Portfolio Manager Compensation in the U.S. Mutual Fund Industry

Linlin Ma
Georgia State University

Yuehua Tang
Georgia State University

Juan-Pedro Gómez
IE Business School

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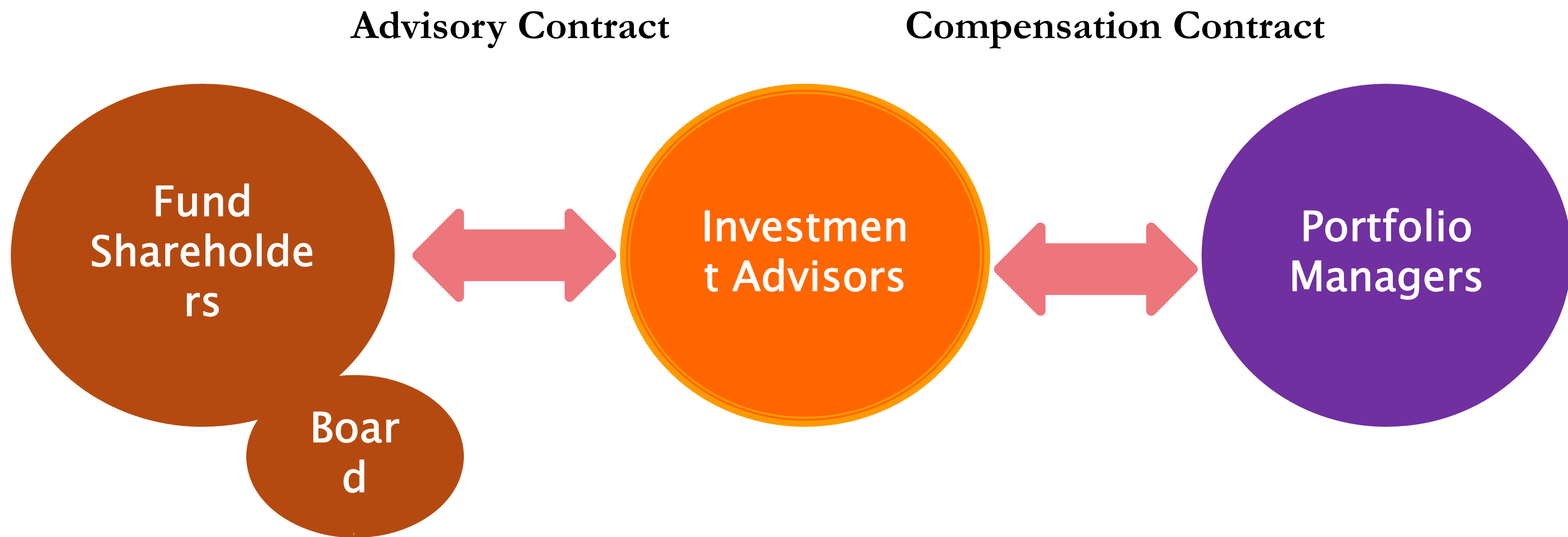
Mutual Fund Organization Structure



Motivation

- Advisory contracts between shareholders and advisors
  - Coles, Suay, and Woodbury (2000), Deli (2002), Elton, Gruber, and Blake (2003)
- Not much is know about the compensation contracts between advisors and port. managers due to data limitation
- New SEC disclosure requirement on portfolio manager compensation contract introduced in March, 2005
  - Structure
  - Method

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What do we do?

- Hand collect the information on compensation contracts

- Stylized facts of portfolio manager compensation

- Cross-sectional determinants of these contract features

Main Results

- We find the following stylized facts on portfolio manager compensation contract features.
  - Over 95% of portfolio managers receive salary-plus-bonus type of compensation
  - About three quarters of portfolio managers receive explicit performance based incentives
  - Average performance evaluation period is three years.

Main Results – contd.

- Portfolio manager compensation contracts are broadly consistent with an optimal contracting equilibrium.
  - Larger advisors tend to use performance based incentives more frequently and longer evaluation period.
  - Portfolio managers as the stakeholders of the advisors receive performance based incentives less often and have shorter evaluation periods.
  - Portfolio management teams are more likely to receive performance based incentives.
  - Longer manager tenure decreases the probability of receiving any incentives, including performance based contracts.

