

Performance and Persistence in Institutional Investment Management

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Outline

- 1 Overview of the industry
- 2 Data
- 3 Performance
- 4 Persistence
- 5 Final issues

Institutional investment management

Plan sponsors (Corporate pension plans, Public pension plans, Union plans, Foundations, Endowments)

- Draft an investment policy statement (asset allocation)
- RFP and screening investment managers
- Hiring, monitoring, and firing investment managers

Goyal and Wahal (2008) study plan sponsors

We study institutional investment managers

- Should have written this paper first !

Unit of analysis

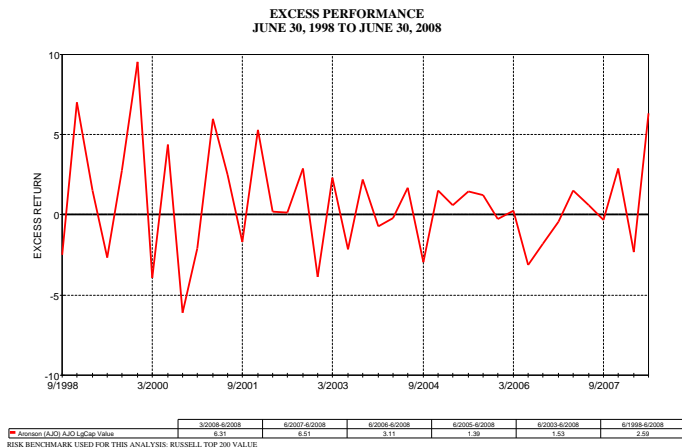
- Mandates for investment in a product that fits a style (size and growth-value gradations)
- Multiple mandates from different plan sponsors can be managed together in one portfolio or separately
- Essential elements of the portfolio strategy are identical
- Reflected in the name of the composite product (e.g., large-cap value)
- May not be the actual portfolio for a specific plan sponsor
 - ▶ Separate managed accounts
 - ▶ Sin stocks

This product is our unit of observation

An example of a product

Aronson+Johnson+Ortiz Large-cap Value (AUM \$ 2 billion)

PSN



(Little) Existing evidence

“When all is said and done, we doubt that an industry that has added little, if any, value can continue to exist in its present form”

LSV manages \$80 billion in assets

- Lakonishok, Shleifer, and Vishny (1992), Coggin, Fabozzi, and Rahman (1993)
- Christopherson, Ferson, and Glassman (1998), Ferson and Khang (2002)
- Del Guercio and Tkac (2002), Heisler, Knittel, Neumann, and Stewart (2005)
- Berzins and Trzcinka (2005), Tonks (2005)

Data

- Data from Informa Investment Solutions (IIS)
 - ▶ Provides data, services, and consulting to plan sponsors, investment consultants, and investment managers
- Quarterly returns, benchmarks, annual assets, and other firm- and product-level attributes
- Sample period of 1991 to 2008
 - ▶ Database goes back to 1979 but contains only “live” portfolios prior to 1991
- 4,617 products offered by 1,448 firms (actively managed domestic equity)
 - ▶ See Busse, Goyal, and Wahal (2013, Review of Finance) on international equity

Data features

- Composite returns
- Returns are net of trading costs, but gross of investment management fees
- Data are self reported
 - ▶ Not allowed to amend historical returns
 - ▶ Required to report a contiguous return series
 - ▶ SEC vets these return data when it performs random audits of investment management firms

Aggregate performance (Table II.A)

	Benchmark-adjusted returns	Factor model alphas		
		1 factor	3 factors	4 factors
EW Gross	0.49 (3.36)	0.57 (3.17)	0.35 (2.52)	0.20 (1.34)
VW Gross	0.16 (1.11)	0.13 (1.06)	-0.01 (-0.05)	0.05 (0.40)
EW Net	–	0.40 (2.11)	0.16 (1.17)	0.01 (0.05)
VW Net	–	-0.02 (-0.15)	-0.16 (-1.39)	-0.10 (-0.79)

Individual performance - Gross returns (Table II.B)

	Benchmark-adjusted returns	Factor model alphas		
		1 factor	3 factors	4 factors
5 th pcnt	-0.67	-0.71	-0.84	-0.96
10 th pcnt	-0.39	-0.42	-0.60	-0.61
Mean	0.52	0.60	0.34	0.20
Median	0.43	0.51	0.21	0.18
90 th pcnt	1.56	1.71	1.38	1.03
95 th pcnt	1.99	2.20	1.94	1.45
		<i>t</i> -statistics		
5 th pcnt		-1.18	-1.63	-1.44
10 th pcnt		-0.68	-1.13	-1.04
Mean		0.81	0.44	0.33
Median		0.88	0.45	0.35
90 th pcnt		2.22	2.02	1.69
95 th pcnt		2.66	2.48	2.08
# products	3,842	3,842	3,842	3,842

