

Equities Part Deux Factor Investing

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Executive Summary

- Funds from the terminated Large Cap value manager are currently being overlaid, pending further discussion
- The FCERA Board already expressed a willingness to consider semi-active options
- Questions remaining are:
 - How much Value exposure does the Board desire at present?
 - What are the options for gaining Value exposure?
 - What are the merits and demerits?
 - What is the relative performance of those options?
 - What are the fees?
- Staff Recommends employing State Street to manage an MSCI multi-factor portfolio with Value + Quality + Min Vol, at 3% of the portfolio



The Equities Portfolio Risk Factor Pyramid

Beyond the Growth Factor Beta, Can We Get Paid Adequately for Taking on other "Risks" and/or find Alpha?

StocksPlus – small size
AJO - Value
T Rowe & Artisan – Growth
Mondrian Intl - Small
RAFI Intl - Value
Baillie G and Mondrian - EM

Northern Trust Passive

US: MSCI US

International: ACWI ex-US

Alpha, not just Beta
Low Correlation to Growth Factor

Illiquidity means Private Equity, Actively Managed

Factor Tilts, e.g. Alt Beta

- -Small size, Value
- -Momentum, Quality, Low Vol
- -Currencies or Countries

Active or Semi-Active

Equity Beta, Sensitivity to
Economic Growth
Where Markets are Efficient,
Go Passive



Recap What is Factor-Based Investing?

- Factor investing is an investment approach that involves targeting specific drivers of return; characteristics or attributes
- Two main types of factors: macroeconomic (e.g. inflation)and style. (e.g. Growth, Value, Quality, Momentum, Low Volatility)
- Investing in factors can help improve portfolio outcomes, reduce volatility and enhance diversification.
- Almost every "active" manager starts with a style preference, their own "factor tilt." Most screen on various Factors

These factors can be employed either actively or passively (semi-active?)



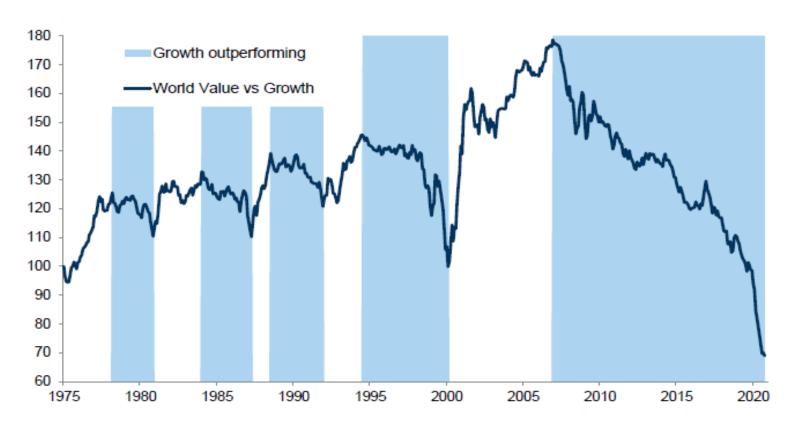
FCERA Domestic Equities Positioning History

- Growth vs. Value? Historically offsetting, where Growth + Value = Index
 - (NOTE: There was no factor tilt due to Russell Index construction)
 - Value and Growth offset each other, and the Russell 1000 was result
 - Alpha could only be added by manager selection, Growth and Value
 - In the past five years, FCERA has terminated two growth and two value managers in Domestic Large Cap
 - To benefit from Factor exposure, the FCERA allocation needs either more courage or more nuance



One of the most enduring features of the post financial crisis period has been the secular outperformance of Growth versus Value (Exhibit 1).

Exhibit 1: Growth has outperformed since the GFC Relative price performance in local currency



Source: Datastream, Goldman Sachs Global Investment Research

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How do traditional "Value Investors" pick stocks?

- Screen on financial and stock attributes
- Point-in-time valuation measures like Book(value per share)
 to Price (per share)
- Earnings/Price (P/E) or Price to Cash Flow
- Traditional measures of "value" are not forward looking, or at least not very far forward looking
- (Growth and Momentum investors use different metrics)
- Other Factors appear to have driven much higher stock performance over the past several years, such as Momentum

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Why has Value underperformed (and what clues do we have that it will work again?) According to Goldman Sachs:

There are three major reasons why this has occurred, in our view:

- The secular decline in bond yields and inflation expectations has boosted the value of longer-duration Growth companies (while hitting Value companies most at risk of deflation).
- A secular decline in long-term growth expectations, together with greater uncertainty about growth.
- The bifurcation of industry returns, with impressive growth in the returns of the Technology sector and, at the same time, a secular decline in returns in sectors such as Banks and Oil.



Questions for Value Equities Allocation

- Will Value ever work again? Do we need Value?
 - Value: crummy since 2006
 - Value: "cheap," as cheap as ever, but ...
 - Value: perhaps the old rules no longer apply
- How much Value? (Remember: 50/50 Growth/Value is arbitrary)
 - At 50/50 split with Russell 1000, you don't have a Value bet, you have only a Value manager bet, and a Growth manager bet
- How do we implement?
 - Replicate a passive index: i.e. Russell Large Cap Value
 - Build a Value Factor portfolio (semi-active)
 - Choose an Active US Large Cap Value manager



Considerations for Value Style or Factor Allocation

- A Single Factor Value approach using multiple indicators (book/price, earnings/price, cash flows, intangibles) will work better than a single indicator, so the approach to value matters
- A Value approach blended with other factors will offer smoother but less extreme performance up or down
- A rules based, transparent, blended factor model is preferred to an active and evolving approach (either Active or Semi-Active)
 - Keep in mind that there is nothing more opaque in investment management than the mind of an active manager



