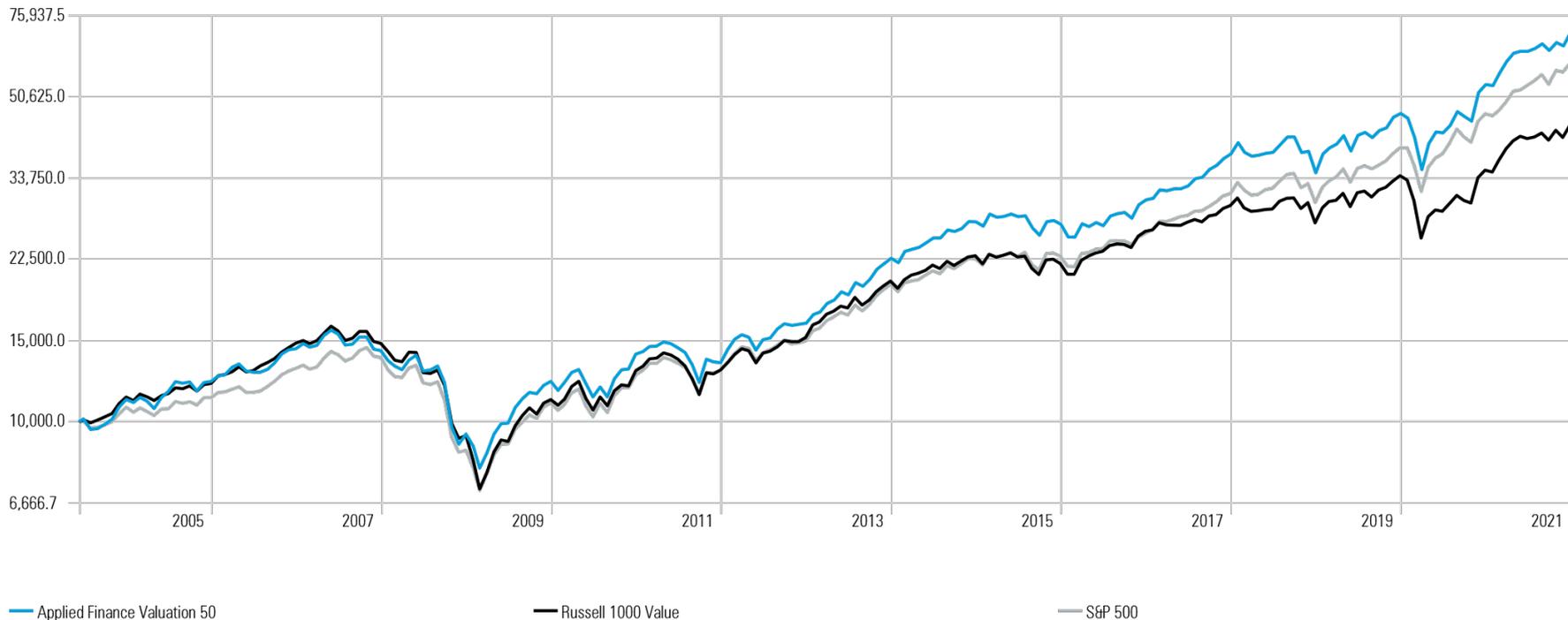
## STRATEGY AVAILABILITY:

- SMA
- Mutual Fund

# VALUATION 50 RETURNS

## Investment Growth of \$10,000 Since Inception

Time Period: Since Common Inception (6/11/2004) to 12/31/2021



## Trailing Returns

As of Date: 12/31/2021

	YTD	1 Year	3 Years	5 Years	10 Years	15 Years	Inception
Valuation 50 (Gross)	29.74%	29.74%	26.29%	18.18%	17.91%	11.09%	11.64%
Valuation 50 (Net)	29.36%	29.36%	25.92%	17.82%	17.55%	10.76%	11.31%
Russell 1000 Value	25.16%	25.16%	17.64%	11.16%	12.97%	7.51%	8.76%
S&P 500	28.71%	28.71%	26.07%	18.47%	16.55%	10.66%	10.73%

The performance data quoted represents past performance and does not guarantee future results. NET returns with an annual management fee of .30 bps fee.

