

Internet Appendix:

Immigrants in Finance:
Evidence from Hedge Funds

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Table IA1: Variable definitions

Variable name	Description
<i>RETURN</i>	Hedge fund monthly return.
<i>ALPHA</i>	Hedge fund monthly Fund and Hsieh (2004) seven-factor alpha with factor loadings estimated over the previous 24 months.
<i>HIRED_H1B</i>	Indicator variable for whether the fund management company hired at least one H-1B worker in the previous year.
<i>NUMBER_H1B_RANK</i>	The percentile rank of the number of H-1B workers hired in the previous year.
<i>UNSUCCESSFUL_H1B</i>	Indicator variable for whether the fund management company applied but did not successfully hire any H-1B worker in the previous year.
<i>DEMAND_H1B_RANK</i>	The percentile rank for the number of H-1B visa applications submitted by the fund management company.
<i>log(SIZE)</i>	Natural logarithm of the previous month's asset under management in US\$m.
<i>AGE</i>	Fund age in decades.
<i>SHARPE</i>	Average monthly return minus risk-free rate divided by the standard deviation of the monthly returns during current fiscal year.
<i>INFORMATION</i>	Average of the monthly Fung and Hsieh (2004) residuals divided by the standard deviation of the monthly residuals during current fiscal year.
<i>MPPM</i>	Manipulation-proof performance measure computed as per Goetzmann et al. (2007) with risk aversion parameter $\rho = 3$.
<i>VALUEADD</i>	Monthly gross fund excess return multiplied by prior month's fund assets under management as per Berk and van Binsbergen (2015).
<i>H1B</i>	Fraction of the fund management company's demand for cap-subject H-1B visas that is met.
<i>H1B_TERCILE</i>	Fraction of the fund management company's demand for cap-subject H-1B visas that is met decomposed into terciles.
<i>TREATMENT</i>	Indicator variable that takes a value of one if the fund management company was allocated at least one of its H-1B visas demanded during that lottery year.
<i>POST_LOTTERY</i>	Indicator variable for whether the month equals to or exceeds the first month of the lottery year.
<i>TREATMENT1</i>	Indicator variable that takes a value of one if the fund management company that operates the fund hired H-1B workers prior to 2004.
<i>POST_QUOTACUT</i>	Indicator variable for whether the year equals to or exceeds 2004.
<i>TOPSALARY</i>	An indicator variable for whether the prevailing wage paid to a H-1B worker by the fund management company that year based on LCA data is in the top 10 percentile.
<i>POSTGRADUATE</i>	An indicator variable for whether the proportion of the H-1B workers hired by the fund management company that year with postgraduate degrees (either Master's or PhD degrees) exceeds the sample median.
<i>PHD</i>	An indicator variable for whether the fund management company hired a H-1B worker with a PhD degree that year.
<i>STEM</i>	An indicator variable for whether the majority of the H-1B visas demanded are for STEM positions.
<i>ECON_FIN</i>	An indicator variable for whether the majority of the H-1B visas demanded are for economics and finance positions.
<i>ADMIN</i>	An indicator variable for whether the majority of the H-1B visas demanded are for administrative positions.
<i>SYSTEMATIC1</i>	An indicator variable for whether the fund employs a systematic strategy as defined by Harvey et al. (2017).
<i>SYSTEMATIC2</i>	An indicator variable for whether the fund employs a systematic strategy as defined by Chincarini (2014)
<i>SYSTEMATIC3</i>	An indicator variable for whether any of the hedge fund managers of the fund holds a PhD degree.
<i>SCALABILITY1</i>	The beta on the natural logarithm of last month's fund AUM in the rolling regression, estimated over the last 36 months, of monthly fund return on the natural logarithm of last month's fund AUM.
<i>SCALABILITY2</i>	The beta on the natural logarithm of last month's fund AUM in the rolling regression, estimated over the last 36 months, of fund alpha on the natural logarithm of last month's fund AUM.
<i>ANOMALY1</i>	The number of stock anomaly factors that the fund loads positively and significantly on at the 5% level.
<i>ANOMALY2</i>	The number of stock anomaly factors that the fund loads positively and significantly on at the 10% level.

