

Internet Appendix to “Regulatory Oversight and Return Misreporting by Hedge Funds”

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Internet Appendix Table 1

Regressions using Alternate Definitions of Sample Periods

The dependent variable equals one if the fund triggers any of the return misreporting flags. IA-2333 Fund is an indicator variable equal to one if the fund's advisor registered in response to the rule change. For the first set of alternate windows (Include Anticipation): Pre-Mandatory period is January 2001 to December 2003 and Mandatory period is January 2004 to December 2006. For the second set of alternate windows (Start at Passage): Pre-Mandatory period is July 2002 to September 2004 and Mandatory period is October 2004 to December 2006. For the third set of alternate windows (Start at Effective Date): Pre-Mandatory period is January 2002 to June 2004 and Mandatory period is February 2005 to December 2006. [Note: we relax requirement of at least 24 months of returns per fund-period for the Mandatory period to 12 months as the period only spans 23 months.] We estimate logit models that include, but we do not report, controls for $\log(\text{total assets managed by the fund's advisor})$, $\log(\text{fund NAV})$, a dummy for missing NAV, $\log(\text{fund age})$, returns, standard deviations, liquidity β , style-period effects, domicile-period effects, and constants. Columns two and four also include fund fixed effects. Standard errors are clustered by fund, and Z-scores are reported in square brackets. The symbols *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively.

| | Include Anticipation | | Start at Passage | | Start at Effective Date | |
|----------------------------|-------------------------|-----------|---------------------|-----------|----------------------------|-----------|
| IA-2333 Fund | 0.334*** | | 0.234* | | 0.295** | |
| | [2.63] | | [1.83] | | [2.10] | |
| IA-2333 \times Mandatory | -0.238 | -0.625*** | -0.287* | -0.614*** | -0.267 | -0.711*** |
| | [1.50] | [2.83] | [1.72] | [2.72] | [1.44] | [3.23] |
| Fund Fixed Effects | No | Yes | No | Yes | No | Yes |
| Fund Characteristics | Yes | Yes | Yes | Yes | Yes | Yes |
| Style-Period Effects | Yes | Yes | Yes | Yes | Yes | Yes |
| Domicile-Period Effects | Yes | Yes | Yes | Yes | Yes | Yes |
| Observations | 2,895 | 2,895 | 2,588 | 2,588 | 2,091 | 2,091 |

Internet Appendix Table 2

Summary of Fund Survival

This table reports the percentage of hedge funds that fail to survive for 12, 24, and 36 months after the end of the Mandatory period (December 2006). We define a fund as IA-2333 if the fund's advisor registered in response to the rule change. We define a fund as Baseline if the fund's advisor was required to register prior to the rule change. We define a fund as Deregister if the IA-2333 fund deregistered after the rule was revoked. We define a fund as Remain if the IA-2333 fund voluntarily remained registered after the rule was revoked. The symbols *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively.

| | 12 Month | 24 Month | 30 Month |
|-----------------------|----------|----------|----------|
| Baseline | 0.134 | 0.335 | 0.397 |
| IA-2333 | 0.135 | 0.329 | 0.388 |
| Deregister | 0.166 | 0.358 | 0.397 |
| Remain | 0.124 | 0.319 | 0.385 |
| IA-2333 - Baseline | 0.001 | -0.007 | -0.009 |
| Deregister - Baseline | 0.032 | 0.022 | 0.001 |
| Deregister - Remain | 0.041 | 0.039 | 0.013 |
| Remain - Baseline | -0.009 | -0.016 | -0.012 |

Internet Appendix Table 3

Alternate Return Misreporting Measure: Bollen and Pool's F -score

The dependent variable is an indicator variable equal to one if the F -score calculated from Bollen and Pool (2012) is above the 95th percentile of sample funds. The F -score is calculate using flags for maximum adjusted R-squared, kink, low index β , AR(1), CAR(1), number of zero returns, uniformity of the distribution in a funds last digit of returns, frequency of repeat returns, strings of repeated returns, return, volatility, and size. IA-2333 Fund is an indicator variable equal to one if the fund's advisor registered in response to the rule change. Mandatory is equal to one if the period is July 2004 to December 2006. The base period is January 2002 to June 2004. In column one, we estimate a logit model. The model includes, but we do not report, controls for log(total assets managed by the fund's advisor), log(fund NAV), a dummy for missing NAV, log (fund age), returns, standard deviations, liquidity β , style-period effects, domicile-period effects, and constants. Standard errors are clustered by fund. In column two, we include fund fixed effects in addition to the control variables used in column one. Z -scores are reported in square brackets. The symbols *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively.