## QUANTITATIVE VALUATION

Our proprietary valuation approach is distinctly different from common quantitative value metrics by incorporating key concepts related to profitability, competition, growth and risk.

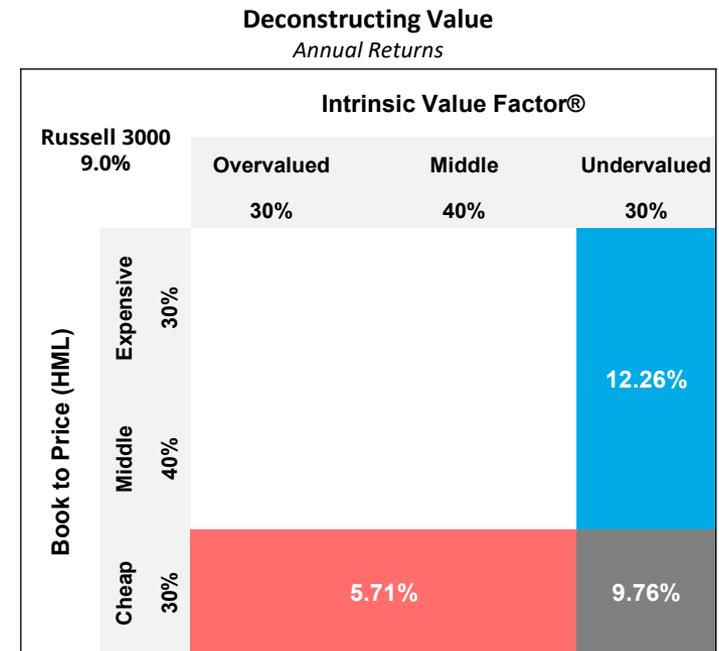
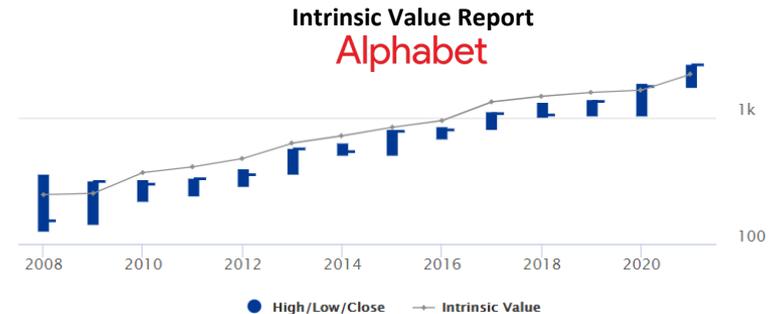
Unlike most firms today that focus on low multiples to define “value”, we define value as identifying companies trading below their intrinsic value. Consider our purchase of Alphabet in 2010, viewed as expensive from a multiple standpoint, but undervalued from our vantagepoint as it was trading below our estimated intrinsic value.

### Valuation Edge®

Since 1995, we have calculated over 20 million out-of-sample, point-in-time, company valuations. In addition, each week, we add approximately 20,000 additional intrinsic value estimates to expand our knowledge about what drives levels and changes in stock prices.

For example, we can address whether commonly used price multiples such as book to price generate alpha alone or through a correlation to intrinsic value. Similarly, we can ask whether under or overvalued stocks add alpha on their own or do so through a correlation to cheapness. We find that undervalued stocks outperform regardless of B/P ranking. High B/P stocks that are fairly or overvalued as determined by the Intrinsic Value Factor® underperform.