Variable name	Description
<i>DISTINCTIVE1</i>	One minus the correlation of fund returns with the equal-weighted return of the fund's investment style peers.
<i>DISTINCTIVE2</i>	One minus the correlation of fund returns with the value-weighted return of the fund's investment style peers.
<i>DISTINCTIVE3</i>	One minus the R-squared from the regression of fund excess returns on the Fund and Hsieh (2004) seven factors.
<i>DISTINCTIVE4</i>	One minus the adjusted R-squared from the regression of fund excess returns on the Fund and Hsieh (2004) seven factors.
<i>IMMIGRANTMGR</i>	The proportion of the fund managers at the fund that are classified as immigrants by ChatGPT based on name.
<i>SAMEREGIONMGR</i>	An indicator variable for whether the region-of-origin cosine similarity score between managers and H-1B workers is above the median. Managers' region of origins are determined by ChatGPT based on names.
<i>CHINESE_INDIAN</i>	The fraction of a hedge fund's approved H-1B visas in the past three years that were issued to Chinese or Indian employees.
<i>WHITE</i>	Fraction of the hedge fund management team that is White.
<i>BLACK</i>	Fraction of the hedge fund management team that is Black.
<i>LATINO</i>	Fraction of the hedge fund management team that is Latino.
<i>ASIAN</i>	Fraction of the hedge fund management team that is Asian.
<i>AMERICA</i>	Fraction of the hedge fund management team that is from North America.
<i>EUROPE</i>	Fraction of the hedge fund management team that is from Europe.
<i>EASTASIA</i>	Fraction of the hedge fund management team that is from East and Southeast Asia.
<i>SOUTHASIA</i>	Fraction of the hedge fund management team that is from South and Central Asia.
<i>MIDDLEEAST</i>	Fraction of the hedge fund management team that is from West Asia and North Africa.
<i>RACIAL_DIVERSITY</i>	The racial diversity of the hedge fund management team or one minus the number of shared connections in a team based on race scaled by the total number of possible shared connections as per Lu, Naik, and Teo (2024).
<i>CTRY_DIVERSITY</i>	The country of origin diversity of the hedge fund management team or one minus the number of shared connections in a team based on country of origin scaled by the total number of possible shared connections as per Lu, Naik, and Teo (2024).
<i>PAST_2YRRETURN</i>	Hedge fund firm past two-year return.
<i>PAST_2YRALPHA</i>	Hedge fund firm past two-year Fung and Hsieh (2004) alpha.
<i>PAST_2YRSTRATRETURN</i>	Hedge fund firm past two-year strategy return.
<i>PAST_2YRSTRATALPHA</i>	Hedge fund firm past two-year Fung and Hsieh (2004) strategy alpha.
<i>FRAC.POSTGRADUATE</i>	The fraction of H-1B workers that the fund management company would like to hire that have post-graduate degrees.
$\log(FIRMSIZE)$	The natural logarithm of last year's firm AUM in US\$m.
<i>FIRMAGE</i>	Firm age in decades.
$\log(NFUND)$	The natural logarithm of the number of funds operated by the hedge fund firm last year.
$\log(NSTRATEGY)$	The natural logarithm of the number of unique strategies employed by the hedge fund firm last year.
<i>POSTINCUBATION_ALPHA</i>	Incubation bias-adjusted Fung and Hsieh (2004) alpha.
<i>UNSMOOTHED_ALPHA</i>	Unsmoothed Fung and Hsieh (2004) alpha adjusted for serial correlation in fund returns.
<i>STYLEADJ_ALPHA</i>	Style-adjusted Fung and Hsieh (2004) alpha which accounts for the performance of the fund's investment style peers.
<i>PREFEE_ALPHA</i>	Pre-fee Fung and Hsieh (2004) alpha derived from gross fund returns.
<i>DOM.NONECONFINSTEM</i>	the number of job postings for domestic workers who are not in economics, finance or STEM positions.
<i>DOM.ECONFIN</i>	the number of job postings for domestic workers who are in economics or finance positions.
<i>DOM.STEM</i>	the number of job postings for domestic workers who are in STEM positions.
<i>PSEUDO_TREATMENT1</i>	An indicator variable that takes a value of one if the fund management company that operates the fund hired H-1B workers prior to the pseudo treatment year.
<i>POST.PSEUDO_QUOTACUT</i>	An indicator variable that takes a value of one if the year equals to or exceeds the pseudo treatment year.
<i>MF.RETURN</i>	Mutual fund monthly return.
<i>ALPHA_3FF</i>	Mutual fund monthly Fama and French (1993) three-factor alpha with factor loadings estimated over the previous 24 months.
<i>ALPHA_4FF</i>	Mutual fund monthly Carhart (1997) four-factor alpha with factor loadings estimated over the previous 24 months.

Table IA2: **Randomness of H-1B visa lotteries**

This table reports multivariate OLS regressions on hedge fund management company H-1B visa lottery outcomes. The dependent variable is the fraction of the fund management company's demand for cap-subject H-1B visas that is met that year (*H1B*). The independent variables include hedge fund firm past two-year return (*PAST_2YRRETURN*), firm past two-year Fung and Hsieh (2004) alpha (*PAST_2YRALPHA*), hedge fund firm past two-year strategy return (*PAST_2YRSTRATRETURN*), firm past two-year Fung and Hsieh (2004) strategy alpha (*PAST_2YRSTRATALPHA*), the fraction of H-1B workers that the fund management company would like to hire that have post-graduate degrees (*FRAC_POSTGRADUATE*), firm age in decades (*FIRMAGE*), the natural logarithm of last year's firm AUM in US\$m (*FIRMSIZE*), the natural logarithm of the number of funds operated by the hedge fund firm last year (*NFUND*), and the natural logarithm of the number of unique strategies employed by the hedge fund firm last year (*NSTRATEGY*) as well as fixed effects for firm and year. Detailed variable definitions can also be found in Table IA1. Standard errors in parentheses are clustered by firm. The sample period for the regressions reported in columns 1 and 2 comprises the following fiscal years 2008, 2009, 2014, 2015, and 2016. The sample period for the regressions reported in columns 3 and 4 comprises the following fiscal years 2014, 2015, and 2016, which corresponds to the subperiod during which education level information is available. The regressions ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

