



The performance of female hedge fund managers[☆]

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ABSTRACT

Using data for the period 1994–2013, we examine the return and risk-taking behavior of hedge funds having at least one female portfolio manager and funds that have all female portfolio managers. Funds with all female managers perform no differently than all male-managed funds and have similar risk profiles. For single-style funds, those with mixed teams of both genders underperform male-only funds on both a raw and risk-adjusted basis, although mixed funds incur less risk and their Sharpe ratios do not differ. For funds of funds, both all-female and mixed funds have similar performance to male-managed funds. We then consider the failure rate across all fund styles. Funds with at least one female manager fail at higher rates, driven by difficulty in raising capital—these funds are smaller and are less likely to be closed to new investment. Surviving funds with at least one female manager have better performance than male-managed surviving funds, consistent with the idea that female managers need to perform better for their funds to survive. Yet, female-managed surviving funds have fewer assets under management than surviving male-managed funds. Using media mentions as a proxy for investor interest, female-managed funds receive proportionately less attention. Our results suggest that there are no inherent differences in skill between female and male managers, but that only the best performing female managers manage to survive.

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1. Introduction

The number of female hedge fund portfolio managers is remarkably small in relation to the number of male hedge fund portfolio managers. Using the Thomson–Reuters hedge fund database (formerly known as Lipper TASS) over the period 1994–2013, we identify 439 unique hedge funds with at least one female portfolio manager. Excluding funds with both male and female portfolio managers (195 funds) leaves 244 unique funds with only female portfolio managers. By contrast, there are 9081 funds with male portfolio managers. In other words, just 4.6% of hedge funds with identified portfolio managers have any female portfolio managers, while 2.6% of hedge funds with identified portfolio managers have only female portfolio managers.¹

The relatively small number of female hedge fund managers is curious in its own right. The small number of female managers is even more surprising in light of a well-known study by the Rothstein Kass Institute (2013) claiming that female hedge fund managers outperform the hedge fund universe in general: “For the six and a half years ending

June 2013, the Rothstein Kass Women in Alternative Investments (WAI) Hedge Fund Index returned 6 percent, while . . . the HFRX Global Hedge Fund Index dropped – 1.1 percent during the same period.”² These results suggest that a significant source of potential alpha has been overlooked in the financial markets.

We examine these claims with more comprehensive data and conclude that female-only managed hedge funds perform about the same as male-only managed hedge funds, while taking similar amounts of risk. This analysis includes both live and failed funds, and thus does not condition on survival. In essence, we do not find that one gender dominates the other when it comes to performance. Our sample of female-only managed hedge funds is obviously small. We next examine funds that employ mixed teams of female and male portfolio managers—also a relatively small sample of 195 funds. These mixed gender teams underperform both female-only and male-only managed hedge funds. Important for this result, the underperformance of mixed teams is not driven by teams in general, as we control for team-

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¹ There are an additional 5414 funds that do not provide any identifying information for their portfolio managers, which we drop from the sample. For this reason, as well as the usual reasons of self-reporting, we do not have the full universe of hedge funds.

² Rothstein Kass Institute (2013), page 2. The WAI Index is composed of 82 funds that they categorize as women-owned funds. Note that there are some important differences between Rothstein Kass's analysis and ours. Crucially, their study does not control for survivorship bias. Next, they focus on women-owned funds, while we focus on funds with female portfolio managers. They focus on a select group of funds that they can identify as women-owned. We use the TASS database and identify every female manager that the database tracks. They focus on a six-and-a-half-year time period running through the middle of 2013. We use a 20-year period from 1994 to 2013. They focus exclusively on raw returns. We consider raw returns, style-adjusted returns, alphas, and several risk measures. We also consider our results in a multivariate setting, and assess statistical significance.

Table 1
Summary statistics.

