

MBA Student Investment Management Fund

Final Presentation

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MBA SIM Fund Team



Jessica Hocken



Christian Harris



Ido Gilboa



Casey Spink



Saumya Gupta



Rob Maloney



Matt Guida

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Strategy Review & Implementation

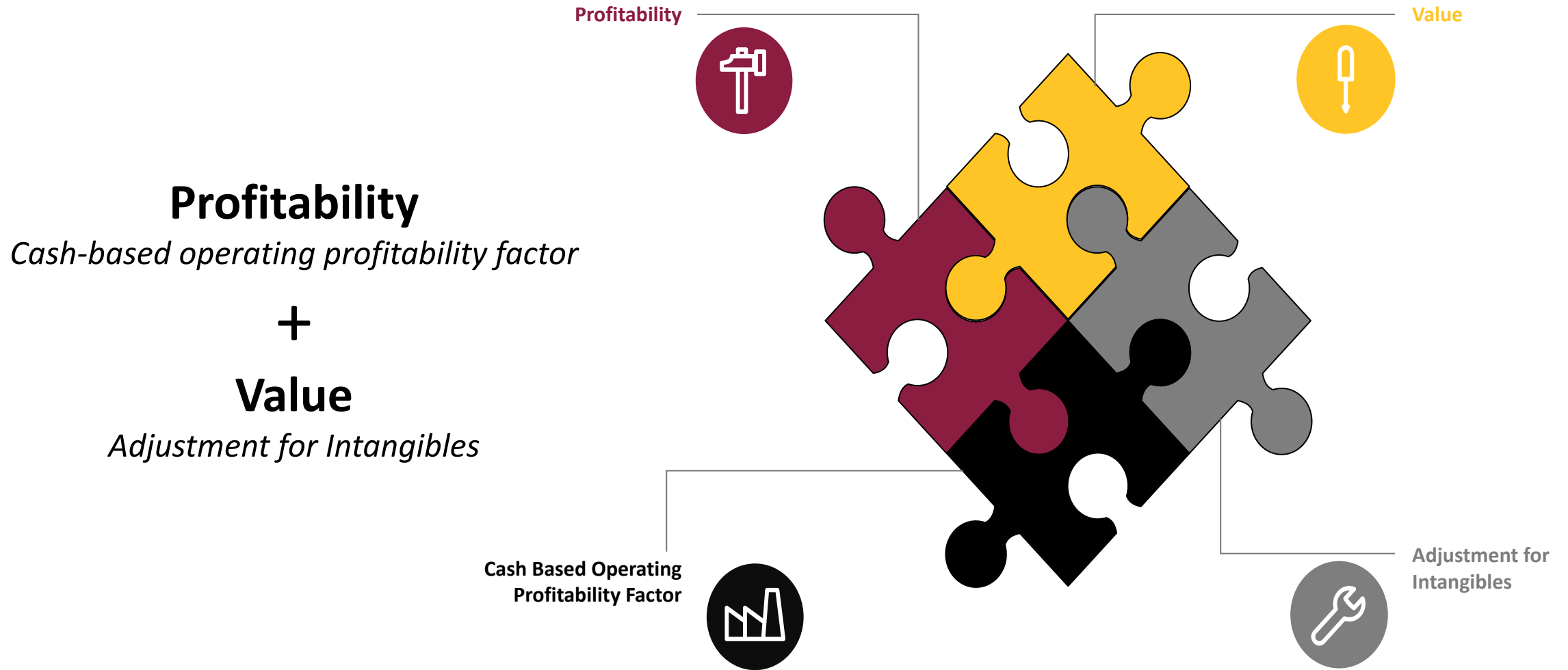
Strategy Review &
Implementation

Rebalancing,
Performance, &
Challenges

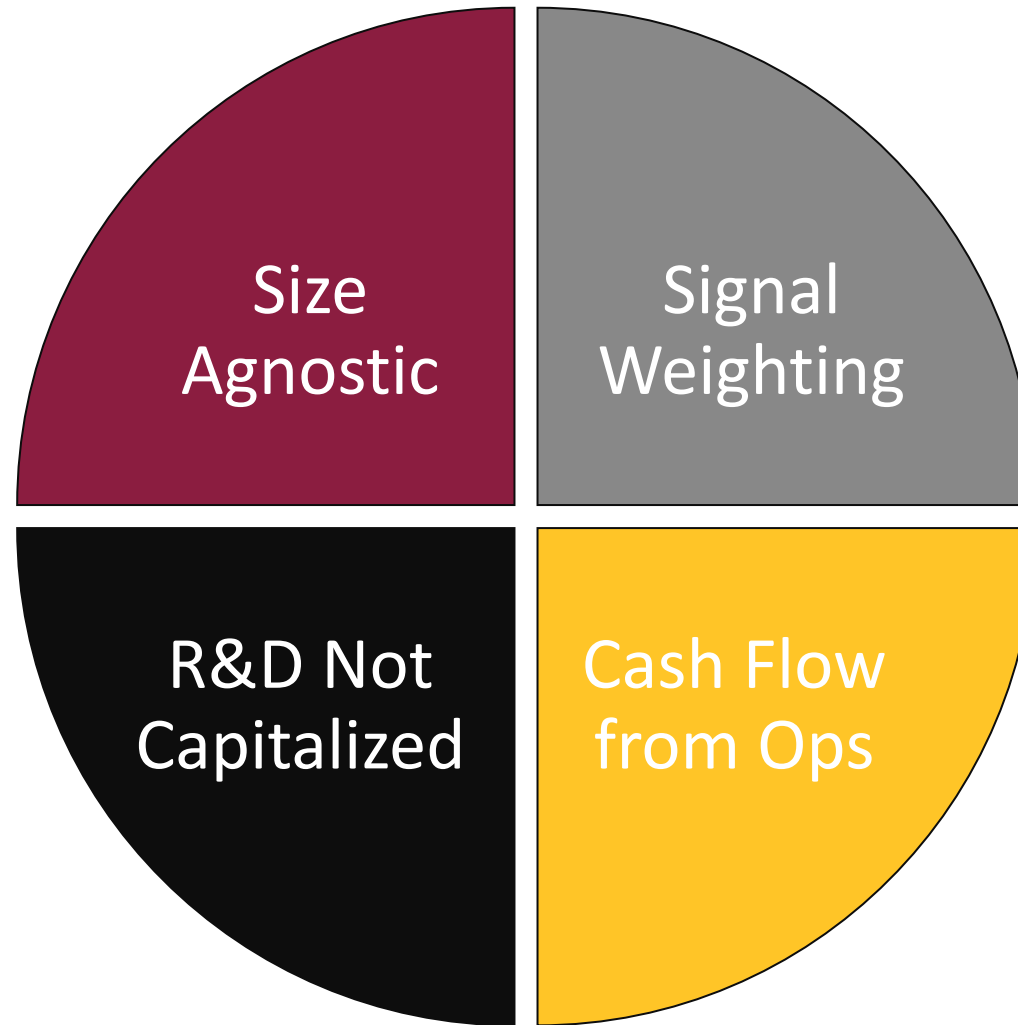
Lessons Learned

Discussion

Strategy Review