Independent variable	<i>H1B</i> (1)	<i>H1B</i> (2)	<i>H1B</i> (3)	<i>H1B</i> (4)
<i>PAST_2YRRETURN</i>	-0.013 (0.042)		-0.097 (0.094)	
<i>PAST_2YRALPHA</i>		0.011 (0.047)		-0.066 (0.101)
<i>PAST_2YRSTRATRETURN</i>	-0.118 (0.140)		-0.117 (0.289)	
<i>PAST_2YRSTRATALPHA</i>		-0.215 (0.196)		-0.214 (0.530)
<i>FRAC_POSTGRADUATE</i>			-0.051 (0.090)	-0.038 (0.093)
log(<i>FIRMSIZE</i>)	0.017 (0.038)	0.016 (0.040)	-0.014 (0.088)	-0.014 (0.092)
<i>FIRMAGE</i>	0.162 (0.230)	0.193 (0.233)	-0.505 (0.482)	-0.416 (0.458)
log(<i>NFUND</i>)	0.007 (0.097)	0.033 (0.100)	0.002 (0.227)	-0.036 (0.221)
log(<i>NSTRATEGY</i>)	0.135 (0.201)	0.091 (0.201)	-0.331 (0.336)	-0.302 (0.333)
Firm FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Adj. R ²	0.256	0.257	0.232	0.227
Observations	709	709	328	328

Table IA3: **The first natural experiment: H-1B visa lotteries, robustness tests**

This table reports multivariate OLS and Fama and MacBeth (1973) regressions on hedge fund performance. The dependent variables include monthly alpha ($ALPHA$), which is the monthly alpha from the basic Fung and Hsieh (2004) model or the augmented Fung and Hsieh (2004) model where factor loadings are estimated over the last 24 months, incubation bias adjusted alpha ($POSTINCUBATE_ALPHA$), unsmoothed alpha ($UNSMOOTH_ALPHA$), style-adjusted alpha ($STYLEADJ_ALPHA$), and preferee alpha ($PREFEE_ALPHA$). FH denotes the Fung and Hsieh (2004) model. HML is the Fama and French (1993) value factor. UMD is the Carhart (1997) momentum factor. RMW and CMA are the Fama and French (2015) profitability and investment factors, respectively. PS is the Pástor and Stambaugh (2003) traded liquidity factor. BAB is the Frazzini and Pedersen (2014) betting against beta factor. MACRO is the Bali, Brown, and Caglayan (2014) macroeconomic uncertainty factor. CALL and PUT are the Agarwal and Naik (2004) out-of-the-money call and put option based factors. EM is the emerging markets factor derived from the MSCI Emerging Markets index. The primary independent variable of interest is the fraction of the fund management company's demand for cap-subject H-1B visas that is met ($H1B$). The other independent variables include the natural logarithm of last month's fund AUM in US\$m ($\log(SIZE)$) and fund age in decades (AGE) as well as fixed effects for fund. Detailed variable definitions can also be found in Table IA1. The OLS regressions also include year-month fixed effects. Standard errors in parentheses are clustered by firm for the OLS regressions. The sample period comprises the following fiscal years: 2008, 2009, 2014, 2015, and 2016. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

Panel A: Dependent variable is $ALPHA$ (or variant of $ALPHA$) from the Fung and Hsieh (2004) model

Independent variable	Fama-MacBeth			Full sample of hedge fund management firms			Firms that demand more than one visa	
	$ALPHA$	$POSTINCUBATE_ALPHA$	$UNSMOOTH_ALPHA$	$STYLEADJ_ALPHA$	$PREFEE_ALPHA$	$ALPHA$	$ALPHA$	$ALPHA$
$H1B$	0.177** (0.085)	0.407** (0.164)	0.434** (0.173)	0.407** (0.161)	0.468 (0.326)	0.353** (0.165)	0.448* (0.270)	
$\log(SIZE)$	-0.035 (0.029)	-0.559*** (0.092)	-0.585*** (0.098)	-0.545*** (0.090)	-0.668*** (0.192)		-0.728*** (0.128)	
AGE	0.171* (0.098)	1.616 (5.529)	3.449 (8.369)	0.006 (5.365)	1.024 (1.257)	1.522 (6.181)	0.405 (2.043)	
Fund FE	No	Yes	Yes	Yes	Yes	Yes	Yes	
Year-month FE	No	Yes	Yes	Yes	Yes	Yes	Yes	
Fund size decile FE	No	No	No	No	No	Yes	Yes	
Adj. R ²	0.015	0.138	0.129	0.059	0.153	0.136	0.147	
Observations	15707	14952	15707	15707	5341	15707	8415	

Panel B: Dependent variable is $ALPHA$ from an augmented Fung and Hsieh (2004) model

Independent variable	$ALPHA$ from augmented FH model:						FH+EM
	FH+HML+UMD (1)	FH+RMW+CMA (2)	FH+PS (3)	FH+BAB (4)	FH+MACRO (5)	FH+CALL+PUT (6)	
$H1B$	0.372** (0.162)	0.284* (0.149)	0.374** (0.158)	0.319* (0.163)	0.398** (0.181)	0.415** (0.203)	0.333* (0.173)
$\log(SIZE)$	-0.603*** (0.109)	-0.620*** (0.096)	-0.582*** (0.099)	-0.659*** (0.108)	-0.703*** (0.134)	-0.530*** (0.106)	-0.550*** (0.100)
AGE	10.396 (6.514)	2.552 (7.007)	4.722 (6.597)	2.939 (6.622)	-0.005 (4.906)	-9.894 (7.852)	2.822 (6.078)
Fund FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year-month FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R ²	0.118	0.139	0.108	0.123	0.133	0.128	0.122
Observations	15707	15707	15707	15707	15707	15707	15707

