

Yesterday's Heroes: Compensation and Creative Risk-Taking

Online Appendix

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September 2013

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This Online Appendix provides additional analyses that supplement the paper.

- Table A1 examines whether the persistence of residual compensation is an artifact of linearity by tabulating the average residual compensation in year $t+1$ sorted by residual compensation in year t . It also examines whether the persistence of residual compensation holds within firms who experienced CEO turnover and those that did not, as well as within the top and lowest deciles of excess return performance. These values underlie Figure 2 in the paper, discussed in Section III.B.
- Table A2 examines whether residual compensation is related to deciles of origin risk. It is analogous to Table 4, Panel B in the main text, discussed in Section III.C, but with origin risk.
- Table A3 examines both the persistence of risk and how risk is related to productivity. It tabulates the average residual risk and productivity in year $t+1$ by deciles of risk in year t . The former is a non-parametric analog of Table 3, Panel B in the paper, discussed in Section III.B and plotted in Figure 3. The latter is the analog of Table 6, discussed in Section III.E, and plotted in Figure 5.
- Table A4 examines how compensation is related to leverage as a risk variable, as discussed in Section III.D.
- Table A5 examines how our main results vary by sub-industry, as discussed in Section III.D.
- Table A6 examines how components of pay as a fraction of total pay vary with origin risk, as discussed in Section III.F, and is the analog of Table 7, but using origin risk.

Table A1: Compensation Persistence

This table reports average residual compensation in year $t+1$ based on a sort of residual compensation in year t . Column 1 is an unconditional sort, while Columns 2-3 report results from a two-way independent sort on residual compensation and CEO turnover in year t . Columns 4-5 report results from a two-way independent sort on residual compensation and excess returns in year t . T-statistics are reported in brackets. Standard errors are clustered at the firm level. ***/*** indicate statistical significance at the 10, 5, and 1% levels, respectively.

Average Residual Compensation, $t+1$					
Residual Compensation Decile, t	CEO Turnover at t			Excess Returns in t	
	One-way (1)	No (2)	Yes (3)	Decile 1 (4)	Decile 10 (5)
1	-0.699 [-5.28]***	-0.709 [-5.11]***	-0.531 [-4.96]***	-0.545 [-3.67]***	-0.447 [-2.40]**
2	-0.404 [-14.11]***	-0.403 [-13.32]***	-0.413 [-4.05]***	-0.349 [-3.02]***	-0.402 [-3.65]***
3	-0.258 [-9.87]***	-0.267 [-10.32]***	0.054 [0.30]	-0.161 [-1.43]	-0.331 [-4.28]***
4	-0.178 [-6.35]***	-0.165 [-5.90]***	-0.351 [-3.02]***	-0.125 [-1.29]	-0.080 [-1.14]
5	-0.075 [-3.20]***	-0.072 [-3.04]***	-0.111 [-1.21]	-0.183 [-2.55]**	-0.016 [-0.29]
6	0.059 [2.10]**	0.061 [2.22]**	0.028 [0.22]	-0.097 [-0.99]	0.192 [2.22]**
7	0.138 [5.77]***	0.150 [6.14]***	-0.001 [-0.02]	0.000 [-0.00]	0.172 [2.74]**
8	0.285 [8.00]***	0.296 [7.90]***	0.136 [2.70]**	0.121 [0.69]	0.320 [2.41]**
9	0.419 [12.05]***	0.425 [11.97]***	0.327 [3.04]**	0.481 [3.35]***	0.457 [5.77]***
10	0.779 [12.82]***	0.799 [12.39]***	0.621 [6.05]***	0.557 [4.77]***	0.965 [9.20]***
10-1 Spread	1.478 [9.99]***	1.507 [9.68]***	1.153 [7.79]***	1.101 [5.84]***	1.412 [6.63]***
DID		-0.355 [-1.77]*		0.311 [1.24]	

Table A2: Origin Risk and Compensation

This table reports average compensation and ownership in year $t+1$ based on a cross-sectional sort of origin risk in year t . All variables are computed as residuals net of interacted sub-industry and size effects within each year. T-statistics are reported in brackets. Standard errors are clustered at the firm level. */**/** indicate statistical significance at the 10, 5, and 1% levels, respectively.