| | (1) | (2) |
|----------------------------|--------------------|---------------------|
| IA-2333 Fund | 0.759*** [2.84] | |
| IA-2333 \times Mandatory | -0.690** [2.14] | -3.408*** [2.97] |
| Fund Fixed Effects | No | Yes |
| Fund Characteristics | Yes | Yes |
| Style-Period Effects | Yes | Yes |
| Domicile-Period Effects | Yes | Yes |
| Observations | 2,796 | 2,796 |

Internet Appendix Table 4

Count Models of Return Misreporting Flags

The dependent variable is the number of return misreporting flags. IA-2333 Fund is an indicator variable equal to one if the fund's advisor registered in response to the rule change. Mandatory is equal to one if the period is July 2004 to December 2006. The base period is January 2002 to June 2004. In column one, we estimate a Poisson model. The model includes, but we do not report, controls for log(total assets managed by the fund's advisor), log(fund NAV), a dummy for missing NAV, log (fund age), returns, standard deviations, liquidity β , style-period effects, domicile-period effects, and constants. Standard errors are clustered by fund. In column two, we estimate a conditional Poisson model, and the specification includes fund fixed effects in addition to the control variables used in column one. Z -scores are reported in square brackets. The symbols *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively.

| | (1) | (2) |
|----------------------------|---------------------|---------------------|
| IA-2333 Fund | 0.268*** [3.59] | |
| IA-2333 \times Mandatory | -0.392*** [3.94] | -0.513*** [4.28] |
| Fund Fixed Effects | No | Yes |
| Fund Characteristics | Yes | Yes |
| Style-Period Effects | Yes | Yes |
| Domicile-Period Effects | Yes | Yes |
| Observations | 2,796 | 2,796 |

Internet Appendix Table 5

Additional Summary Statistics of Return Misreporting Flags

This table reports the frequency of the return misreporting flags by registration status during the Pre-Mandatory period (January 2002 to June 2004). In Panel A, we compare IA-2333 funds that deregistered after Rule IA-2333 was revoked (Deregister) and those funds whose advisor was already registered (Baseline). In Panel B, we compare IA-2333 funds that remained registered after Rule IA-2333 was revoked (Remain) and those funds whose advisor was already required to register (Baseline). In Panel C, the sample excludes funds that were required to register in the Pre-Mandatory period. Averages are reported separately for funds that registered in response to Rule IA-2333 (IA-2333) and for those that were already registered because they chose to voluntarily forgo the exemption (Voluntary). In Panel D, IA-2333 funds are compared to foreign funds. Foreign is equal to one if the fund's advisor never registered with the SEC and is located outside of the U.S. and the fund is not domiciled in the U.S. Low Max R^2 equals one if the maximum adjusted- R^2 from regressions on all possible subsets of the Fung and Hsieh (2001) factors is below the 95th percentile of a fund-specific bootstrap simulation [see Bollen and Pool (2012)] for details. Low Index β equals one if the coefficient from a regression of the fund's returns on its style index is not significant. Kink equals one if the fund's returns exhibit a significant discontinuity at zero. December Return equals one if the fund exhibits a significant positive December return spike. December Residual equals one if the coefficient on the December indicator is significant when we regress the fund's returns on Fung and Hsieh's (2001) seven-factor model and an indicator variable for the month of December. Any Misreporting equals one if the fund triggers any of the return misreporting flags. The symbols *, **, and *** denote significance at the 10%, 5%, and 1% levels based on Fisher's exact test.