Table IA4: **Stock performance of hedge funds sorted by H-1B visa allocations**

This table reports the performance of stocks held by hedge funds sorted by H-1B visa allocations. Every January 1st, hedge funds are sorted into portfolios based on the proportion of their H-1B visas demanded secured in the H-1B lottery last year. High H-1B allocation hedge funds are hedge funds that were allocated all of their H-1B visas demanded last year via H-1B lotteries. Low H-1B allocation hedge funds are hedge funds that were allocated none of their H-1B visas demanded last year via H-1B lotteries. Stock holdings are derived from Thomson Reuters hedge fund firm 13-F filings. We compute monthly returns on high and low H-1B allocation hedge fund holdings based on the assumptions that hedge fund firm holdings proxy for hedge fund holdings and that funds did not change their holdings between quarterly reports. Portfolios are rebalanced every calendar quarter and within a given fund portfolio, stocks are value-weighted by the fund's dollar holdings. Finally, we compute value-weighted calendar time portfolios by averaging across funds, weighting individual fund portfolios by the fund's total net asset value at the end of the previous quarter. We report average annualized returns, DGTW-adjusted returns, and 4-factor alphas. DGTW characteristic-adjusted returns are defined as raw returns minus the returns on a value-weighted portfolio of all CRSP firms in the same size, market-book, and one year momentum quintile as per Daniel, Grinblatt, Titman, and Wermers (1997). 4-factor alpha is the intercept on a regression of monthly portfolio excess returns. The explanatory variables are the monthly returns from Fama and French (1993) mimicking portfolios and Carhart (1997) momentum factor. The t -statistics are derived from White (1980) standard errors. The sample period comprises the following years: 2008, 2009, 2014, 2015, and 2016. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

Stock portfolio	Stock performance measure (annualized)		
	Raw return	DGTW-adjusted	4-factor alpha
	(1)	(2)	(3)
High H-1B allocation hedge funds	1.01	0.75	0.49
Low H-1B allocation hedge funds	-1.64	-1.30	-2.14
Difference	2.65**	2.05**	2.63**
t -statistics	2.01	2.20	2.11

Table IA5: **Difference-in-differences model based on H-1B visa lotteries with alternative treatment variables**

This table reports multivariate OLS regressions on fund performance. The dependent variables include hedge fund monthly return (*RETURN*) and monthly alpha (*ALPHA*). *ALPHA* is the Fung and Hsieh (2004) seven-factor monthly alpha with factor loadings estimated over the last 24 months. The primary independent variable of interest is the interaction between the treatment variable (*H1B* or *H1B.TERCILE*) and an indicator variable for whether the month equals to or exceeds the first month of the lottery year (*POST_LOTTERY*). *H1B* is the fraction of the fund management company's demand for cap-subject H-1B visas that is met. *H1B.TERCILE* is the discrete version of *H1B* when *H1B* is decomposed into terciles. The other independent variables include the natural logarithm of last month's fund AUM in US\$m ($\log(\textit{SIZE})$) and fund age in decades (*AGE*) as well as fixed effects for fund-event and event-month. Standard errors in parentheses are clustered by firm. Detailed variable definitions can also be found in Table IA1 of the Internet Appendix. The lottery years comprise the following fiscal years: 2008, 2009, 2014, 2015, and 2016. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

Independent variable	<i>RETURN</i> (1)	<i>ALPHA</i> (2)	<i>RETURN</i> (3)	<i>ALPHA</i> (4)
<i>H1B</i> x <i>POST_LOTTERY</i>	0.084* (0.047)	0.113** (0.051)		
<i>H1B.TERCILE</i> x <i>POST_LOTTERY</i>			0.044* (0.023)	0.060** (0.026)
$\log(\textit{SIZE})$	-0.210*** (0.027)	-0.183*** (0.033)	-0.210*** (0.027)	-0.183*** (0.033)
<i>AGE</i>	-1.207* (0.619)	-1.610*** (0.535)	-1.207* (0.619)	-1.610*** (0.535)
Fund-event FE	Yes	Yes	Yes	Yes
Event-month FE	Yes	Yes	Yes	Yes
Adj. R ²	0.354	0.212	0.354	0.212
Observations	80535	78984	80535	78984

Table IA6: **The first natural experiment regressions on hedge fund performance controlling for H-1B worker education level**