Residual Risk Ranking, t	Origin Beta		Origin Volatility	
	Residual Compensation, $t+1$	Residual Ownership, $t+1$	Residual Compensation, $t+1$	Residual Ownership, $t+1$
1	-0.001 [-0.02]	-0.007 [-0.68]	-0.203 [-3.04]***	-0.014 [-2.09]**
2	-0.145 [-2.68]**	-0.003 [-0.34]	-0.009 [-0.13]	-0.013 [-2.03]**
3	-0.054 [-0.68]	-0.017 [-2.92]***	-0.001 [-0.01]	-0.018 [-3.61]***
4	-0.090 [-1.49]	-0.020 [-4.30]***	0.056 [0.81]	-0.005 [-0.40]
5	0.012 [0.19]	-0.009 [-1.59]	0.048 [0.76]	-0.014 [-2.78]***
6	0.048 [0.51]	-0.005 [-0.99]	0.035 [0.51]	-0.013 [-3.27]***
7	0.115 [1.57]	-0.005 [-0.62]	-0.033 [-0.36]	0.005 [0.34]
8	0.135 [1.81]*	0.022 [1.82]*	0.029 [0.28]	0.018 [1.26]
9	0.073 [0.64]	0.015 [1.05]	0.217 [2.57]**	0.032 [1.88]*
10	0.403 [4.13]***	0.026 [1.57]	0.341 [4.52]***	0.016 [1.46]
10-1 Spread	0.405 [3.39]***	0.033 [1.70]*	0.545 [5.43]***	0.030 [2.36]**

Table A3: Risk Persistence and Productivity

This table reports average risk and productivity in year $t+1$ based on a cross-sectional sort of risk in year t . All variables are computed as residuals net of interacted sub-industry and size effects within each year. Panel A sorts by beta while Panel B sorts by volatility. Panel C sorts by origin beta. Panel D sorts by origin volatility. T-statistics are reported in brackets. Standard errors are clustered at the firm level. ***/** indicate statistical significance at the 10, 5, and 1% levels, respectively.

Panel A: Sorted by Beta Residuals				
Beta Residuals Decile, t	Beta Residuals, $t+1$	Return on Assets Residuals, $t+1$	Revenue / Assets Residuals, $t+1$	TFP Percentile Ranking - 50, $t+1$
1	-0.284 [-12.57]***	0.001 [0.83]	-0.008 [-0.94]	-0.028 [-0.72]
2	-0.192 [-12.99]***	-0.001 [-0.85]	-0.009 [-1.37]	0.007 [0.26]
3	-0.117 [-8.57]***	-0.002 [-1.42]	-0.015 [-2.53]**	-0.021 [-0.74]
4	-0.068 [-4.00]***	-0.004 [-2.95]***	-0.021 [-2.54]**	-0.009 [-0.31]
5	-0.072 [-5.25]***	-0.002 [-1.63]	0.000 [0.04]	-0.012 [-0.42]
6	0.007 [0.51]	-0.001 [-0.67]	-0.015 [-1.61]	-0.020 [-0.65]
7	0.038 [2.26]**	-0.004 [-2.05]**	-0.012 [-1.52]	0.000 [0.00]
8	0.096 [5.95]***	-0.002 [-1.12]	-0.013 [-1.29]	0.000 [-0.01]
9	0.215 [11.89]***	0.001 [0.29]	0.007 [0.58]	0.042 [1.21]
10	0.453 [13.07]***	0.010 [2.15]**	0.079 [3.05]***	0.109 [2.10]**
10-1 Spread	0.737 [17.55]***	0.008 [1.78]*	0.087 [3.22]***	0.136 [2.15]**

