

Does Team Management Reduce Operational Risk? Evidence from the Financial Services Industry

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Why study operational risk?

- One of the most important tasks of modern financial institutions
- Large-scale scandals due to failure of efficient operational risk management
- Empirical evidence on operational risk management scarce
- Explicitly addressed by Basel II

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- Increased trend towards team-production in the economy
 - Many decisions in politics and business are made by committees/groups/teams
 - Team members might monitor each other vs. danger of 'Groupthink'
- Does team management have an influence on operational risk?

2 Why study the fund industry?

- Ideal real-world test setting
- Professional obligation to clients often not met
- Dramatic shift towards team-management in this industry

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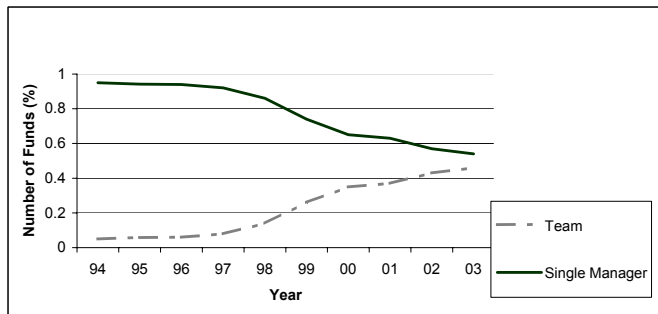
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Team Management in the Mutual Fund Industry



- 1 Can operational risk be reduced by employing teams?
 - Are various dimensions of problematic behavior of fund managers less common among teams?
 - ... deviations from stated investment styles (Kim/Shukla/Tomas, 2000).
 - ... engagement in tournament behavior (Brown/Harlow/Starks, 1996).
 - ... performance not persistent (Carhart, 1997).
- 2 What is the cost of this operational risk management practice?
 - Impact of team status on performance?
 - Impact of team status on inflows?

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- Large extent of idiosyncratic risk as evidence for operational risk
- Wei (2003) and (2006), Perry and de Fontnouvelle (2005), and Cummins, Lewis, and Wei (2006) - market price reactions to operational losses
- Distributional characteristics of op risk loss events (e.g., Dionne/Dahen, 2008)
- Determinants of operational risk (Chernobai/Jorion/Yu, 2008)

2 Differences in behavior and performance in the fund industry

- Performance: Prather/Middleton (2002, 2006), Chen et al. (2004), Bär/Kempf/Ruenzi (2005), Massa/Reuter/Zitzewitz (2007)
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- funds from 10 different market segments.
- management structure as defined by CRSP: team if 'team' or 'team managed' and 'single' if one manager name; deleting the rest (e.g. multiple names; Massa et al. (2007)).
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Descriptive Statistics

	All (Mean)	Team (Mean)	Single Manager (Mean)	Difference (Mean)
Age (in Years)	9.7	8.9	10.0	-1.18***
NAV (in Mio)	842	997	791	206***
Turnover (in %)	114	146	102	44***
Expense Ratio (in %)	1.4	1.3	1.4	-0.15***

*** 1 % significance, ** 5 % significance, * 10 % significance

Style Drift Measures

1. Compute yearly factor loadings along the SMB, HML and MOM Style dimensions:

$$r_{i,m,t} - r_{f,m,t} = \alpha_{i,t} + \beta_{i,t}^1 (r_{M,m,t} - r_{f,m,t}) + \beta_{i,t}^2 \text{SMB}_{m,t} + \beta_{i,t}^3 \text{HML}_{m,t} + \beta_{i,t}^4 \text{MOM}_{m,t} + \epsilon_{i,m,t}$$

2. Construct (individual and overall) style drift measures based on the variation of the factor loadings over time:

$$SDM_i^F = STDev^{resc.}(\beta^F)_i \quad \text{for } F = 2, 3, 4$$

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Results: Style Drift

	SDM	SDM(SMB)	SDM(HML)	SDM(MOM)
Solo Manager (SM)	1.053	1.047	1.030	1.081
Team (T)	0.809	0.804	0.861	0.762
Team - Solo Manager	-0.244***	-0.244***	-0.169***	-0.319***

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→ Team managed funds follow more stable investment styles ✓

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$$\Delta Risk_{i,t} = \beta^1 Rank_{i,t}^{(1)} + \beta^2 TeamD \cdot Rank_{i,t}^{(1)} + \dots$$

Results:

	Estimated Coefficients
Performance Rank (first part of the year)	0.83***
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Performance Persistence

Port.	Return	Four Factor Model				
		Alpha	Market	SMB	HML	MOM
Single Managers						
1	0.00884	-0.00172	0.98359	0.48402	-0.02486	0.26823
⋮	⋮	⋮	⋮	⋮	⋮	⋮
10	0.00216	-0.00265	0.97846	0.25514	0.03013	-0.29347
1 - 10	0.00668	0.00093	0.00513	0.22888***	-0.05499	0.56169**
Teams						
1	0.00970	0.00007	0.90381	0.41795	-0.09773	0.27418
⋮	⋮	⋮	⋮	⋮	⋮	⋮
10	0.00019	-0.00623	1.05332	0.22171	0.16295	-0.22383
1 - 10	0.00951	0.00631*	-0.14951*	0.19625**	-0.26068	0.49802**
Difference Team - Solo Manager						
Spread	0.00283	0.00538**	-0.15464***	-0.03264	-0.20568***	-0.06367*

→ Some evidence that team managed funds deliver more stable performance ✓

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Performance Consequences

Empirical Model:

$$\alpha_{i,t} = \beta^1 TeamD_{i,t} + \beta^2 Perf_{i,t-1} + \dots$$

Results:

	4-Factor Alpha	Appraisal Ratio
Team Dummy (T)	-0.00056**	-0.0295*
Previous Performance	-0.01536	0.03277***
⋮	⋮	⋮

→ Negative but weak impact on performance X

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Flow Consequences

Empirical Model:

$$\text{Inflows}_{i,t} = \beta^1 \text{TeamD}_{i,t} + \beta^2 \text{Inflow}_{i,t-1} + \beta^3 \text{Rank}_{i,t-1} + \beta^4 \text{Rank}_{i,t-1}^2 \dots$$

Results:

	Estimated Coefficient
Team Dummy (T)	0.0504**
Previous Flow	0.0623***
Previous Performance Rank	-0.2762
Squared Previous Performance Rank	0.8088***
⋮	⋮

→ Strong positive impact on inflows ✓

→ Investors seem to value team management!

Flow Consequences

Empirical Model:

$$\text{Inflows}_{i,t} = \beta^1 \text{TeamD}_{i,t} + \beta^2 \text{Inflow}_{i,t-1} + \beta^3 \text{Rank}_{i,t-1} + \beta^4 \text{Rank}_{i,t-1}^2 \dots$$

Results:

	Estimated Coefficient
Team Dummy (T)	0.0504**
Previous Flow	0.0623***
Previous Performance Rank	-0.2762
Squared Previous Performance Rank	0.8088***
⋮	⋮

→ Strong positive impact on inflows ✓

→ Investors seem to value team management!

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 - Teams engage less in problematic behavior, i.e. they help to reduce operational risk.
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