Valuation transcends “value” and “growth” dogmas, our ability to systematically identify undervalued and overvalued stocks enables us to exploit common approaches. *(See appendix)*



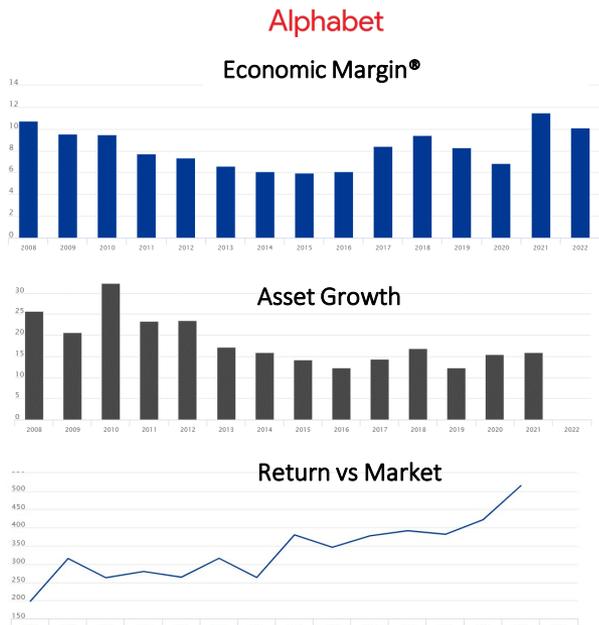
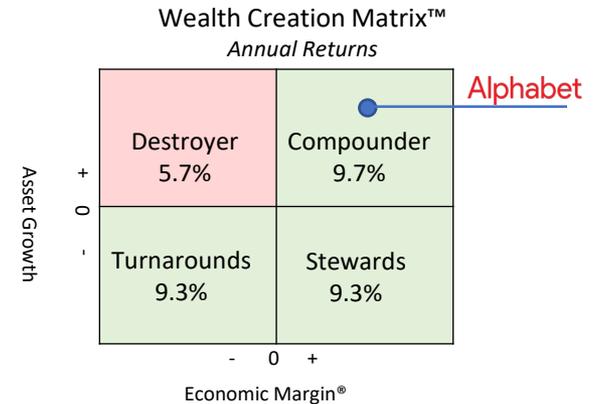
Applied Finance Live Research Database: 1998-2021



# WEALTH CREATION ANALYSIS

Companies should either be reinvesting profitably, returning capital to shareholders, or restructuring unprofitable businesses. Conversely, companies that grow economically unprofitable businesses are wealth destroyers and should be avoided in a portfolio as they are likely to underperform.

Our wealth creation matrix illustrates this concept. For the past decade, Alphabet has been a wealth compounder characterized by positive Economic Margins and positive reinvestment in its business.

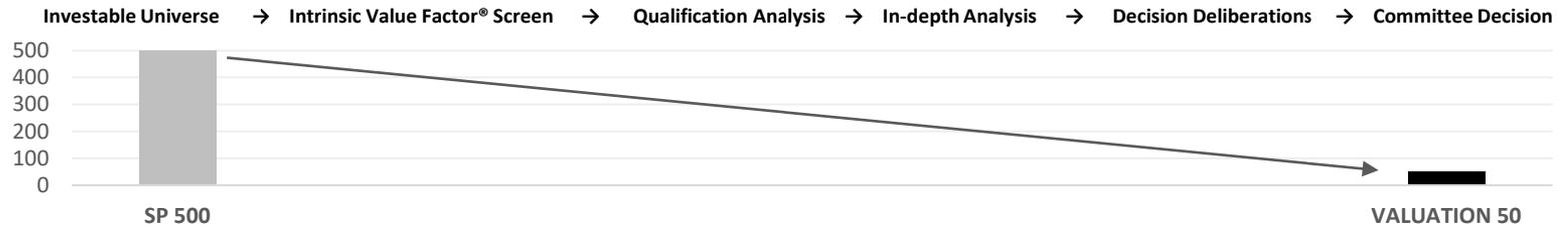


Alphabet has consistently generated high levels of Economic Margin®, returns above their cost of capital, despite becoming one of the largest companies in the world. The average company in the world only earns their cost of capital, Alphabet serves as a rare example of a company that has been able to stave off competition.