Panel A: Deregister Funds

| | Deregister | Baseline | Difference |
|-------------------|------------|----------|------------|
| Low Max R^2 | 0.093 | 0.074 | 0.019* |
| Low Index β | 0.225 | 0.157 | 0.068** |
| Kink | 0.147 | 0.126 | 0.022 |
| Dec Return | 0.124 | 0.100 | 0.024 |
| Dec Residual | 0.217 | 0.171 | 0.046 |
| Any Misreporting | 0.543 | 0.456 | 0.086** |

Panel B: Remain Funds

| | Remain | Baseline | Difference |
|-------------------|--------|----------|------------|
| Low Max R^2 | 0.125 | 0.074 | 0.051*** |
| Low Index β | 0.199 | 0.157 | 0.043 |
| Kink | 0.106 | 0.126 | -0.020 |
| Dec Return | 0.131 | 0.100 | 0.031* |
| Dec Residual | 0.178 | 0.171 | 0.006 |
| Any Misreporting | 0.474 | 0.456 | 0.017 |

| Panel C: Voluntary Funds | | | |
|-------------------------------|---------|-----------|------------|
| | IA-2333 | Voluntary | Difference |
| Low Max R^2 | 0.116 | 0.066 | 0.049** |
| Low Index β | 0.207 | 0.151 | 0.055** |
| Kink | 0.118 | 0.129 | -0.012 |
| Dec Return | 0.129 | 0.076 | 0.053** |
| Dec Residual | 0.189 | 0.142 | 0.047 |
| Any Misreporting | 0.493 | 0.423 | 0.071** |
| Panel D: Foreign Funds | | | |
| | IA-2333 | Foreign | Difference |
| Low Max R^2 | 0.116 | 0.122 | -0.006 |
| Low Index β | 0.207 | 0.217 | -0.010 |
| Kink | 0.118 | 0.098 | 0.020 |
| Dec Return | 0.129 | 0.125 | 0.004 |
| Dec Residual | 0.189 | 0.149 | 0.040 |
| Any Misreporting | 0.493 | 0.491 | 0.002 |
| Hotelling T^2 (p -value) | | | 0.360 |

Internet Appendix Table 6

Summary Statistics of Return Misreporting Flags: Sensitivities to Cutoff

This table reports the frequency of the return misreporting flags by registration status during the Pre-Mandatory period (January 2002 to June 2004) using alternate versions of the misreporting flag based on individual misreporting flags that are triggered by a 1% (instead of 5%) significance level. We define a fund as IA-2333 if the fund's advisor registered in response to the rule change. We define a fund as Baseline if the fund's advisor was required to register prior to the rule change. The symbols ** and *** denote significance at the 5% and 1% levels based on Fisher's exact test.

| | 5% Threshold | 1% Threshold |
|--------------------|--------------|--------------|
| IA-2333 | 49.3% | 29.1% |
| Baseline | 45.6% | 23.4% |
| IA-2333 - Baseline | 3.7%** | 5.7%** |

Internet Appendix Table 7

Return Misreporting Flags Sensitivity Regressions

This table reports regressions using misreporting flags that are triggered by a 1% (instead of 5%) significance level. The dependent variable equals one if the fund triggers any of the return misreporting flags. IA-2333 Fund is an indicator variable equal to one if the fund's advisor registered in response to the rule change. Mandatory is equal to one if the period is July 2004 to December 2006. The base period is January 2002 to June 2004. We estimate logit models that include, but we do not report, controls for log(total assets managed by the fund's advisor), log(fund NAV), a dummy for missing NAV, log (fund age), returns, standard deviations, liquidity β , style-period effects, domicile-period effects, and constants. Column two also includes fund fixed effects. Standard errors are clustered by fund, and Z-scores are reported in square brackets. The symbols *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively.

| | (1) | (2) |
|----------------------------|--------------------|--------------------|
| IA-2333 Fund | 0.440*** [3.05] | |
| IA-2333 \times Mandatory | -0.329* [1.78] | -0.593** [2.24] |
| Fund Fixed Effects | No | Yes |
| Fund Characteristics | Yes | Yes |
| Style-Period Effects | Yes | Yes |
| Domicile-Period Effects | Yes | Yes |
| Observations | 2,796 | 2,796 |