This table reports multivariate OLS regressions on hedge fund performance. The dependent variables include hedge fund monthly return (*RETURN*), monthly alpha (*ALPHA*), annualized Sharpe ratio (*SHARPE*), annualized information ratio (*INFORMATION*), manipulation-proof performance measure (*MPPM*), and value-added skill (*VALUEADD*). *ALPHA* is the Fung and Hsieh (2004) seven-factor monthly alpha with factor loadings estimated over the last 24 months. *SHARPE*, *INFORMATION*, and *MPPM* are estimated each fiscal year. *SHARPE* is the average monthly return minus the risk-free rate divided by the standard deviation of the monthly returns during that fiscal year. *INFORMATION* is the average of the monthly Fung and Hsieh (2004) residuals divided by the standard deviation of the monthly residuals during that fiscal year. *MPPM* is computed as per Goetzmann et al. (2007) with risk aversion parameter $\rho = 3$. *VALUEADD* is the monthly gross fund excess return multiplied by prior month's fund assets under management as per Berk and van Binsbergen (2015). The primary independent variable of interest is the fraction of the fund management company's demand for cap-subject H-1B visas that is met (*H1B*). The other independent variables include the fraction of H-1B workers that the fund management company would like to hire that have post-graduate degrees (*FRAC_POSTGRADUATE*), the natural logarithm of last month's fund AUM in US\$m ($\log(\text{SIZE})$) and fund age in decades (*AGE*) as well as fixed effects for fund. Detailed variable definitions can also be found in Table IA1. The regressions on fund return, alpha, and skill include year-month fixed effects while the regressions on Sharpe ratio, information ratio, and MPPM include year fixed effects. Standard errors in parentheses are clustered by firm. The sample period comprises the following fiscal years: 2014, 2015, and 2016, which corresponds to the subperiod during which education level information is available. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	<i>RETURN</i>	<i>ALPHA</i>	<i>SHARPE</i>	<i>INFORMATION</i>	<i>MPPM</i>	<i>VALUEADD</i>
Independent variable	(1)	(2)	(3)	(4)	(5)	(6)
<i>H1B</i>	0.200* (0.111)	0.325** (0.134)	0.443* (0.243)	0.843*** (0.249)	3.325** (1.315)	6.539* (3.539)
<i>FRAC_POSTGRADUATE</i>	-0.034 (0.198)	-0.190 (0.163)	-0.655* (0.355)	-0.630* (0.318)	2.498 (2.463)	-5.677 (9.407)
$\log(\text{SIZE})$	-0.544*** (0.110)	-0.444*** (0.092)	-0.413** (0.183)	0.574 (0.442)	-3.409** (1.345)	-2.215 (3.100)
<i>AGE</i>	3.400 (2.204)	2.005 (2.113)	3.154 (3.616)	-1.030 (2.007)	60.893** (24.357)	58.825** (27.842)
Fund FE	Yes	Yes	Yes	Yes	Yes	Yes
Year-month FE	Yes	Yes	No	No	No	Yes
Year FE	No	No	Yes	Yes	Yes	No
Adj. R ²	0.131	0.063	0.409	0.343	0.237	0.249
Observations	7974	7974	742	742	742	2924

Table IA7: **Weighted least squares regressions for the first natural experiment**

This table reports multivariate weighted least squares regressions on hedge fund performance. The dependent variables include hedge fund monthly return (*RETURN*), monthly alpha (*ALPHA*), annualized Sharpe ratio (*SHARPE*), annualized information ratio (*INFORMATION*), manipulation-proof performance measure (*MPPM*), and value-added skill (*VALUEADD*). *ALPHA* is the Fung and Hsieh (2004) seven-factor monthly alpha with factor loadings estimated over the last 24 months. *SHARPE*, *INFORMATION*, and *MPPM* are estimated each fiscal year. *SHARPE* is the average monthly return minus the risk-free rate divided by the standard deviation of the monthly returns during that fiscal year. *INFORMATION* is the average of the monthly Fung and Hsieh (2004) residuals divided by the standard deviation of the monthly residuals during that fiscal year. *MPPM* is computed as per Goetzmann et al. (2007) with risk aversion parameter $\rho = 3$. *VALUEADD* is the monthly gross fund excess return multiplied by prior month's fund assets under management as per Berk and van Binsbergen (2015). The primary independent variable of interest is the fraction of the fund management company's demand for cap-subject H-1B visas met (*H1B*). The other independent variables include the natural logarithm of last month's fund AUM in US\$m ($\log(\text{SIZE})$), fund age in decades (*AGE*), and fixed effects for fund. Detailed variable definitions can also be found in Table IA1. The regressions on fund return, alpha, and skill include year-month fixed effects while the regressions on Sharpe ratio, information ratio, and MPPM include year fixed effects. Standard errors in parentheses are clustered by firm. Panel A, B, and C report regressions with inverse probability weights (Stuart et al., 2011), overlap weights (Li, Morgan, and Zaslavsky, 2018) and stratification weights (Stuart et al., 2011), respectively. The sample period comprises 2008, 2009, 2014, 2015, and 2016. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

Independent variable	<i>RETURN</i> (1)	<i>ALPHA</i> (2)	<i>SHARPE</i> (3)	<i>INFORMATION</i> (4)	<i>MPPM</i> (5)	<i>VALUEADD</i> (6)
Panel A: Regressions with inverse probability of participation weights (Stuart, Cole, Bradshaw, and Leaf, 2011)						
<i>H1B</i>	0.423* (0.240)	0.453*** (0.169)	0.653*** (0.223)	0.624** (0.288)	6.218* (3.390)	2.541 (1.607)
$\log(\text{SIZE})$	-1.013*** (0.131)	-0.716*** (0.128)	-0.584*** (0.127)	0.205 (0.298)	-8.506*** (1.786)	-2.349 (2.176)
<i>AGE</i>	4.052 (7.453)	5.723 (6.527)	4.755*** (1.660)	0.437 (1.625)	57.300 (37.743)	-3.792 (20.141)
Fund FE	Yes	Yes	Yes	Yes	Yes	Yes
Year-month FE	Yes	Yes	No	No	No	Yes
Year FE	No	No	Yes	Yes	Yes	No
Adj. R ²	0.256	0.124	0.444	0.394	0.445	0.253
Observations	15707	15707	1485	1485	1485	3289
Panel B: Regressions with overlap weights (Li, Morgan, and Zaslavsky, 2018)						
<i>H1B</i>	0.281** (0.138)	0.388** (0.158)	0.500** (0.195)	0.598*** (0.207)	3.819* (1.965)	4.502* (2.340)
$\log(\text{SIZE})$	-0.901*** (0.113)	-0.571*** (0.093)	-0.567*** (0.108)	0.193 (0.240)	-7.414*** (1.334)	-2.614 (2.822)
<i>AGE</i>	-0.283 (5.243)	2.206 (5.572)	4.915*** (1.364)	1.090 (1.430)	28.474 (23.599)	12.324 (27.013)
Fund FE	Yes	Yes	Yes	Yes	Yes	Yes
Year-month FE	Yes	Yes	No	No	No	Yes
Year FE	No	No	Yes	Yes	Yes	No
Adj. R ²	0.269	0.139	0.416	0.264	0.436	0.252
Observations	15707	15707	1485	1485	1485	3289
Panel C: Regressions with stratification weights (Stuart, Cole, Bradshaw, and Leaf, 2011)						
<i>H1B</i>	0.404* (0.211)	0.448*** (0.168)	0.659*** (0.230)	0.721** (0.302)	5.704* (3.005)	3.616* (2.027)
$\log(\text{SIZE})$	-0.994*** (0.126)	-0.676*** (0.124)	-0.577*** (0.126)	0.289 (0.304)	-8.165*** (1.664)	-2.518 (2.573)
<i>AGE</i>	2.822 (7.320)	7.650 (6.939)	4.856*** (1.640)	0.863 (1.717)	47.809 (30.851)	12.155 (28.240)
Fund FE	Yes	Yes	Yes	Yes	Yes	Yes
Year-month FE	Yes	Yes	No	No	No	Yes
Year FE	No	No	Yes	Yes	Yes	No
Adj. R ²	0.262	0.133	0.461	0.415	0.437	0.251
Observations	15707	15707	1485	1485	1485	3289