Alphabet has also reinvested while maintaining high levels of profitability (EM's) which, thereby compounding profits for shareholders.

The market rewards companies that create wealth for shareholders. Alphabet's ability to compound wealth for shareholders has led to outsized returns relative to the market.

# VALUATION 50 STOCK SELECTION PROCESS



## STEP 1: INTRINSIC VALUE SCREEN

Objectively screen for the top 30% of undervalued names in each sector using a proprietary valuation factor. This approach gives each analyst team member a head start in identifying buy candidates statistically poised to outperform. In addition, it ensures consistency in process that is repeatable and can be audited.

## STEP 2: QUALIFICATION ANALYSIS

A vetting process that begins by auditing and verifying quantitative buy candidates for historical intrinsic value accuracy to mitigate systematic model biases. Analysts then review management’s historical ability to create shareholder value by analyzing company’s historical levels of Economic Margin® and Wealth Creation , trends and variability.

## STEP 3: IN-DEPTH ANALYSIS

Analysts gain a deep understanding of the company’s business cycle, evolution, and path to the future. Analysts analyze companies’ historical blunders, challenges, successes, current business momentum, strategy, and assess the credibility of management’s vision for the future. Once the analyst has become intimate with the company, they perform valuation sensitivity analysis and build out custom, detailed proforma model calibrations to fine-tune an intrinsic value target for the stock.

## STEP 4: DECISION DELIBERATION

Investment candidates are then assessed from the perspective of valuation, management quality, and in the portfolio setting. Risk implications such as Industry concentration/diversification, correlation of investment holdings within the portfolio, specific business uncertainty and catalysts in the near/long term.

## STEP 5: COMMITTEE DECISION

Analyst presents complete BUY analysis/thesis and models to the investment committee for approval. A super majority approval is needed for a Buy candidate to move into the strategy.



# BLENDING QUANTITATIVE AND FUNDAMENTAL ANALYSIS

After the initial Intrinsic Value Factor® screen, our analysts perform further analysis through:

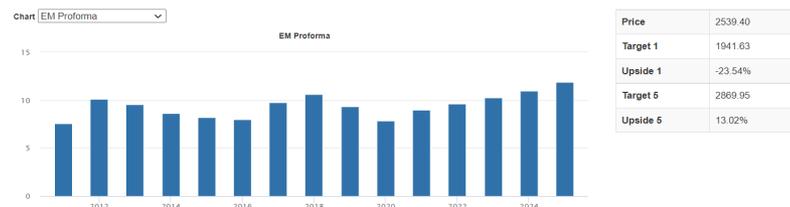
- Detailed proforma modeling and sensitivity analysis
- Business momentum, challenges, and outlook reviews
- Industry and peer reviews to assess company positioning

Our view is that both quantitative and fundamental analyst research have their own set of strengths and weaknesses. Properly pairing them leads to a complete investment process that leverages the strengths of each approach and leads to unique advantages.

Institutionalizing a quantitative buy discipline to generate buy ideas mitigates behavioral biases by providing an objective, consistent and repeatable process. This allows analysts to focus their efforts on a select pool of companies they can become very intimate with, rather than having to find buy ideas.

Applied Finance analysts average over 20 years experience implementing our quantitative and qualitative research to construct portfolios. Applied Finance’s process incorporates a rigorous time-proven quantitative approach, with experienced expert analysts to provide checks on quantitative and qualitative analysis used in portfolio construction.