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SEC Disclosure Requirement

- Types of compensation
  - Salary/Bonus/Deferred Compensation
- Whether the compensation is fixed
- Whether, and if so how, the compensation is based on:
  - Fund Performance
  - Assets
- Only criteria has to be disclosed, no dollar value

Example: Vanguard Managed Payout Fund

"*As of December 31, 2009, a portfolio manager's compensation generally consists of* ***base salary, bonus****, and payments under Vanguard's* ***long-term incentive compensation*** *program …… A portfolio manager's base salary is generally a fixed amount that may change as a result of an annual review …… A portfolio manager's* ***bonus is determined*** *by a number of factors. One factor is gross,* ***pre-tax performance*** *of the fund relative to expectations for how the fund should have performed, given the fund's investment objective, policies, strategies …… This performance factor is* ***not based on the value of assets*** *held in the fund's portfolio. For the Managed Payout Funds, the performance factor depends on how closely the portfolio manager outperforms these expectations and maintains the risk parameters of the fund* ***over a three-year period****. …….*"

Data

- U.S. Open-end Mutual Funds in Morningstar Direct MF database
  - Sample Period: 2009
- We collect the compensation information from Statement of Additional Information (SAI) in the SEC Edgar Database
- We obtain investment advisor characteristics from Form ADV
- Our final sample covers:
  - 4,112 Funds
  - 669 unique Advisors
  - 4,010 unique Managers

Summary Statistics of Portfolio Manager Compensation Structures

Contract Features	Mean	Median	Std. Dev.	Min	Max	Obs.
Fixed Salary Only	0.017		0.128			4,112
Performance Incentive	0.752		0.432			4,112
Evaluation Period Mean	2.71	3.00	1.01	0.25	7.50	2,525
Evaluation Period Most	2.97	3.00	1.24	0.25	7.50	2,525
Evaluation Period Min	1.29	1.00	0.78	0.25	5.00	2,525
Evaluation Period Max	4.26	5.00	2.01	0.25	10.00	2,508
AUM Incentive	0.214	0	0.410	0	1	4,112
Advisor Profit Incentive	0.418	0	0.493	0	1	4,112
Deferred Compensation	0.288	0	0.453	0	1	4,112
Stock/Option	0.473	0	0.499	0	1	4,112

Portfolio Manager Compensation Contract Features

- Over 95% of portfolio managers receive salary-plus-bonus type of compensation
- 75.2% of portfolio managers receive explicit performance based incentives
- Average evaluation period is three years.
- 21.4% of manager compensation is directly linked to AUM.
- 28.8% of managers have deferred compensation and 47.3% receive stock and option grants.

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Hypotheses Development

- Delegated portfolio management relationship falls in the principal-agent paradigm.

- Theory posits that a compensation contract that links the agent's payoff to her performance may alleviate agency conflicts.
  - Harris and Raviv (1979), Holmstrom (1979), Grossman and Hart (1983)

- However, performance based incentives are costly due to the distortion of risk-sharing b/w the principal and the agent.

Hypotheses Development – contd.

- Given this cost-benefit trade-off, we should expect more explicit performance based incentives when
  - An advisor's direct monitoring of port. managers is more costly
  - Implicit incentives (e.g., career concerns) are less effective
- Next, we relate the compensation structures to advisor and portfolio manager characteristics.

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Hypotheses – Advisor Characteristics

- *Hypo. 1-3: If monitoring portfolio managers' actions is more costly for certain advisors, we expect performance based contracts to be used more frequently in these cases:*

  - Advisor size (AUM and # Employees)
  - Clientele heterogeneity
  - # of affiliated financial industry activities

Hypotheses – Manager Characteristics

- *H4A: If portfolio managers in team-managed funds are less disciplined by career concerns, we expect more performance based contracts.*

- *H4B: Due to the free-rider problem in team-managed funds, we expect to observe longer evaluation periods.*

- *H5: If successful portfolio managers use their **bargaining power** to negotiate the contract terms, we expect more performance based contracts for those with longer tenure.*