Internet Appendix Table 8

Linear Models of Return Misreporting and the Introduction of Rule IA-2333

The dependent variable is the return misreporting flag listed at the top of the column. IA-2333 Fund is an indicator variable equal to one if the fund's advisor registered in response to the rule change. Mandatory is equal to one if the period is July 2004 to December 2006. The base period is January 2002 to June 2004. Panel A reports linear regression models. The model includes, but we do not report, controls for log(total assets managed by the fund's advisor), log(fund NAV), a dummy for missing NAV, log (fund age), returns, standard deviations, liquidity β , style-period effects, domicile-period effects, and constants. Standard errors are clustered by fund. Panel B reports linear models that include fund fixed effects in addition to the control variables used in Panel A. Table 4 shows results for corresponding specifications using logit models. t -statistics are reported in square brackets. The symbols *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively.

Panel A: Linear Models

| | Any | Individual Flags | | | | |
|----------------------------|--------------------|---------------------|---------------------|-----------------|---------------------|--------------------|
| | Misreporting Flag | Low Max R^2 | Low Index β | Kink | Dec Return | Dec Residual |
| IA-2333 Fund | 0.063** [2.13] | 0.045** [2.43] | 0.056** [2.50] | 0.002 [0.12] | 0.037** [1.97] | 0.031 [1.38] |
| IA-2333 \times Mandatory | -0.084** [2.17] | -0.066*** [2.94] | -0.064*** [2.65] | 0.005 [0.20] | -0.073*** [2.72] | -0.060** [1.99] |
| Fund Characteristics | Yes | Yes | Yes | Yes | Yes | Yes |
| Style-Period Effects | Yes | Yes | Yes | Yes | Yes | Yes |
| Domicile-Period Effects | Yes | Yes | Yes | Yes | Yes | Yes |
| Observations | 2,796 | 2,796 | 2,796 | 2,796 | 2,796 | 2,796 |

Panel B: Linear Models with Fund Fixed Effects

| | Any | Individual Flags | | | | |
|----------------------------|---------------------|---------------------|---------------------|------------------|---------------------|--------------------|
| | Misreporting Flag | Low Max R^2 | Low Index β | Kink | Dec Return | Dec Residual |
| IA-2333 \times Mandatory | -0.141*** [3.15] | -0.074*** [2.96] | -0.097*** [4.11] | -0.005 [0.19] | -0.098*** [3.03] | -0.078** [2.18] |
| Fund Fixed Effects | Yes | Yes | Yes | Yes | Yes | Yes |
| Fund Characteristics | Yes | Yes | Yes | Yes | Yes | Yes |
| Style-Period Effects | Yes | Yes | Yes | Yes | Yes | Yes |
| Domicile-Period Effects | Yes | Yes | Yes | Yes | Yes | Yes |
| Observations | 2,796 | 2,796 | 2,796 | 2,796 | 2,796 | 2,796 |

Internet Appendix Table 9

Linear Models of Return Misreporting, Registration, and Deregistration

The dependent variable is the return misreporting flag listed at the top of the column. Deregister is an indicator variable equal to one for IA-2333 funds that deregistered after the rule was revoked. Remain is an indicator variable equal to one for IA-2333 funds that voluntarily remained registered after the rule was revoked. Mandatory is equal to one if the period is July 2004 to December 2006. Post-Mandatory is equal to one if the period is January 2007 to June 2009. The base period is January 2002 to June 2004. The model includes, but we do not report, controls for log(total assets managed by the fund's advisor), log(fund NAV), a dummy for missing NAV, log (fund age), returns, standard deviations, liquidity β , style-period effects, domicile-period effects, and constants. Standard errors are clustered by fund. In the first column, we estimate a linear regression model. In the second column, we estimate a linear model that includes fund fixed effects in addition to the control variables used in column one. Table 5 shows results for corresponding specifications using logit models. *t*-statistics are reported in square brackets. The symbols *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively.