	2021	2022	2023	2024	2025
Sales Growth	24.00	15.00	15.00	10.00	10.00
EBITDA %	31.00	30.00	29.00	29.00	29.00
Asset Turns	0.69	0.76	0.83	0.87	0.93
EPS	68.52	76.61	85.50	95.08	105.47



Price	2539.40
Target 1	1941.63
Upside 1	-23.54%
Target 5	2869.95
Upside 5	13.02%

Income Statement	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Sales	74989	90272	110855	136619	161657	182527	226333	260283	299326	329259	362184
Cost of Goods Sold ex. DDA	23140	29036	36684	50520	60245	71053	83564	96051	112037	123241	135565
Total DD&A Expense	5024	6100	6899	9029	11651	13679	13932	15296	16806	17637	18557
SG&A Expense	27455	31418	36390	45878	54033	56571	72607	86147	100485	110533	121586
Operating Inc.	19360	23716	28882	31392	35928	41224	56231	62769	69998	77648	86477
Interest Expense	104	124	109	114	100	135	230	230	246	246	257
Non Operating Inc./Exp.	-127	558	-1580	3635	3797	6993	1693	1947	2239	2463	2591
Pretax Inc.	19129	24150	27193	34913	39625	48082	57694	64506	71991	80065	88812
Tax Expense	3303	4672	4707	4177	5282	7813	10962	12256	13678	15212	16874
Minority Interest	0	0	0	0	0	0	0	0	0	0	0
Inc. Before Pref., Extra. & Disc. Ops.	15626	19478	22486	30736	34343	40269	46732	52250	58313	64853	71937
Preferred Dividends	0	0	0	0	0	0	0	0	0	0	0
Net Inc. Avail. to Common	15826	19478	22486	30736	34343	40269	46732	52250	58313	64853	71937
Net Inc. Avail. to Common Adj for \$1	15915	19573	24410	30885	33607	35405	46732	52250	58313	64853	71937

Balance Sheet	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Cash	73694	86929	101951	109653	120019	136694	139428	142216	145061	147962	150921
Receivables	19309	14232	18705	21193	27492	31384	30740	33178	35823	38691	40709
Inventories	0	268	749	1107	999	728	1044	1215	1311	1416	1490
Other Current Assets	2511	3979	2903	3723	4068	5490	6082	6567	7090	7658	8058
Total Current Assets	90114	105408	124308	135676	152578	174296	177294	183176	189285	195728	201178
Gross Property, Plant & Equip.	40146	47527	59647	82507	104207	126462	142770	157047	172752	181389	190850
Accumulated Depreciation	11130	13293	17264	22788	30561	41713	47114	51825	57008	59858	62980
Net Property, Plant & Equip.	29016	34234	42383	59719	73646	84749	95656	105221	115744	121531	127869
Net Intangibles	19716	19775	19439	20108	22603	22620	24540	23473	23473	23473	24697
Other Assets	8615	8080	11165	17289	16141	25740	28517	30789	33243	35905	37778
Total Assets	147461	167497	197295	232792	264968	307405	326006	342650	361745	376637	391523

Cash Flow Statement	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
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## PORTFOLIO DESIGN

The Valuation 50 is designed to optimize exposure to companies likely to preserve capital and outperform.

### Valuation 50 Portfolio:

- Always holds 50 stocks to provide effective diversification. A new name is added to the portfolio when an existing holding meets the Sell criteria and is approved to be sold by the investment committee.
- Sector Neutral, to avoid sector bets and focus on stock selection. We also aim to diversify across sector industries when possible.
- Equal weighted stocks within sector to focus on owning diversified exposure to attractive valuation, not size.
- Quarterly rebalancing to maintain sector and stock weighting discipline.
- Aim for discretionary Turnover  $\leq 20\%$ , to save transaction cost, maximize tax efficiency, and harness time arbitrage.