Table A3, continued

Panel B: Sorted by Volatility Residuals				
Volatility Residuals Decile, t	Volatility Residuals, $t+1$	Return on Assets Residuals, $t+1$	Revenue / Assets Residuals, $t+1$	TFP Percentile Ranking - 50, $t+1$
1	-0.067 [-11.41]***	-0.003 [-1.90]*	-0.013 [-1.65]	-0.081 [-2.49]**
2	-0.051 [-10.40]***	-0.003 [-2.28]**	-0.016 [-1.71]*	-0.050 [-1.73]*
3	-0.036 [-9.54]***	-0.002 [-1.28]	-0.017 [-3.44]***	-0.011 [-0.45]
4	-0.028 [-8.84]***	-0.002 [-1.22]	-0.017 [-2.28]**	-0.022 [-0.79]
5	-0.009 [-1.73]*	-0.001 [-0.91]	-0.017 [-2.22]**	0.019 [0.72]
6	-0.003 [-0.79]	-0.002 [-1.25]	-0.021 [-3.69]***	-0.003 [-0.10]
7	0.006 [1.28]	0.000 [-0.17]	-0.004 [-0.50]	0.001 [0.04]
8	0.021 [4.08]***	-0.003 [-1.29]	0.003 [0.25]	0.032 [0.85]
9	0.046 [9.06]***	-0.002 [-0.75]	0.014 [1.12]	0.088 [2.17]**
10	0.127 [7.72]***	0.012 [2.66]***	0.083 [3.43]***	0.124 [2.45]**
10-1 Spread	0.194 [11.07]***	0.015 [3.15]***	0.097 [3.79]***	0.205 [3.50]***

Table A3, continued

Panel C: Sorted by Origin Beta Residuals				
Origin Beta Residuals Ranking, t	Beta Residuals, $t+1$	Return on Assets Residuals, $t+1$	Revenue / Assets Residuals, $t+1$	TFP Percentile Ranking - 50, $t+1$
1	-0.106 [-2.27]**	-0.001 [-0.38]	-0.004 [-0.36]	-0.128 [-1.58]
2	-0.068 [-2.23]**	-0.002 [-1.41]	-0.007 [-0.63]	0.013 [0.23]
3	-0.033 [-1.13]	-0.003 [-1.43]	-0.015 [-2.02]**	0.011 [0.27]
4	0.018 [0.57]	-0.004 [-2.48]**	-0.024 [-2.27]**	-0.071 [-1.32]
5	0.009 [0.25]	-0.006 [-3.36]***	-0.032 [-4.16]***	-0.016 [-0.39]
6	0.033 [0.88]	0.001 [0.34]	0.008 [0.45]	-0.016 [-0.30]
7	0.073 [1.71]*	0.004 [1.00]	0.009 [0.30]	-0.022 [-0.38]
8	0.055 [1.35]	-0.001 [-0.34]	-0.003 [-0.12]	0.064 [1.08]
9	0.060 [1.22]	0.004 [0.71]	0.010 [0.48]	0.214 [4.63]***
10	0.347 [5.32]***	0.012 [1.88]*	0.042 [1.35]	0.225 [3.23]***
10-1 Spread	0.453 [5.68]***	0.013 [1.90]*	0.046 [1.40]	0.352 [3.33]***

Table A3, continued

Panel D: Sorted by Origin Volatility Residuals

Origin Volatility Residuals Ranking, t	Volatility Residuals, $t+1$	Return on Assets Residuals, $t+1$	Revenue / Assets Residuals, $t+1$	TFP Percentile Ranking - 50, $t+1$
1	-0.014 [-1.10]	-0.003 [-2.55]**	-0.039 [-7.74]***	-0.134 [-2.62]**
2	-0.016 [-1.50]	-0.008 [-4.11]***	-0.040 [-3.25]***	0.043 [0.82]
3	-0.014 [-1.61]	-0.003 [-1.32]	-0.033 [-3.45]***	0.038 [0.64]
4	-0.009 [-1.23]	0.002 [0.53]	0.009 [0.71]	-0.012 [-0.21]
5	-0.012 [-1.26]	-0.002 [-1.15]	-0.019 [-1.61]	0.026 [0.54]
6	0.008 [0.88]	-0.008 [-2.90]***	-0.032 [-2.00]*	0.043 [0.83]
7	0.006 [0.51]	0.004 [0.69]	0.015 [0.68]	0.073 [1.46]
8	0.015 [1.08]	-0.002 [-0.79]	0.009 [0.55]	0.071 [1.11]
9	0.036 [1.95]*	0.008 [1.73]*	0.057 [2.04]**	0.079 [1.34]
10	0.059 [2.33]**	0.014 [2.21]**	0.056 [1.32]	0.046 [0.41]
10-1 Spread	0.073 [2.60]**	0.017 [2.66]***	0.095 [2.24]**	0.181 [1.48]

Table A4: Leverage as Risk

This table reports results from pooled regressions where the dependent variables are measures of compensation and ownership, and the independent variable is leverage. T-statistics are reported in brackets. Standard errors are clustered at the firm level. */**/** indicate statistical significance at the 10, 5, and 1% levels, respectively.