| | (1) | (2) |
|------------------------------------|---------------------|---------------------|
| Deregister | 0.114** [2.38] | |
| Remain | 0.028 [0.86] | |
| Deregister \times Mandatory | -0.167*** [2.66] | -0.192*** [2.78] |
| Deregister \times Post-Mandatory | -0.093 [1.45] | -0.084 [1.07] |
| Remain \times Mandatory | -0.049 [1.15] | -0.094* [1.95] |
| Remain \times Post-Mandatory | -0.012 [0.29] | -0.047 [0.92] |
| Fund Fixed Effects | No | Yes |
| Fund Characteristics | Yes | Yes |
| Style-Period Effects | Yes | Yes |
| Domicile-Period Effects | Yes | Yes |
| Observations | 4,072 | 4,072 |

Internet Appendix Table 10

Propensity Score Matching

The table reports average treatment effects from using propensity score matching IA-2333 funds to control funds on fund and advisor characteristics. The propensity score is calculated using a logit regressions of an indicator variable equal to one if the fund's advisor registered in response to Rule IA-2333 on log(total assets managed by the fund's advisor), log(fund NAV), and a dummy for missing NAV, log (fund age), returns, standard deviations, liquidity β , fund style, fund domicile, a dummy for advisor's with 75% or more hedge funds clients, advisor's number of funds, advisor age, and U.S. advisor. The matched fund is selected among control funds using nearest neighbor matching, and the significance tests are based on standard errors calculated as in Abadie and Imbens (2006). The symbols *, ** and *** denote significance at the 10%, 5%, and 1% levels, respectively.

| | Pre-Mandatory | Mandatory |
|----------------|---------------|-----------|
| Average Effect | 0.153*** | 0.037 |
| | [3.01] | [0.99] |

Internet Appendix Table 11

Pooled Return Discontinuity Tests

Following the approach of Jylha (2011), we compare the empirical return distribution of pooled fund returns to a fitted continuous non-parametric distribution to determine the degree of return discontinuity around zero. We define a fund as IA-2333 if the fund's advisor registered in response to the rule change. We define a fund as Baseline if the fund's advisor was required to register prior to the rule change. Pre-Mandatory is equal to one if the period is January 2002 to June 2004. Mandatory is equal to one if the period is July 2004 to December 2006. We pool returns by registration status and period. Z-scores are reported in square brackets. The symbols *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively.

| | Pre-Mandatory | Mandatory |
|--------------------|--------------------|-------------------|
| IA-2333 | 15.5%*** [7.31] | 8.9%*** [4.45] |
| Baseline | 8.2%*** [4.79] | 6.2%*** [3.57] |
| IA-2333 - Baseline | 7.4%*** [2.70] | 2.7% [1.03] |

Internet Appendix Table 12

Additional Summary Statistics of Hedge Fund Advisors

This table presents summary statistics for hedge fund investment advisors in the merged ADV-TASS-BarclayHedge sample. In Panel A, the sample includes IA-2333 funds and those funds that voluntarily registered in the Pre-Mandatory period. Averages are reported separately for funds that registered in response to Rule IA-2333 (IA-2333) and for those that were already registered because they chose to voluntarily forgo the exemption (Voluntary). In Panel B, the sample includes only IA-2333 funds, and divides the sample into those that deregistered after Rule IA-2333 was revoked (Deregister) and those that did not (Remain). All values are as of February 2006. U.S. Advisor equals one if the advisor's principal office and place of business is in the United States. Advisor Age is the advisor's age in years. Advisor Total AUM is the total assets under management for the investment advisor, including non-hedge fund assets. Primarily Hedge Fund equals one if 75% or more of the advisor's clients are hedge funds. The symbols ** and *** denote significance at the 5% and 1% levels based on Welch's *t*-test.

Panel A: IA-2333 versus Voluntary

| | IA-2333 | Voluntary | Difference |
|---------------------------|---------|-----------|------------|
| Advisors | 341 | 186 | |
| U.S. Advisor | 0.664 | 0.894 | -0.229*** |
| Advisor Age (years) | 6.7 | 7.4 | -0.8** |
| Advisor Total AUM (\$mil) | 806.3 | 705.7 | 100.6 |
| Primarily Hedge Fund | 0.708 | 1.000 | -0.292 |