#### Valuation 50 Stats

Turnover Ratio (Since Inception) 13%

Turnover Ratio (Last Five Years) 6%

Up Capture Ratio 107.55%

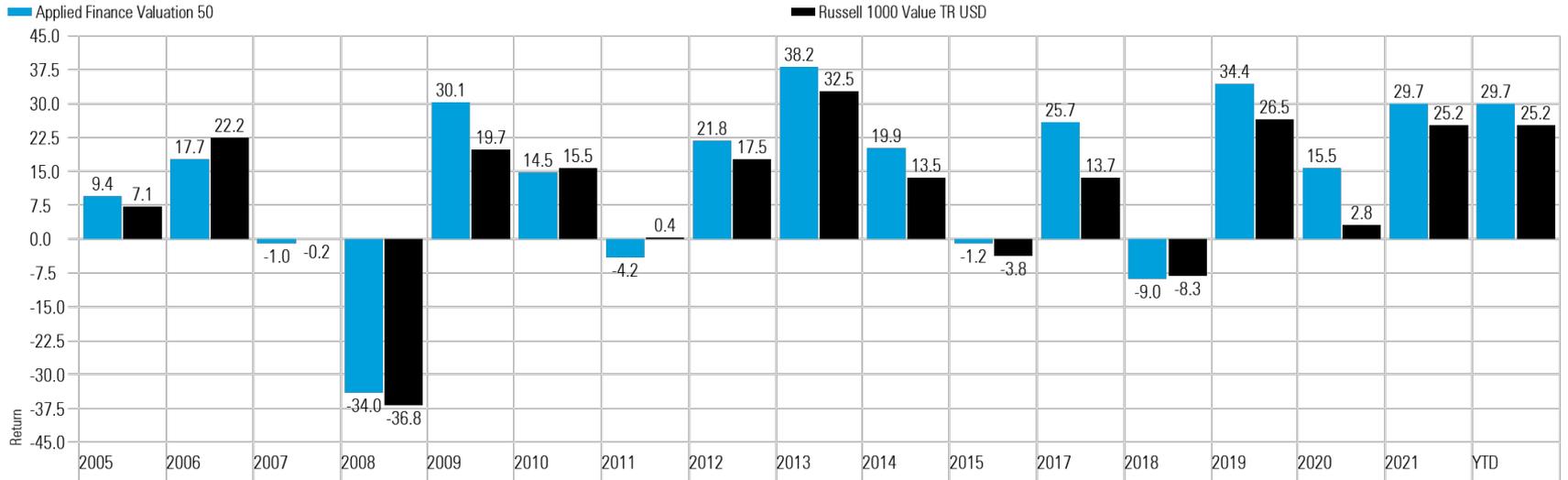
Down Capture Ratio 94.98%

Sector	Sector Weight	Stock Count	Stock Weight
Information Technology	26.67%	8	3.33%
Consumer Discretionary	12.93%	5	1.62%
Health Care	12.46%	8	1.56%
Communication Services	11.74%	4	1.47%
Financials	11.37%	7	1.42%
Industrials	8.38%	6	1.05%
Consumer Staples	6.48%	4	0.81%
Energy	2.73%	3	0.34%
Materials	2.50%	2	0.31%
Real Estate	2.45%	1	0.31%
Utilities	2.29%	2	0.29%