- *H6: For portfolio manages as **stakeholders** of advisors, we expect*
  - Less performance based contracts
  - Shorter evaluation periods
  - Less retention mechanisms

Empirical Methodology

- We use logistic regression at the fund level to investigate the cross-sectional determinants of the contract features

$$y^*_{i,j} = \beta AdvisorChar_j + \gamma MgrChar_{i,j} + \lambda FundChar_{i,j} + \alpha_{org} + \delta_{style} + \varepsilon_{i,j}$$

$$y_{i,j} = 1\,[y^*_{i,j} > 0] \qquad (3)$$

  - where *i* indexes mutual funds; *j* indexes investment advisors

- The DV equals to one if the contract has certain feature (performance based incentives).

Empirical Methodology – contd.

- We use the following OLS regression model to examine performance evaluation periods:

$$EvPeriod_{i,j} = \beta AdvisorChar_j + \gamma MgrChar_{i,j} + \lambda FundChar_{i,j} + \alpha_{org} + \delta_{style} + \varepsilon_{i,j} \quad (4)$$

  - where *i* indexes mutual funds; *j* indexes investment advisors

- We consider two measures: (i) the average evaluation period, and (ii) the evaluation period with highest weights.

Table III-A: Univariate Comparison

Advisor Characteristics	Performance Incentive=1 (N=3,094)		Performance Incentive=0 (N=1,018)		
	Mean	**Median**	**Mean**	**Median**	**Diff.**
Advisor Size (millions)	153,797	61,917	28,079	4,725	125,718***
#Employees	152.7	150.0	45.6	30.0	107.1***
Accounts per Employee	76.9	6.1	64.3	6.1	12.6
Clientele Heterogeneity	0.308	0.195	0.407	0.240	-0.099***
#Affiliations	5.71	6.00	3.46	3.00	2.25***
Advisor Age (months)	296.3	259.0	221.4	210.0	74.9***

Advisors with large AUM, more employees, a more diverse clientele, and more financial industry affiliations use more performance based incentives.

Table III-A: Univariate Comparison – contd.

Port. Manager Characteristics	Performance Incentive=1 (N=3,094)		Performance Incentive=0 (N=1,018)		
	Mean	**Median**	**Mean**	**Median**	**Diff.**
Stakeholder	0.073	0.000	0.382	0.000	-0.309***
Fund Ownership	0.470	0.000	0.590	1.000	-0.120***
Mgr. Tenure (months)	59.7	46.0	71.3	54.5	-11.6***
Team Management	0.672	1.000	0.609	1.000	0.064

Port. Managers as stakeholders and the ones with longer tenure to less likely to receive less performance based incentives.

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Table III-B: Logit Model – Performance Based Incentives

Advisor Characteristics	*Coeff. (1a)*	*ME (1b)*	*Coeff. (2a)*	*ME (2b)*	*Coeff. (3a)*	*ME (3b)*
Log(Advisor Size)	0.370***	5.10%			0.310***	4.21%
Log(#Employees)	0.374**	5.15%			0.356**	4.83%
Log(Acc./Employee)	0.091	1.26%			0.097	1.32%
Clientele HHI			1.046**	-15.10%	-0.066	-0.89%
#Affiliations			0.263***	3.80%	0.110	1.49%
Log(Advisor Age)	-0.018	-0.24%	0.406**	5.88%	0.004	0.05%

Advisors with large AUM and more employees are more likely to use perf. based incentives; e.g., 9.9% increase for a one-std. increase in Log(Advisor Size).

Table III-B: Logit Model – Performance Based Incentives – contd.

Advisor Characteristics	*Coeff. (1a)*	*ME (1b)*	*Coeff. (2a)*	*ME (2b)*	*Coeff. (3a)*	*ME (3b)*
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Log(Advisor Age)	-0.018	-0.24%	0.406**	5.88%	0.004	0.05%

Advisors with a more diverse clientele and more affiliations use more perf. based incentives; e.g., 9.7% increase for a one-std. increase in #Affiliations.

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Table III-B: Logit Model – Performance Based Incentives – contd.