Panel B: IA-2333 Registrants

| | Deregister | Remain | Difference |
|---------------------------|------------|--------|------------|
| Advisors | 100 | 241 | |
| U.S. Advisor | 0.628 | 0.679 | -0.052 |
| Advisor Age (years) | 6.8 | 6.6 | 0.2 |
| Advisor Total AUM (\$mil) | 511.4 | 927.7 | -416.22* |
| Primarily Hedge Fund | 0.744 | 0.694 | 0.05 |

Internet Appendix Table 13

Additional Summary Statistics of Hedge Funds

This table summarizes fund characteristics of various subsamples of funds. In Panel A, the sample excludes funds that were required to register in the Pre-Mandatory period. Averages are reported separately for funds that registered in response to Rule IA-2333 (IA-2333) and for those that were already registered because they chose to voluntarily forgo the exemption (Voluntary). In Panel B, the sample includes only IA-2333 funds, and divides the sample into those that deregistered after Rule IA-2333 was revoked (Deregister) and those that did not (Remain). In Panel C, IA-2333 funds are compared to foreign funds. Foreign is equal to one if the fund's advisor never registered with the SEC and is located outside of the U.S. and the fund is not domiciled in the U.S. U.S. Domiciled equals one if the fund is domiciled in the United States. Fund NAV is the net asset value of the funds in millions. Fund Age is the fund age in years. Alpha is the estimated monthly alpha from the Fung and Hsieh (2001) seven-factor model. Liquidity β is the loading on the liquidity risk factor of Sadka (2010) in the augmented Fung and Hsieh (2001) model. Flows is quarterly imputed flows. There is one observation per fund, and values are for the Pre-Mandatory period (January 2002 to June 2004). The symbols ** and *** denote significance at the 5% and 1% levels based on Welch's t -test.

Panel A: IA-2333 versus Voluntary

| | IA-2333 | Voluntary | Difference |
|--------------------|---------|-----------|------------|
| Funds | 650 | 378 | |
| U.S. Domiciled | 0.344 | 0.543 | -0.198*** |
| Fund NAV (\$mil) | 104.3 | 133.4 | -29.1 |
| Fund Age (years) | 5.3 | 5.8 | -0.5** |
| Return | 0.009 | 0.007 | 0.002*** |
| Standard Deviation | 0.029 | 0.027 | 0.002 |
| Alpha | 0.007 | 0.005 | 0.002*** |
| Liquidity β | 0.013 | -0.011 | 0.024*** |
| Flows | 0.027 | -0.006 | 0.033*** |

Panel B: Funds from IA-2333 Registrants

| | Deregister | Remain | Difference |
|--------------------|------------|--------|------------|
| Funds | 183 | 467 | |
| U.S. Domiciled | 0.372 | 0.333 | 0.039 |
| Fund NAV (\$mil) | 113.3 | 100.6 | 12.7 |
| Fund Age (years) | 5.3 | 5.2 | 0.1 |
| Return | 0.012 | 0.008 | 0.004*** |
| Standard Deviation | 0.036 | 0.026 | 0.010*** |
| Alpha | 0.010 | 0.007 | 0.003*** |
| Liquidity β | 0.025 | 0.008 | 0.018 |
| Flows | 0.025 | 0.027 | -0.002 |

| Panel C: Foreign Funds | | | | |
|------------------------|---------|---------|------------|--|
| | IA-2333 | Foreign | Difference | |
| Funds | 650 | 515 | | |
| U.S. Domiciled | 0.344 | 0.000 | 0.344*** | |
| Fund NAV (\$mil) | 104.3 | 138.5 | -34.2 | |
| Fund Age (years) | 5.3 | 4.9 | 0.4 | |
| Return | 0.009 | 0.008 | 0.001 | |
| Standard Deviation | 0.029 | 0.026 | 0.003 | |
| Alpha | 0.007 | 0.007 | 0.001 | |
| Liquidity β | 0.013 | 0.011 | 0.002 | |
| Flows | 0.027 | 0.015 | 0.012 | |