*Sample Portfolio Weights as of 8/3/2021*

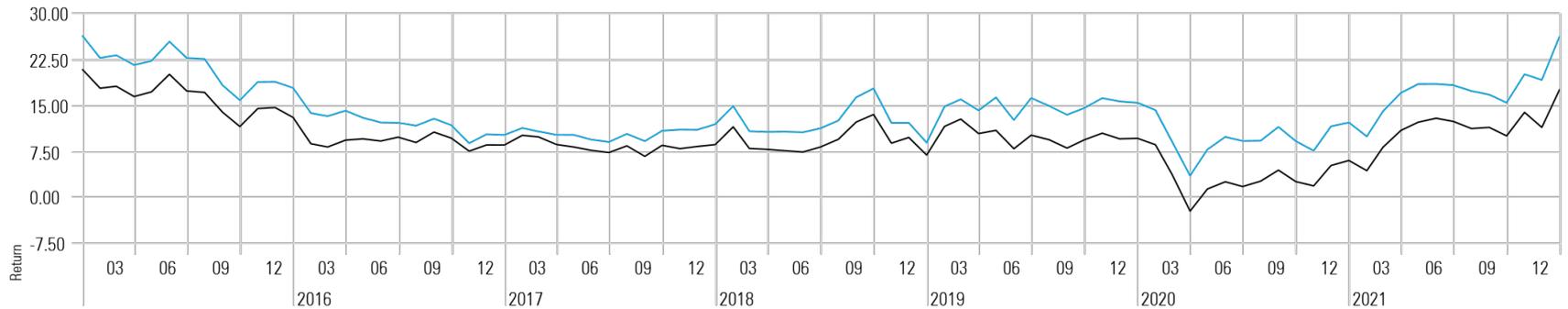
# VALUATION 50 RETURNS

## Valuation 50 Calendar Year Returns



## 36 Month Rolling Returns

Time Period: 1/1/2012 to 12/31/2021



## RESEARCH AND TRADING TEAM

### Rafael Resendes

*Co-founder of Applied Finance, 1995  
Portfolio Manager  
B.S. University of California, Berkeley  
MBA from the University of Chicago.*

### Jun Wang, CFA

*Joined Applied Finance, 2003.  
Portfolio Manager and Fundamental Research Analyst  
B.A. Southwest University China,  
MBA California State University, Fresno*

### John Holt, CFA

*Joined Applied Finance, 2014  
Portfolio Manager and Quantitative Research Analyst  
B.S. George Mason University, MBA George Mason*

### Francesco Franzoni

*Joined Applied Finance, 2021  
Research Consultant  
Quantitative Research. Ph.D. in Economics,  
2002, Massachusetts Institute of Technology*

### Daniel J. Obrycki

*Co-founder of Applied Finance, 1995  
Portfolio Manager  
B.S. University of Missouri-Rolla  
MBA from the University of Chicago*

### Dhaval Sanghavi, CFA, CPA

*Joined Applied Finance, 2004.  
Portfolio Manager and Fundamental Research Analyst.  
Dual B.S. from the University of Illinois at Urbana-  
Champaign*

### Derek Bergen, CFA

*Joined Applied Finance, 2005  
Portfolio Manager and Quantitative Research  
Analyst. B.S. University of Wisconsin-Madison*

### John McErlean

*Joined Applied Finance, 2021  
Operations & Trading  
Fordham University*

### Paul Blinn

*Joined Applied Finance, 2006  
Portfolio Manager and Trader  
B.B.A from The University of Texas at Austin*

### Alex Plascencia

*Joined Applied Finance, 2005.  
Fundamental Research Analyst  
B.S. University of California, Riverside  
MBA University of California, Irvine*

### Mark Everette, CPA

*Joined Applied Finance, 2004  
Research Analyst  
BA University of Illinois at Urbana-Champaign  
MBA University of Illinois at Urbana-Champaign*

# Appendix

## Further Reading:

2000 APPLIED FINANCE - PAPER:

[ECONOMIC MARGIN: THE LINK BETWEEN EVA AND CFROI](#)

2000 APPLIED FINANCE - ARTICLE:

[VALUE EXPECTATIONS™ CISCO SYSTEMS](#)

2007 ACADEMIC USE OF APPLIED FINANCE INTRINSIC VALUE - PAPER:

[HOW QUICKLY DO EQUITY PRICES CONVERGE TO INTRINSIC VALUE?](#)

2008 CNBC – VIDEO:

[NOW IS THE TIME TO GET BACK IN THE MARKET.](#)

2020 APPLIED FINANCE - ARTICLE:

[EMOTIONAL UNEASE CREATES GENERATIONAL WEALTH OPPORTUNITY](#)

2020 APPLIED FINANCE - ARTICLE:

[TIME TO RECONSIDER LARGE CAP VALUE & GROWTH ALLOCATIONS](#)

2020 APPLIED FINANCE - PAPER:

[VALUATION BETA](#)

2021 APPLIED FINANCE - ARTICLE:

[QUANTITATIVE VALUE INVESTING IS BROKEN](#)

2021 APPLIED FINANCE - ARTICLE:

[VALUATION VS. CHEAPNESS IN TACTICAL ALLOCATION](#)