Table IA8: **The second natural experiment: 2004 reduction in H-1B visa cap, robustness tests**

This table reports multivariate OLS regressions on hedge fund performance. The dependent variables include monthly alpha (*ALPHA*), which is the monthly alpha from the basic Fung and Hsieh (2004) model or the augmented Fung and Hsieh (2004) model where factor loadings are estimated over the last 24 months, incubation bias-adjusted alpha (*POSTINCUBATION_ALPHA*), unsmoothed alpha (*UNSMOOTHED_ALPHA*), style-adjusted alpha (*STYLEADJ_ALPHA*), and prefee alpha (*PREFEE_ALPHA*). FH denotes the Fung and Hsieh (2004) model. HML is the Fama and French (1993) value factor. UMD is the Carhart (1997) momentum factor. RMW and CMA are the Fama and French (2015) profitability and investment factors, respectively. PS is the Pástor and Stambaugh (2003) traded liquidity factor. BAB is the Frazzini and Pedersen (2014) betting against beta factor. MACRO is the Bali, Brown, and Caglayan (2014) macroeconomic uncertainty factor. CALL and PUT are the Agarwal and Naik (2004) out-of-the-money call and put option based factors. EM is the emerging markets factor derived from the MSCI Emerging Markets index. The primary independent variable of interest is the interaction between the treatment indicator variable (*TREATMENT1*) and an indicator variable for whether the year equals to or exceeds 2004 (*POST_QUOTACUT*). *TREATMENT1* takes a value of one if the fund management company that operates the fund hired H-1B workers prior to 2004. The other independent variables include the natural logarithm of last month's fund AUM in US\$m ($\log(SIZE)$) and fund age in decades (*AGE*) as well as fixed effects for fund. Detailed variable definitions can also be found in Table IA1. The OLS regressions also include year-month fixed effects. Standard errors in parentheses are clustered by firm for the OLS regressions. Treatment funds are matched to control funds by minimizing the sum of the absolute difference in monthly fund performance over the 36-month period prior to the treatment year. The sample period is from 2001 to 2006. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

Panel A: Dependent variable is fund performance estimated relative to the Fung and Hsieh (2004) model

Independent variable	<i>POSTINCUBATION_ALPHA</i> (1)	<i>UNSMOOTHED_ALPHA</i> (2)	<i>STYLEADJ_ALPHA</i> (3)	<i>PREFEE_ALPHA</i> (4)	<i>ALPHA</i> (5)
<i>TREATMENT1</i> x <i>POST_QUOTACUT</i>	-0.447*** (0.119)	-0.456*** (0.128)	-0.399*** (0.117)	-0.519*** (0.162)	-0.475*** (0.126)
$\log(SIZE)$	-0.335*** (0.072)	-0.375*** (0.075)	-0.311*** (0.070)	-0.231** (0.101)	-0.399*** (0.078)
<i>AGE</i>	2.725 (3.348)	-1.671 (4.464)	2.513 (3.249)	-6.978 (9.305)	2.401 (3.530)
$\log(SIZE)$ x <i>POST_QUOTACUT</i>					0.085* (0.048)
<i>AGE</i> x <i>POST_QUOTACUT</i>					0.335** (0.148)
Fund FE	Yes	Yes	Yes	Yes	Yes
Year-month FE	Yes	Yes	Yes	Yes	Yes
Adj. R ²	0.048	0.045	0.012	0.011	0.049
Observations	27667	27175	27667	13211	27667

Panel B: Dependent variable is fund performance estimated relative to an augmented Fung and Hsieh (2004) model