Internet Appendix Table 14

Stock Holdings Characteristics

The dependent variable in this table is the 13F stock holdings characteristics at the top of each column. Bid-Ask spread is the CRSP bid-ask spread (ask price minus bid price) divided by the price (last trade price or bid-ask midpoint). Amihud measure is the Amihud (2002) liquidity measure; High values indicate less liquidity. Market Cap is the natural logarithm of market cap. Option Percent is the percentage of total 13F holdings that are option securities. Unmatched Percent is the percentage of total 13F holdings that do not match to the holdings in the CRSP database. The unit of observation is the fund-period. For each firm that files a 13F, we take the value weighted average of the characteristics of the stocks listed in the report. Then we take an equal weighted average across all of the reports filed during the period. Only a subset of the main sample file a 13F. The final column reports the χ^2 test of joint significance of the individual factors. IA-2333 Fund is an indicator variable equal to one if the fund's advisor registered in response to the rule change. Mandatory is equal to one if the period is July 2004 to December 2006. The base period is January 2002 to June 2004. The model includes, but we do not report, controls for returns, standard deviation, age, net asset value, advisor assets under management, advisor location, style-period fixed effects, domicile-period fixed effects, fund fixed effects and constants. Standard errors are clustered by fund. *t*-statistics are reported in square brackets. The symbols *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively.

| | Bid-Ask Spread | Amihud Measure | Market Cap | Option Percent | Unmatched Percent | χ^2 |
|----------------------------|-------------------|-------------------|------------------|-------------------|----------------------|------------------|
| IA-2333 \times Mandatory | 0.004** [2.16] | -0.001 [0.25] | -0.011 [0.07] | 0.002 [0.10] | 0.084*** [3.10] | 11.81** 0.038 |
| Fund Fixed Effects | Yes | Yes | Yes | Yes | Yes | |
| Fund Characteristics | Yes | Yes | Yes | Yes | Yes | |
| Style-Period Effects | Yes | Yes | Yes | Yes | Yes | |
| Domicile-Period Effects | Yes | Yes | Yes | Yes | Yes | |
| Observations | 983 | 983 | 983 | 983 | 983 | |

Internet Appendix Table 15

Hedge Fund Alphas, Fees, and Regulation

Panels A reports estimates from regressions in which the dependent variables are the fund-period alphas calculated using the Fung and Hsieh (2001) model. In Panel A, the sample includes the 30 month periods before and after the introduction of Rule IA-2333. IA-2333 Fund is equal to one if the fund's advisor registered in response to the rule change. Mandatory is equal to one if the period is July 2004 to December 2006. The base period is January 2002 to June 2004. Controls for log(age), log(net asset value), and log(advisor total AUM), style-period fixed effects, domicile, advisor location and constants are included but not reported. In column two, we also include fund fixed effects. Panel B reports estimates from cross-sectional regressions where the dependent variables are the fees charged by the hedge fund. We include, but do not report, returns, standard deviation, age, net asset value, advisor assets under management, advisor location, style-period fixed effects, domicile-period fixed effects, and constants. Standard errors are clustered by fund, and t -statistics are reported in square brackets. The symbols *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively.

| Panel A: Hedge Fund Regulation and Alphas | | |
|---|--------|--------|
| | (1) | (2) |
| IA-2333 Fund | 0.000* | |
| | [1.81] | |
| IA-2333 \times Mandatory | 0.001 | 0.000 |
| | [1.53] | [1.10] |
| Fund Fixed Effects | No | Yes |
| Fund Characteristics | Yes | Yes |
| Style-Period Effects | Yes | Yes |
| Domicile-Period Effects | Yes | Yes |
| Observations | 2,796 | 2,796 |

| Panel B: Hedge Fund Regulation and Fees | | |
|---|-----------|---------------|
| | Mgmt. Fee | Incentive Fee |
| IA-2333 Fund | 0.104*** | 1.229*** |
| | [3.02] | [3.01] |
| Fund Characteristics | Yes | Yes |
| Observations | 1,533 | 1,533 |