Options and Recommendations: FCERA US Large Cap Value

Over or Underweight Value, and implement passively, being prepared to adjust the weighting based upon market signals. Keep T Rowe Price as Large Cap Growth, and add Passive Large Cap Value

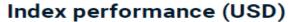
or

Choose a multi-factor semi-active approach which is rules based, transparent, and makes investment sense (not based upon sun-spots, or bitcoin or some complex technical trading algorithm)



Sample Alternatives To a Classic Active Value Manager Allocation

FCERA Short-term index performance







MSCI IndexMetrics®

FCERA Created

Any Exposure to the Value Factor has Detracted, and Active Managers Have Lagged Value Benchmarks

Created On: 2020	0-12-08								
Firm I	Name	Product Name	Returns - YTD (09/2020)	Returns - 1 Year (09/2020)	Returns - 3 Years (09/2020)	Returns - 5 Years (09/2020)	Sharpe Ratio - 5 Years using FTSE 3-Month T- Bill (09/2020)	Cumulative Returns - 5 Years (09/2020)	Standard Deviation - 5 Years (09/2020)
MSCI Index		MSCI USA-ND	6.83	16.41	12.20	13.73	0.83	90.24	15.09
MSCI Index		MSCI ACWI Factor Mix A-Series	-1.63	6.15	6.95	10.12	0.71	61.94	12.65
MSCI Index		MSCI USA Enhanced Value-ND	-16.43	-8.09	0.41	6.29	0.29	35.69	17.55
MSCI Index		MSCI USA Minimum Volatility-ND	-1.58	1.27	9.89	11.73	0.89	74.12	11.84
MSCI Index		MSCI USA Quality-ND	11.72	24.53	18.11	17.37	1.13	122.71	14.37
MSCI Index		MSCI USA Value Weighted-ND	-8.47	-0.03	5.12	9.51	0.52	57.49	16.16
MSCI Index		MSCI USA Value-ND	-12.11	-5.82	2.05	7.29	0.42	42.15	14.73
Russell		Russell 1000 Value	-11.58	-5.03	2.63	7.66	0.42	44.61	15.50
Dimensional Fu	und Advisors	US Large Cap Value Strategy	-15.98	-8.30	0.23	6.99	0.33	40.17	17.90
Prudential Fina	ncial	Large Cap Value/AJO Fund	-6.18	0.73	2.93	6.39	0.33	36.30	15.69
Performance Data	a Frequency: Mo	nthly							

Key metrics Compare MSCI index approaches to Value

Better returns with lower vol

Key metrics

	MSCI USA Index	MSCI USA Value Weighted Index	MSCI USA Value Weighted + Quality Index	MSCI USA Factor Mix A-series (USD) Index
Total return* (%)	6.4	6.7	7.5	7.5
Total risk (%)	15.1	16.0	14.6	13.3
Return / risk	0.42	0.42	0.51	0.56
Sharpe ratio	0.32	0.33	0.41	0.45
Active return (%)	0.0	0.3	1.1	1.1
Tracking error (%)	0.0	3.6	2.0	3.0
Information Ratio	nan	0.09	0.55	0.37
Historical beta	1.00	1.03	0.96	0.87
Number of constituents***	568	566	566	564
Turnover** (%)	2.9	16.2	19.3	22.4
Price to book***	2.7	2.0	2.9	2.9
Price to earnings***	19.4	18.9	18.4	18.9
Dividend yield*** (%)	1.9	2.3	2.0	2.1

Period: Aug 31, 2000 to Aug 31, 2020. * Gross returns annualized in USD ** Annualized one-way index tumover over index reviews *** Monthly averages

Performance (%)

	MSCI USA Index	MSCI USA Value Weighted Index	MSCI USA Value Weighted + Quality Index	MSCI USA Factor Mix A-series (USD) Index
YTD	11.4	-4.6	5.1	3.6
1 Yr	23.6	7.9	18.7	13.8
3 Yr	15.0	8.2	14.1	13.3
5 Yr	14.7	10.4	14.2	13.7
10 Yr	15.3	13.1	15.3	15.1

Gross returns for the period ending Aug 31, 2020 Returns are annualized for periods longer than a year





Investment Officer Recommendation?

If the Board desires to have a similar exposure to US Value as in the past, then implement with State Street to mimic MSCI combination known as Mix Factor A: value + quality + low volatility

- -separate account
 - -fee minimum \$75,000/yr or 5bps on \$150mil, +2-4bps for MSCI
 - -rate declines with scale
- -ETF (ticker QUS)
 - -more than \$800mil in assets for reasonable liquidity
 - -the fee at 15bp is a bit more than passive, much less than active

Risk? Pure Value or Deep Value is resurrected, and this approach will lag Opportunity? Pure Value or Deep Value continues to suffer, this approach will outperform a single factor exposure

This decision is easy to modify or reverse



Conclusion

- Value as a Style Factor has been woeful, detracting from Equity performance for years, and FCERA active management has detracted from even that poor performance
- "Balancing Growth and Value" has in effect been "Cancel Growth with Value"
- One approach is to adjust style/factor weightings according to market signals
- Another approach is to employ more nuanced factor approaches
 - 1. Semi-Active Value only, single factor semi-active mandate?
 - 2. Semi-Active value + exposure to less correlated factors: e.g. growth + quality)
 - More elaborate multi-factor quantitative models: e.g. Northern Trust, Goldman Sachs, Lord Abbett, JP Morgan
- A Semi-Active combination of Factors will perform best in multiple environments