Panel A: Full sample						
This panel presents mean characteristics for funds run by women (all female), funds run by teams of women and men (both genders), and funds run by men (all male), with t-tests for differences in means allowing for unequal variance. All continuous variables are winsorized at the 1% and 99% tails. The full incubation period has been dropped for all funds.						
	Means			Differences		
	All female	Both genders	All male	All female–both	Both–all male	All female–all male
Number of funds	244	195	9081	NA	NA	NA
Fund size (\$ millions)	115.0	98.6	137.0	16.4**	–39.4**	–22.0**
Fund age (years)	6.4	6.9	6.2	–0.5	0.7*	0.2
Number of managers on team	1.0	2.6	1.3	–1.6**	1.3**	–0.3**
Management fee	1.39	1.35	1.46	0.04	–0.11**	–0.07
Incentive fee	14.66	15.90	16.30	–1.24	–0.40	1.64**
Minimum investment (\$ thousands)	604	530	721	74	–191	117
Total redemption period (days)	118	116	101	2	15**	–17**
Lockup period (months)	3.4	2.8	3.0	0.6	–0.2	0.4
<i>Performance variables</i>						
Buy and hold annual return (%)	6.25	6.20	6.76	0.05	–0.56	–0.51
Buy and hold annual return, excess of style index (%)	–0.21	–1.44	–0.04	1.23**	–1.40**	–0.17
Annualized alpha, factor is style index (%)	0.01	–0.71	–0.14	0.72	–0.57	0.15
Sharpe ratio (all)	1.156	1.249	1.230	–0.093	0.019	–0.074
Sharpe ratio (teams only)	2.085	1.249	1.243	0.836*	0.006	0.842*
<i>Risk measures</i>						
Standard deviation (annualized)	0.096	0.095	0.107	0.001	–0.012**	–0.011**
Idiosyncratic volatility (annualized)	0.022	0.021	0.024	0.001	–0.03**	–0.02**
Beta on style index	0.99	0.88	1.01	0.11***	–0.13**	–0.02
<i>Indicator variables</i>						
Team managed	0.03	1.00	0.21	–0.97**	0.79**	–0.18**
High water mark	0.70	0.71	0.71	–0.01	0.00	–0.01
Uses leverage	0.58	0.59	0.59	–0.01	0.00	–0.01
Open to new investment	0.64	0.69	0.61	–0.05	0.08*	0.03
Personal capital	0.25	0.35	0.28	–0.10***	0.07*	–0.03
Live fund	0.17	0.10	0.18	0.07**	–0.08**	–0.01
Registered investment advisor	0.14	0.12	0.12	0.02	0.00	0.02
<i>Style indicators</i>						
Convertible arbitrage	0.02	0.02	0.02	0.00	0.00	0.00
Short bias	0.00	0.01	0.00	–0.01	0.01	0.00
Emerging markets	0.09	0.09	0.07	0.00	0.02	0.02
Equity market neutral	0.03	0.04	0.06	–0.01	–0.02	–0.03
Event driven	0.10	0.10	0.06	0.00	0.04**	0.04**
Fixed-income arbitrage	0.01	0.03	0.03	–0.02	0.00	–0.02
Fund of funds	0.40	0.26	0.24	0.12**	0.02	0.16**
Global macro	0.03	0.03	0.05	0.00	–0.02	–0.02
Long/short	0.22	0.35	0.30	–0.13**	0.05	–0.08**
Managed futures	0.05	0.04	0.07	0.01	–0.03	–0.02
Multi–strategy	0.03	0.03	0.06	0.00	–0.03*	–0.03*
Other	0.03	0.01	0.04	0.02	–0.04*	–0.01
Panel B: Matched sample						
This panel presents mean characteristics for funds run by women, funds run by teams of women and men, and a matched sample of funds run by men, with t-tests for differences in means allowing for unequal variance. Note that the number of all male funds is larger than the total number of funds with females and both genders, because the matching is done by fund category, fund size, and year of observation. Due to the year match, a single female fund can have several male matches. All continuous variables are winsorized at the 1% and 99% tails. Only funds that report fund size are included in the table. The full incubation period has been dropped for all funds.						
	Means			Differences		
	All female	Both genders	All male	All female–both	Both–all male	All female–all male
Number of funds	203	181	1542	NA	NA	NA
Fund size (\$ millions)	115.0	98.6	106.0	16.4	–7.4	9
Fund age (years)	6.7	7.2	9.0	–0.5	–1.8**	–2.3**
Number of managers on team	1.0	2.7	1.3	–1.6**	1.4**	–0.3**
Management fee	1.39	1.37	1.42	0.02	–0.05	–0.03
Incentive fee	14.50	15.95	15.93	–1.45*	0.02	–1.43**
Minimum investment (\$ thousands)	625	490	852	135	–362**	–227**
Total redemption period (days)	113	116	121	–3	–5	–8
Lockup period (months)	3.2	2.6	3.7	0.6	–1.1**	–0.5
<i>Performance variables</i>						
Buy and hold annual return (%)	5.82	6.02	7.27	0.20	–1.25	–1.45*
Buy and hold annual return, excess of style index (%)	–0.90	–1.85	–0.08	0.95	–1.77**	–0.82
Annualized alpha, factor is style index (%)	–0.40	–1.21	–0.88	0.81	–0.33	0.48
Sharpe ratio (all)	1.186	1.164	1.364	0.022	–0.020**	–0.178*
Sharpe ratio (teams only)	2.110	1.164	1.621	0.946	–0.457**	0.489

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