Implementation Strategy



Rebalancing, Performance, & Challenges

Strategy Review &
Implementation

Rebalancing,
Performance, &
Challenges

Lessons Learned

Discussion

Rebalancing - Process & Timeline



Source Data



Pro-Forma
Portfolio



Calculate
Buy/Sell Orders



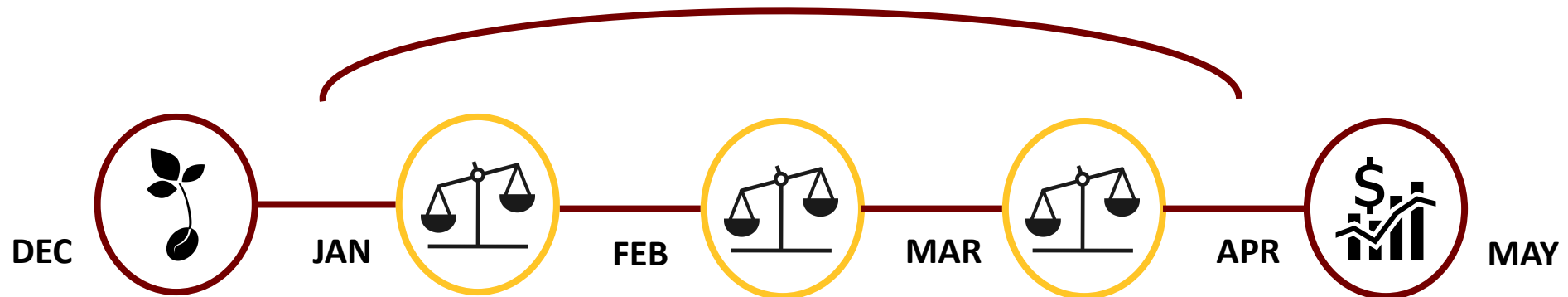
Metrics &
Rankings



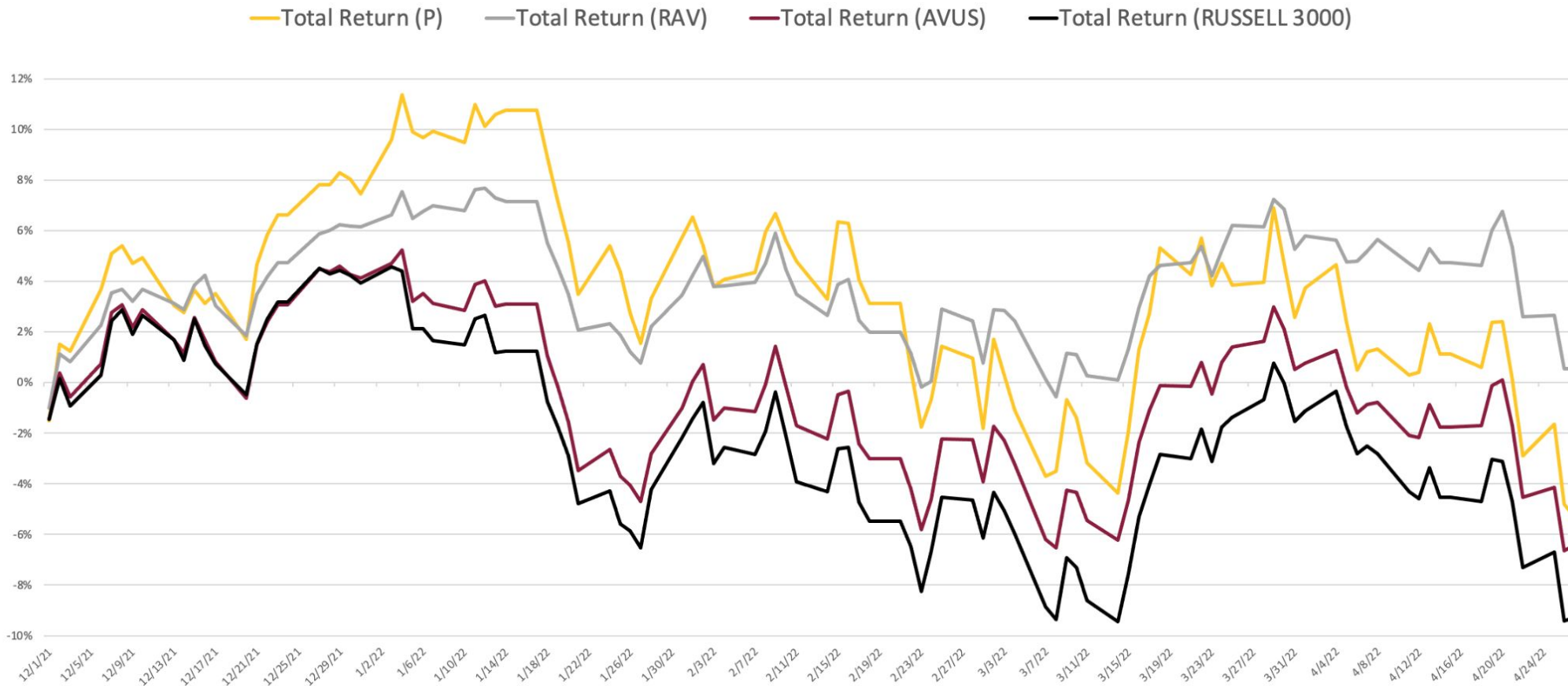
News Check



Place Trades

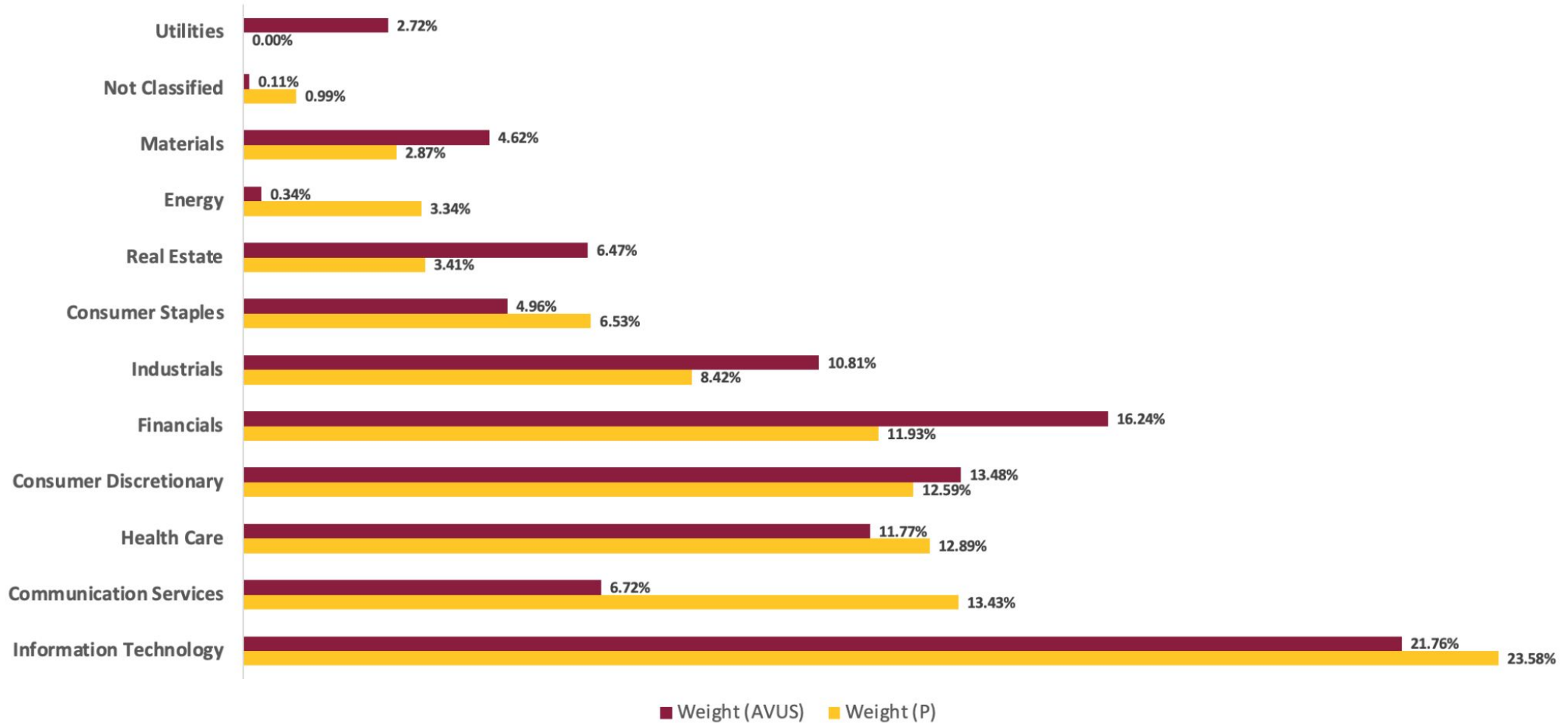


Performance

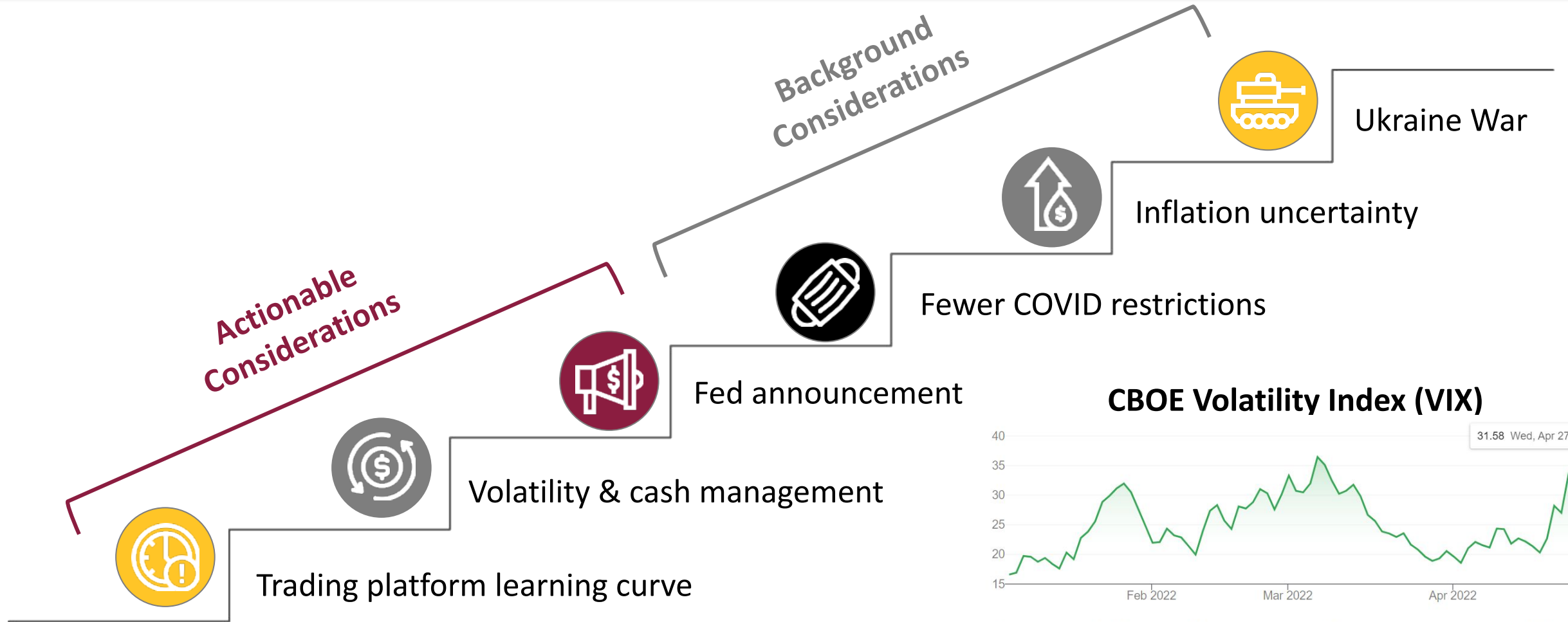


Index	Total Return
RAV	0.56%
Portfolio	-5.31%
AVUS	-6.42%
RAY	-9.28%

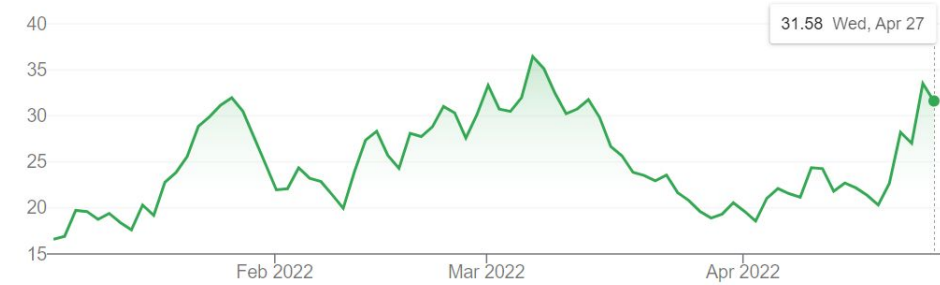
Performance - Sector Allocation



Investment Challenges



CBOE Volatility Index (VIX)



Open	31.11	Low	29.82	52-wk high	38.94
High	32.77	Prev close	33.52	52-wk low	14.10