Internet Appendix Table 16

Hedge Fund Flows and Registration

This table contains regressions of hedge fund flows on past performance. For the Pre-Mandatory (January 2002 to June 2004), Mandatory (July 2004 to December 2006) and Post-Mandatory (January 2007 to June 2009) periods, quarterly flows are regressed on funds' lagged fractional performance rankings over low, medium, and high performance ranges. Net flows are defined as the percentage change in net assets of the fund between the beginning and end of the quarter, net of quarterly returns. Fractional ranks of lagged performance are divided into terciles (Low, Mid, and High Performance). Following Ding, Getmansky, Liang, and Wermers (2009), we include controls for standard deviation, open to public, high water mark, leverage, management and performance fees, lockup, redemption period, subscription period, and fund size. The performance terciles are interacted with Deregister which is an indicator variable equal to one for IA-2333 funds that deregistered after the rule was revoked and Remain which is an indicator variable equal to one for IA-2333 funds that voluntarily remained registered after the rule was revoked. Column (2) includes fund fixed effects. Standard errors are clustered by fund. *t*-statistics are reported in square brackets. The symbols *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively.

| | | |
|---|-----------|-----------|
| Deregister | -0.062** | |
| | [2.03] | |
| Deregister \times Mandatory | 0.099*** | 0.097** |
| | [2.69] | [2.53] |
| Deregister \times Post-Mandatory | -0.005 | 0.029 |
| | [0.16] | [0.77] |
| Remain | -0.052** | |
| | [2.36] | |
| Remain \times Mandatory | 0.068** | 0.069** |
| | [2.14] | [2.06] |
| Remain \times Post-Mandatory | 0.069** | 0.055 |
| | [2.23] | [1.53] |
| Low Performance | 0.303*** | 0.253*** |
| | [10.65] | [9.00] |
| Low Performance \times Deregister | 0.351** | 0.394*** |
| | [2.39] | [2.85] |
| Low Performance \times Deregister \times Mandatory | -0.509*** | -0.509*** |
| | [3.19] | [3.21] |
| Low Performance \times Deregister \times Post-Mandatory | -0.157 | -0.090 |
| | [0.93] | [0.53] |
| Low Performance \times Remain | 0.154 | 0.198* |
| | [1.53] | [1.89] |
| Low Performance \times Remain \times Mandatory | -0.251* | -0.322** |
| | [1.91] | [2.38] |
| Low Performance \times Remain \times Post-Mandatory | -0.275** | -0.193 |
| | [2.38] | [1.37] |

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| | | |
|--|-----------|-----------|
| Mid Performance | 0.054** | 0.020 |
| | [2.38] | [0.95] |
| Mid Performance \times Deregister | -0.273** | -0.306*** |
| | [2.48] | [2.79] |
| Mid Performance \times Deregister \times Mandatory | 0.133 | 0.244** |
| | [1.08] | [1.99] |
| Mid Performance \times Deregister \times Post-Mandatory | 0.139 | 0.156 |
| | [0.96] | [1.06] |
| Mid Performance \times Remain | 0.063 | -0.032 |
| | [0.72] | [0.35] |
| Mid Performance \times Remain \times Mandatory | -0.007 | 0.090 |
| | [0.07] | [0.87] |
| Mid Performance \times Remain \times Post-Mandatory | -0.032 | 0.042 |
| | [0.30] | [0.39] |
| High Performance | 0.350*** | 0.332*** |
| | [10.66] | [10.14] |
| High Performance \times Deregister | 0.342** | 0.061 |
| | [2.45] | [0.44] |
| High Performance \times Deregister \times Mandatory | 0.339** | 0.083 |
| | [2.43] | [0.61] |
| High Performance \times Deregister \times Post-Mandatory | 0.043 | 0.235 |
| | [0.21] | [1.06] |
| High Performance \times Remain | 0.136 | -0.024 |
| | [1.14] | [0.19] |
| High Performance \times Remain \times Mandatory | -0.011 | 0.014 |
| | [0.80] | [0.10] |
| High Performance \times Remain \times Post-Mandatory | 0.014 | 0.114 |
| | [0.10] | [0.74] |
| Mandatory | -0.049*** | -0.036*** |
| | [7.65] | [5.01] |
| Post-Mandatory | -0.085*** | -0.080*** |
| | [12.15] | [7.96] |
| Fund Control Variables | Yes | Yes |
| Fund Fixed Effects | No | Yes |
| Observations | 24,907 | 24,907 |