Independent variable	<i>ALPHA</i> from augmented FH model:						
	FH+HML+UMD (1)	FH+RMW+CMA (2)	FH+PS (3)	FH+BAB (4)	FH+MACRO (5)	FH+CALL+PUT (6)	FH+EM (7)
<i>TREATMENT1</i> x <i>POST_QUOTACUT</i>	-0.324*** (0.112)	-0.250** (0.118)	-0.473*** (0.123)	-0.358*** (0.115)	-0.457*** (0.168)	-0.513*** (0.157)	-0.330*** (0.121)
$\log(SIZE)$	-0.337*** (0.081)	-0.275*** (0.060)	-0.322*** (0.075)	-0.370*** (0.077)	-0.211** (0.103)	-0.288*** (0.076)	-0.325*** (0.081)
<i>AGE</i>	4.818 (3.157)	4.962*** (1.850)	2.584 (3.695)	3.060 (3.352)	8.339*** (3.027)	1.891 (2.156)	4.218 (2.776)
Fund FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year-month FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R ²	0.043	0.042	0.049	0.044	0.060	0.054	0.035
Observations	27667	27667	27667	27667	27667	27667	27667

Table IA9: **H-1B visa lotteries and number of job postings for domestic workers**

This table reports multivariate Poisson regressions on the number of job postings for domestic workers by position type. The dependent variables include the number of job postings for domestic workers who are not in economics, finance or STEM positions (*DOM_NONECONFINSTEM*), the number of job postings for domestic workers who are in economics or finance positions (*DOM_ECONFIN*), and the number of job postings for domestic workers who are in STEM positions (*DOM_STEM*). Job postings are obtained from the Lightcast database, which is only available from 2010 onwards. Job postings for domestic workers refer to job postings made within the U.S. The primary independent variable of interest is the fraction of the fund management company's demand for cap-subject H-1B visas that is met (*H1B*). The other independent variables include firm age in decades (*FIRMAGE*), the natural logarithm of last year's firm AUM in US\$m (*FIRMSIZE*), the natural logarithm of the number of funds operated by the hedge fund firm last year (*NFUND*), the natural logarithm of the number of unique strategies employed by the hedge fund firm last year (*NSTRATEGY*), and hedge fund firm past two-year return (*PAST_2YRRETURN*), as well as fixed effects for firm and year-month. Detailed variable definitions can also be found in Table IA1 of the Internet Appendix. Standard errors in parentheses are clustered by firm. The sample period comprises the following fiscal years: 2014, 2015, and 2016. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

Independent variable	<i>DOM_NONECONFINSTEM</i> (1)	<i>DOM_ECONFIN</i> (2)	<i>DOM_STEM</i> (3)
<i>H1B</i>	1.983*** (0.509)	0.088 (0.124)	-0.276** (0.123)
log(<i>FIRMSIZE</i>)	-0.485 (0.432)	0.061 (0.118)	0.150 (0.104)
<i>FIRMAGE</i>	-0.025 (0.016)	0.008* (0.004)	-0.006* (0.003)
log(<i>NFUND</i>)	1.653 (1.711)	-0.537 (0.489)	0.398 (0.444)
log(<i>NSTRATEGY</i>)	1.001 (1.525)	-0.053 (0.353)	-0.111 (0.334)
<i>PAST_2YRRETURN</i>	1.381** (0.537)	0.411** (0.167)	0.173 (0.114)
Firm FE	Yes	Yes	Yes
Year-month FE	Yes	Yes	Yes
Pseudo-R ²	0.737	0.577	0.318
Observations	4559	4559	4559

Table IA10: **Falsification tests for the second natural experiment**

This table reports multivariate OLS regressions on hedge fund performance that analyse the pseudo reductions of the H-1B visa cap in 2006, 2007, and 2008. The dependent variables include hedge fund monthly return (*RETURN*), monthly alpha (*ALPHA*), annualized Sharpe ratio (*SHARPE*), annualized information ratio (*INFORMATION*), and value-added skill (*VALUEADD*). *ALPHA* is the Fung and Hsieh (2004) seven-factor monthly alpha with factor loadings estimated over the last 24 months. *SHARPE*, *INFORMATION*, and *MPPM* are estimated each fiscal year. *SHARPE* is the average monthly return minus the risk-free rate divided by the standard deviation of the monthly returns during that fiscal year. *INFORMATION* is the average of the monthly Fung and Hsieh (2004) residuals divided by the standard deviation of the monthly residuals during that fiscal year. *MPPM* is computed as per Goetzmann et al. (2007) with risk aversion parameter $\rho = 3$. *VALUEADD* is the monthly gross fund excess return multiplied by prior month's fund assets under management as per Berk and van Binsbergen (2015). The primary independent variable of interest is the interaction between the pseudo treatment indicator variable (*PSEUDO_TREATMENT1*) and an indicator variable for whether the year equals to or exceeds the pseudo treatment year (*POST_PSEUDO_QUOTACUT*). *PSEUDO_TREATMENT1* takes a value of one if the fund management company that operates the fund hired H-1B workers prior to the pseudo treatment year. The other independent variables include the natural logarithm of last month's fund AUM in US\$m ($\log(\text{SIZE})$) and fund age in decades (*AGE*) as well as fixed effects for fund. Detailed variable definitions can also be found in Table IA1. The regressions on *RETURN*, *ALPHA*, and *VALUEADD* include year-month fixed effects while the regressions on *SHARPE*, *INFORMATION*, and *MPPM* include year fixed effects. Standard errors in parentheses are clustered by firm. Treatment funds are matched to control funds by minimizing the sum of the absolute difference in monthly fund performance over the 36-month period. Panels A, B, and C report results when the pseudo treatment year is 2006, 2007, and 2008, respectively. The sample period is the six-year period around the pseudo treatment year. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