Lessons Learned

Strategy Review &
Implementation

Rebalancing,
Performance, &
Challenges

Lessons Learned

Discussion

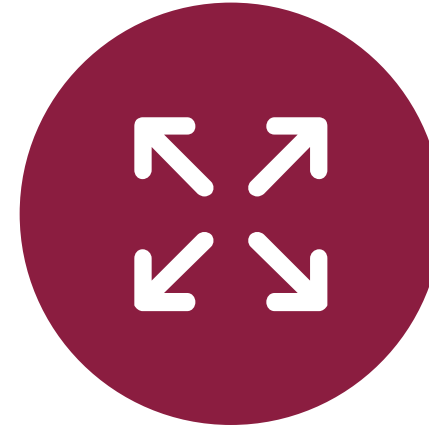
Lessons Learned



**Rebalancing
Challenges**



**Cash Drag
Implications**



**Managing
Volatility**



**Working with
Incomplete Data**

Discussion

Strategy Review &
Implementation

Rebalancing,
Performance, &
Challenges

Lessons Learned

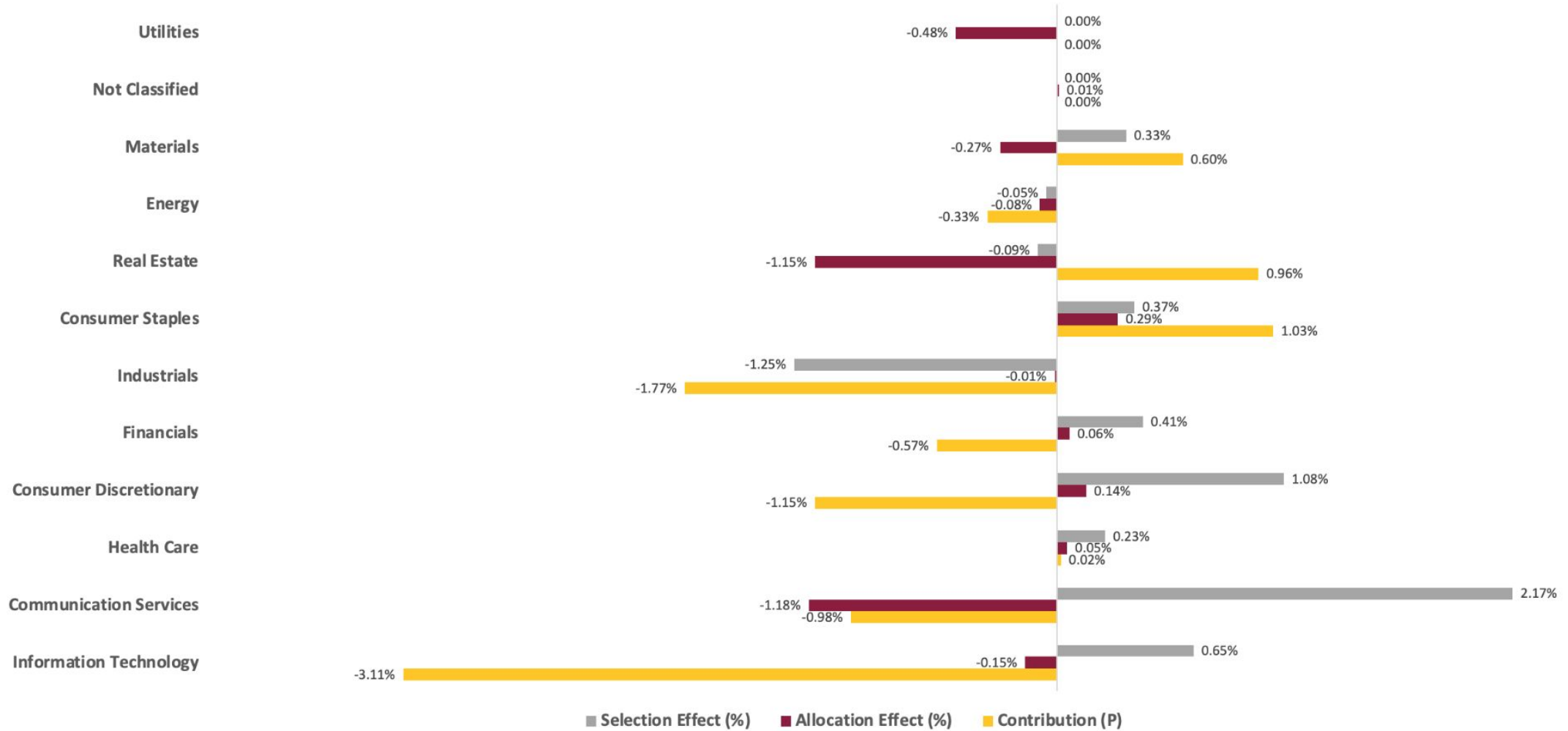
Discussion

Thank You!

Appendix

- Performance
- Intangible Adjustment
- Cash Flow from Operations

Performance - Attribution



Performance

Top/Bottom Performers.