Dependent variable, <i>t</i>	Leverage	
	Comp.	Ownshp.
Leverage, <i>t-1</i>	0.013 [1.60]	0.000 [0.06]
Constant	3.160 [6.44]***	0.138 [4.21]***
Year, Sub-Ind, Size <i>t</i> Effects	Y	Y
Full interactions	Y	Y
N	2629	2629
R-Squared	0.638	0.102
Economic significance	0.089	0.000
Firms	349	349

Table A5: Results by Sub-Industry

This table reports results from pooled regressions where the dependent variables are measures of compensation, and the independent variables are measures of risk, for different sample compositions. T-statistics are reported in brackets. Standard errors are clustered at the firm level. ***/*** indicate statistical significance at the 10, 5, and 1% levels, respectively.

Dependent variable, t	Exclude Primary Dealers				Exclude Insurers			
	Compensation		Ownership		Compensation		Ownership	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Beta, $t-I$	0.458		0.004		0.484		0.012	
	[5.80]***		[0.43]		[6.96]***		[1.80]*	
Volatility, $t-I$		1.552		0.037		1.710		0.031
		[7.39]***		[1.78]*		[6.98]***		[1.65]
Constant	1.527	1.788	0.111	0.103	2.333	2.595	0.110	0.123
	[4.55]***	[5.99]***	[3.56]***	[4.04]***	[4.62]***	[5.34]***	[3.15]***	[3.99]***
Year, Sub-Ind, Size t								
Effects	Y	Y	Y	Y	Y	Y	Y	Y
Full interactions	Y	Y	Y	Y	Y	Y	Y	Y
N	2460	2460	2460	2460	1999	1999	1999	1999
R-Squared	0.574	0.573	0.093	0.095	0.710	0.711	0.138	0.135
Economic significance	0.247	0.243	0.000	0.055	0.283	0.283	0.084	0.063
Firms	334	334	334	334	276	276	276	276

Banks/BHCs Only				
Dependent variable, t	Compensation		Ownership	
	(9)	(10)	(11)	(12)
Beta, $t-I$	0.429		0.012	
	[6.32]***		[1.64]	
Volatility, $t-I$		1.677		0.031
		[6.96]***		[1.59]
Constant	1.588	1.734	0.094	0.105
	[4.92]***	[5.74]***	[3.20]***	[4.21]***
Year, Sub-Ind, Size t				
Effects	Y	Y	Y	Y
Full interactions	Y	Y	Y	Y
N	1828	1828	1828	1828
R-Squared	0.615	0.623	0.127	0.124
Economic significance	0.255	0.292	0.077	0.063
Firms	261	261	261	261

Table A6: Components of Pay with Origin Risk

This table examines how the components of compensation are related to origin risk variables in the cross-section. The dependent variables examined are salary, bonus, total cash (salary plus bonus), restricted stock grants, and option grants, as a fraction of total compensation, and the independent variables are origin risk measures. T-statistics are reported in brackets. Standard errors are clustered at the firm level. */**/** indicate statistical significance at the 10, 5, and 1% levels, respectively.

Compensation fraction, t	Salary		Bonus		Total Cash		Restricted stock grant		Option grant	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Origin Beta	-0.048 [-2.68]***		0.036 [1.93]*		-0.010 [-0.47]		-0.008 [-0.60]		0.015 [0.71]	
Origin Volatility		-0.126 [-2.82]***		0.138 [3.48]***		0.014 [0.26]		0.000 [0.00]		0.056 [1.23]
Constant	1.069 [7.57]***	1.133 [7.60]***	0.578 [5.07]***	0.496 [4.36]***	1.648 [10.72]***	1.630 [10.38]***	1.679 [1.60]	1.700 [1.61]	-0.290 [-0.79]	-0.324 [-0.94]
Year, Sub-Ind, Size t Effects	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Full interactions	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
N	1744	1744	1744	1744	1744	1744	1352	1352	1352	1352
R-Squared	0.428	0.428	0.236	0.244	0.329	0.328	0.214	0.213	0.230	0.231
Economic significance	0.202	0.184	0.173	0.148	0.045	0.045	0.045	0.032	0.084	0.110
Firms	260	260	260	260	260	260	214	214	214	214