Skill vs. luck

- Right tail in performance is pretty impressive
- Is this skill or merely luck?
- Use Kosowski et al. (2006), Fama and French (2008)
 - ▶ Bootstrap returns under the null of zero alphas
 - ▶ Maintain cross-sectional dependence, non-normality of residuals
 - ▶ Use the cross-section of returns to gauge statistical significance of alphas and their t -statistics

Skill vs. luck in net returns (Table III)

Pct	Alphas			t-statistics		
	Actual	Sim	%(Sim>Actual)	Actual	Sim	%(Sim>Actual)
1	-1.96	-1.97	53.60	-2.68	-2.67	52.00
3	-1.44	-1.35	64.70	-2.08	-2.08	51.80
5	-1.19	-1.10	65.80	-1.80	-1.80	52.00
10	-0.79	-0.79	53.00	-1.40	-1.38	53.20
30	-0.32	-0.30	56.20	-0.58	-0.58	49.70
50	0.00	0.02	40.60	0.00	-0.05	40.60
70	0.29	0.24	34.60	0.57	0.47	33.00
90	0.86	0.73	22.30	1.36	1.25	33.10
95	1.25	1.04	19.30	1.77	1.65	33.70
97	1.54	1.29	19.00	2.05	1.92	34.10
99	2.47	1.89	9.70	2.61	2.49	38.10

Persistence

Why persistence?

- Perhaps one can do better by selecting investment management firms / products based on prior performance
- Pension plans do condition on prior performance (Goyal and Wahal, 2008)

Our approaches

- 1 Form deciles based on prior annual return, follow performance and see if it persists
- 2 Estimate regressions of future returns on prior returns (+ control variables)

Persistence across deciles

- Sort portfolios into deciles based on *benchmark-adjusted* returns over past year
- Compute mean decile returns over subsequent evaluation period, ranging from 1 quarter to 3 years
- Roll forward and repeat
- Concatenate evaluation period mean decile returns → one long time series
- Estimate post-ranking performance

$$r_{p,t} = \alpha_p + \sum_{k=1}^K \beta_{p,k} f_{k,t} + \epsilon_{p,t}$$

4-factor post-ranking alphas (Table IV)

Decile	Post-ranking holding period			
	1 st quarter	1 st year	2 nd year	3 rd year
1	0.32 (1.20)	0.30 (1.36)	0.37 (1.85)	0.07 (0.30)
2	0.27 (1.19)	0.16 (0.72)	0.20 (1.04)	0.10 (0.58)
3	0.16 (0.77)	0.19 (0.96)	0.12 (0.74)	0.13 (0.88)
5	0.07 (0.47)	0.14 (0.90)	0.15 (1.02)	0.06 (0.43)
8	0.06 (0.35)	0.07 (0.40)	0.16 (0.91)	0.06 (0.34)
9	-0.06 (-0.42)	0.04 (0.30)	0.09 (0.45)	0.01 (0.05)
10	0.18 (0.66)	0.00 (0.00)	-0.04 (-0.13)	-0.09 (-0.25)
10-1	-0.15 (-0.39)	-0.30 (-0.95)	-0.41 (-1.03)	-0.15 (-0.41)

Regression-based evidence on persistence

γ_1 coefficient (Table V)

Future adjusted returns = $\gamma_0 + \gamma_1$ Lagged benchmark-adjusted returns

Horizon of returns		Future return adjustment			
Future	Lagged	Benchmark	Factor model		
$t+k_1:+t+k_2$	$t-k:t$		3-factor	4-factor	
1 st year	1-quarter	0.441 (3.51)	0.231 (2.24)	0.183 (2.01)	
	1-year	0.147 (2.40)	0.090 (2.07)	0.071 (1.41)	
	2-years	0.082 (3.25)	0.044 (1.66)	0.015 (0.53)	
	3-years	0.030 (1.50)	0.018 (1.02)	-0.004 (-0.19)	
2 nd year	1-quarter	-0.170 (-0.94)	-0.133 (-1.71)	-0.078 (-0.80)	
	1-year	0.071 (1.13)	0.021 (0.38)	-0.019 (-0.28)	
	2-years	0.012 (0.43)	0.001 (0.05)	-0.028 (-0.73)	
	3-years	0.024 (1.20)	0.001 (0.06)	-0.017 (-0.56)	

Robustness

- Data veracity (backfill bias)
- Natural attrition in deciles
- Performance measures (conditional alphas)
- Statistical significance (bootstrapped t 's)

Conclusion

- No evidence of superior performance, even before fees
- Large cross-sectional variation in performance
- Estimates of persistence, particularly those derived from four-factor models, are statistically indistinguishable from zero

Active investment management does not systematically deliver superior risk-adjusted returns, even for large and presumably sophisticated institutional investors