Top 5	Avg % Wgt	Total Return (%)	Contribution to Return (%)
UNITED STATES STEEL CORP	0.45	64.22	0.34
GOLAR LNG LTD	0.21	41.72	0.30
SOUTHWESTERN ENERGY CO	0.30	40.11	0.24
CENTENNIAL RESOURCE DEVELO-A	0.44	38.04	0.22
GCP APPLIED TECHNOLOGIES	0.23	37.49	0.18

Bottom 5	Avg % Wgt	Total Return (%)	Contribution to Return (%)
AVAYA HOLDINGS CORP	2.40	-48.13	-1.45
EXP WORLD HOLDINGS INC	0.67	-42.50	-0.59
STONECO LTD-A	1.54	-35.29	-1.06
OPEN LENDING CORP - CL A	0.32	-31.35	-0.30
ADVANCED MICRO DEVICES	0.63	-28.21	-0.51

Intangible Adjustment

Eisfeldt et al. justification for capitalizing 100% of SG&A:

“...we show in the Online Appendix that our main results are unchanged if we follow the alternative convention of separately setting $\beta = 0.3$ for SG&A minus R&D expenditures and $\beta = 1$ for R&D expenditures.”

In reference to their 2013 paper:

“firms with higher stocks of intangible assets outperform firms with lower intangibles, and provides additional evidence supporting the use of the selling and general administrative expense as a measure of intangible investment.”

Intangible Adjustment

Eisfeldt et al. Fama French 3/5 factor regression analysis using different intangible adjusted value factors.

Capitalizing
100% of SG&A

	(1)	(2)	(3)	(4)
α (%)	12.97 (4.04)	11.19 (3.47)	8.73 (2.92)	9.85 (3.30)
β_{MktRF}	-0.36 (-1.11)	-0.23 (-0.70)	-0.05 (-0.17)	-0.14 (-0.46)
β_{SMB}	0.22 (1.68)	0.24 (1.79)	0.29 (2.28)	0.29 (2.23)
β_{HMLFF}	0.30 (2.33)		0.25 (1.98)	
β_{HMLINT}		0.37 (2.74)		0.43 (3.13)
β_{MOM}	0.54 (2.78)	0.55 (2.81)	0.53 (2.74)	0.54 (2.78)
β_{RMW}			0.31 (2.76)	0.31 (2.81)
β_{CMA}			0.16 (1.75)	0.11 (1.20)
Adj. R^2	73.66	77.56	78.21	80.38
RMSE	0.43	0.39	0.34	0.33

Capitalizing
100% of R&D
and 30% of
SG&A

	(1)	(2)	(3)	(4)
α (%)	12.97 (4.04)	11.92 (3.70)	8.73 (2.92)	9.52 (3.19)
β_{MktRF}	-0.36 (-1.11)	-0.28 (-0.86)	-0.05 (-0.17)	-0.12 (-0.37)
β_{SMB}	0.22 (1.68)	0.23 (1.71)	0.29 (2.28)	0.29 (2.23)
β_{HMLFF}	0.30 (2.33)		0.25 (1.98)	
β_{HMLINT}		0.36 (2.88)		0.37 (2.87)
β_{MOM}	0.54 (2.78)	0.55 (2.82)	0.53 (2.74)	0.54 (2.78)
β_{RMW}			0.31 (2.76)	0.31 (2.77)
β_{CMA}			0.16 (1.75)	0.12 (1.33)
Adj. R^2	73.66	77.97	78.21	79.59
RMSE	0.43	0.41	0.34	0.33

Intangible Adjustment

Formula for initializing a firm's intangible assets used by Eisfeldt, Kim, et. al.

$$\text{Int}_{it} = \text{SG\&A}_1 / (g + \delta)$$

Formula for adjusting a firm's book equity

$$B_{it}^{\text{INT}} = B_{it} + \text{Int}_{it}$$

Leveraging Cash Flows from Operations

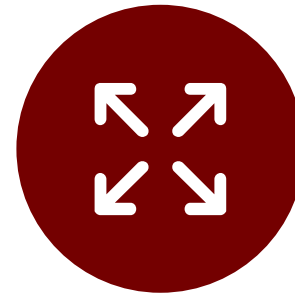
We leveraged **cash flows from operations (CFO)** from the Statement of Cash Flows because:



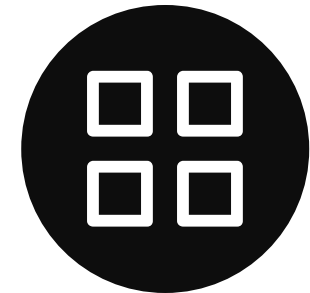
Adjusted for change in working capital



Cash-based line item (pulled from Statement of Cash Flows)



Limited missing data across Russell 3000 universe (Bloomberg)



Industry agnostic since required by GAAP regardless of industry

Cash-Based Operating Profitability

Ball et al. suggests that cash-based operating profitability is a **better predictor of future profitability** than operating profitability.