Independent variable	<i>RETURN</i> (1)	<i>ALPHA</i> (2)	<i>SHARPE</i> (3)	<i>INFORMATION</i> (4)	<i>MPPM</i> (5)	<i>VALUEADD</i> (6)
Panel A: Pseudo treatment year = 2006, Sample period = 2003 to 2008						
<i>PSEUDO_TREATMENT1</i> x <i>POST_PSEUDO_QUOTACUT</i>	0.053 (0.075)	0.093 (0.085)	0.031 (0.110)	0.089 (0.105)	1.440 (0.961)	-0.609 (1.647)
$\log(\text{SIZE})$	-0.422*** (0.038)	-0.416*** (0.045)	-0.548*** (0.055)	-0.316*** (0.045)	-4.299*** (0.446)	3.130*** (0.927)
<i>AGE</i>	2.237 (1.766)	-0.823 (2.591)	4.361 (3.419)	1.119 (3.613)	9.377 (21.238)	30.267 (29.532)
Fund FE	Yes	Yes	Yes	Yes	Yes	Yes
Year-month FE	Yes	Yes	No	No	No	Yes
Year FE	No	No	Yes	Yes	Yes	No
Adj. R ²	0.217	0.093	0.503	0.275	0.363	0.387
Observations	51621	50769	4225	4225	4225	22098
Panel B: Pseudo treatment year = 2007, Sample period = 2004 to 2009						
<i>PSEUDO_TREATMENT1</i> x <i>POST_PSEUDO_QUOTACUT</i>	0.108 (0.067)	0.106 (0.073)	0.243 (0.192)	0.171 (0.123)	1.515 (0.926)	2.278 (1.656)
$\log(\text{SIZE})$	-0.433*** (0.039)	-0.322*** (0.044)	-0.620*** (0.065)	-0.430*** (0.039)	-4.667*** (0.430)	3.293*** (0.833)
<i>AGE</i>	-0.478 (1.332)	1.856*** (0.524)	0.983 (0.704)	1.294* (0.711)	6.082 (6.118)	4.979 (5.547)
Fund FE	Yes	Yes	Yes	Yes	Yes	Yes
Year-month FE	Yes	Yes	No	No	No	Yes
Year FE	No	No	Yes	Yes	Yes	No
Adj. R ²	0.284	0.129	0.681	0.449	0.336	0.294
Observations	67259	65681	5568	5568	5568	24466
Panel C: Pseudo treatment year = 2008, Sample period = 2005 to 2010						
<i>PSEUDO_TREATMENT1</i> x <i>POST_PSEUDO_QUOTACUT</i>	0.040 (0.086)	0.088 (0.090)	0.025 (0.114)	-0.102 (0.093)	1.066 (1.181)	2.312 (2.346)
$\log(\text{SIZE})$	-0.519*** (0.045)	-0.383*** (0.046)	-0.505*** (0.045)	-0.335*** (0.040)	-4.232*** (0.472)	2.392* (1.351)
<i>AGE</i>	-2.669 (4.987)	-0.782 (1.800)	2.092 (2.918)	-0.496 (2.668)	0.881 (35.459)	10.993 (9.135)
Fund FE	Yes	Yes	Yes	Yes	Yes	Yes
Year-month FE	Yes	Yes	No	No	No	Yes
Year FE	No	No	Yes	Yes	Yes	No
Adj. R ²	0.238	0.117	0.472	0.315	0.296	0.229
Observations	66457	65336	5612	5612	5612	21033

Table IA11: **Mutual funds and H-1B visa lotteries**

This table reports multivariate OLS regressions on mutual fund performance. The dependent variables include mutual fund monthly return (MF_RETURN), monthly three-factor alpha ($ALPHA_3FF$), and monthly four-factor alpha ($ALPHA_4FF$). $ALPHA_3FF$ is the Fama and French (1993) three-factor monthly alpha with factor loadings estimated over the last 24 months. $ALPHA_4FF$ is the Carhart (1997) four-factor monthly alpha with factor loadings estimated over the last 24 months. The primary independent variables of interest are the fraction of the fund management company's demand for cap-subject H-1B visas that is met (HIB), an indicator variable for the fraction of H-1B visas demanded allocated to STEM positions ($STEM$), and their interaction. $STEM$ takes a value of one if the majority of the H-1B visas demanded are for STEM positions. The other independent variables include the natural logarithm of last month's fund AUM in US\$m ($\log(SIZE)$) and fund age in decades (AGE) as well as fixed effects for fund and year-month. Detailed variable definitions can also be found in Table IA1 of the Internet Appendix. Standard errors in parentheses are clustered by firm. The sample period comprises the following fiscal years: 2008, 2009, 2014, 2015, and 2016. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

Independent variable	MF_RETURN			ALPHA_3FF		ALPHA_4FF
	(1)	(2)	(3)	(4)	(5)	(6)
H1B	0.049 (0.041)	0.048 (0.059)	0.047* (0.024)	0.032 (0.029)	0.024 (0.026)	0.001 (0.033)
STEM		0.026 (0.081)		0.008 (0.026)		-0.002 (0.029)
H1B x STEM		0.035 (0.096)		0.055* (0.032)		0.067** (0.032)
log(SIZE)	0.029 (0.038)	0.041 (0.046)	-0.004 (0.017)	-0.004 (0.017)	-0.009 (0.017)	-0.007 (0.018)
AGE	0.043 (0.044)	0.039 (0.044)	-0.022 (0.020)	-0.022 (0.021)	-0.029 (0.021)	-0.028 (0.021)
Fund FE	Yes	Yes	Yes	Yes	Yes	Yes
Year-month FE	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R ²	0.820	0.823	0.521	0.519	0.542	0.539
Observations	17436	15634	17436	15634	17436	15634