2021 INSTITUTIONAL INVESTOR – ARTICLE

[VALUE INVESTORS DON'T NEED TO AVOID GROWTH COMPANIES. IN FACT, DOING SO CAN HURT RETURNS](#)

2021 APPLIED FINANCE OP-ED IN THE MARKETS - ARTICLE:

[QUANTITATIVE FINANCE VS. FUNDAMENTAL ANALYSIS – A 60 YEAR SCHISM](#)

## Disclaimers

Valuation and Wealth Creation is Timeless™ is a registered trademark of Applied Finance Capital Management

Intrinsic Value Factor® is a registered trademark of Applied Finance Capital Management

Valuation Edge® is a registered trademark of Applied Finance Capital Management

**VALUATION 50™ DISCLAIMER** The Valuation 50™ portfolio is a long strategy comprised of approximately 50 U.S. traded large cap equity securities believed to offer superior total returns over long-term investment horizons. The equity securities have attractive valuations and are selected to provide broad economic sector exposure. The Valuation 50 is a hypothetical model portfolio and does not reflect actual client investments. The above presentation is based on holdings in the Valuation 50 strategy which started 6/10/2004. Holdings in the Valuation 50 strategy and security prices are subject to change throughout the year. Gross Performance of the Valuation 50 strategy is based on a hypothetical fully-invested portfolio and excludes all fees and expenses. Net Performance of the Valuation 50 strategy is calculated by deducting an annual investment management fee from Gross Performance. Most individual accounts will have some cash level. Performance is calculated on a pre-tax basis and does not include any reduction for applicable non-U.S. withholding taxes, if any. Past performance is no guarantee of future results. Individual security weights may vary by account. References to stocks held in the Valuation 50 are for informational purposes only and do not constitute an offer to buy or sell any security. The information and data contained in this presentation were obtained from sources deemed to be reliable, but Applied Finance Capital Management LLC makes no guarantee as to the accuracy or completeness of any such information or data. The information in this report is not intended to be used as the primary basis of investment decisions, and Applied Finance Capital Management LLC makes no recommendation as to the suitability of investing in any particular security. Due to individual investor requirements, this report should not be construed as advice meant to meet the investment needs of any investor. Any opinions and projections expressed herein reflect our judgment at this date and are subject to change without notice. Applied Finance Capital Management LLC, its owners, employees and/or clients may have positions in any security that is discussed in this report.

**Information About Risk: Equity Securities Risk.** Since the Valuation 50 invests in equity securities, it is subject to the risk that stock prices will fall over short or extended periods of time. Historically, the equity markets have moved in cycles, and the value of the Valuation 50's equity securities may fluctuate from day to day. Individual companies may report poor results or be negatively affected by industry and/or economic trends and developments. The prices of securities issued by such companies may suffer a decline in response. These factors contribute to price volatility, which is a principal risk of investing in the Valuation 50. **Market Risk.** The value of securities in the Valuation 50's portfolio will fluctuate and, as a result, the Valuation 50's share price may decline suddenly or over a sustained period. The equity securities purchased by the Valuation 50 may involve large price swings and potential for loss. **Management Risk.** The strategies used by the Adviser may fail to produce the intended result. **Large Cap Risk.** Larger, more established companies may be unable to attain the high growth rates of successful, smaller companies during periods of economic expansion. **Risks of Investment Selection and Asset Allocation.** The Valuation 50's investment success depends on the skill of the Adviser in evaluating, selecting and monitoring the portfolio assets. If the Adviser's conclusions about growth rates or securities values are incorrect, the Valuation 50 may not perform as anticipated.

**Key Definitions:** Index - **Russell 1000 Value-** Market-capitalization weighted index of those firms in the Russell 1000 with lower price-to-book ratios and lower forecasted growth values. TR indicates "Total Return" Index - **S&P 500** - A market capitalization-weighted index of 500 widely held stocks often used as a proxy for the stock market TR indicates "Total Return". Active share. The fraction of a fund's portfolio holdings that deviate from the benchmark index.



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