Port. Manager Characteristics	*Coeff. (1a)*	*ME (1b)*	*Coeff. (2a)*	*ME (2b)*	*Coeff. (3a)*	*ME (3b)*
Stakeholder	-1.499***	-27.80%	-1.571***	-30.30%	-1.397***	-25.20%
Fund Ownership	0.123	1.70%	-0.103	-1.50%	0.185	2.51%
Log(Mgr. Tenure)	-0.358***	-4.94%	-0.389***	-5.63%	-0.355***	-4.82%
Team Management	0.366*	5.24%	0.323*	4.83%	0.332*	4.67%

Portfolio managers as the stakeholders of the advisors receive perf. based incentives less often; 25% drop for a change from non- to stakeholders.

Table III-B: Logit Model – Performance Based Incentives – contd.

Port. Manager Characteristics	*Coeff. (1a)*	*ME (1b)*	*Coeff. (2a)*	*ME (2b)*	*Coeff. (3a)*	*ME (3b)*
Stakeholder	-1.499***	-27.80%	-1.571***	-30.30%	-1.397***	-25.20%
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Team Management	0.366*	5.24%	0.323*	4.83%	0.332*	4.67%

Portfolio managers with shorter tenure receive more perf. based incentives; 4.8% increase for a one-std. drop in manager tenure.

Table III-B: Logit Model – Performance Based Incentives – contd.

Port. Manager Characteristics	*Coeff. (1a)*	*ME (1b)*	*Coeff. (2a)*	*ME (2b)*	*Coeff. (3a)*	*ME (3b)*
Stakeholder	-1.499***	-27.80%	-1.571***	-30.30%	-1.397***	-25.20%
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Log(Mgr. Tenure)	-0.358***	-4.94%	-0.389***	-5.63%	-0.355***	-4.82%
Team Management	0.366*	5.24%	0.323*	4.83%	0.332*	4.67%

Portfolio manager teams are more likely to receive perf. based incentives; 4.7% increase for a change from solo-manager to team.

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Table IV: Performance Evaluation Periods

Advisor Characteristics	*Coeff. (4)*	*Coeff. (5)*	*Coeff. (6)*
Log(Advisor Size)	0.218**		0.222**
Log(#Employees)	-0.040		-0.061
Log(Acc./Employee)	0.005		-0.005
Clientele HHI		-0.388	-0.261
#Affiliations		0.041	-0.002
Log(Advisor Age)	0.385**	0.542***	0.378**

Large advisors use longer perf. evaluation periods; a 4-month increase for a one-std. increase in Log(Advisor Size).

Table IV. Performance Evaluation Periods – contd.

Port. Manager Characteristics	*Coeff. (4)*	*Coeff. (5)*	*Coeff. (6)*
Stakeholder	-0.747***	-0.761**	-0.771**
Fund Ownership	0.428***	0.342***	0.422***
Log(Manager Tenure)	0.012	0.024	0.012
Team Management	0.293	0.233	0.289

Portfolio managers as the stakeholders of the advisors have shorter evaluation period; a 8-month drop for a change from non- to stakeholders.

Table V: Fixed Salary Only

Characteristics	*Coeff. (1a)*	*ME (1b)*	*Coeff. (2a)*	*ME (2b)*	*Coeff. (3a)*	*ME (3b)*
Log(Advisor Size)	0.108	0.04%			0.228	0.06%
Log(#Employees)	-0.945***	-0.34%			-0.654**	-0.18%
Log(Acc./Employee)	-0.094	-0.03%			0.048	0.01%
Clientele HHI			1.706**	0.64%	1.721	0.47%
#Affiliations			-0.390***	-0.15%	-0.325*	-0.09%
Log(Mgr. Tenure)	0.657***	0.23%	0.648**	0.24%	0.665***	0.18%

Portfolio managers with longer tenure receive more fix salary only; 10% increase in unconditional mean for a one-std. increase in manager tenure.

Conclusions

- Our paper documents the stylized facts of portfolio manager compensation and examine the determinants of the contract structures.
- Our study contributes to the literature on portfolio delegation
  - the first to systematically analyze portfolio manager compensation
- Performance-based incentives are the dominant form of portfolio manager compensation contract.
  - Resolve the puzzling evidence on the low frequency of performance based fees in the advisory contract.

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