

Internet Appendix

This appendix provides additional tests to supplement ‘The Boss Knows Best: Directors of Research and Subordinate Analysts.’

Table IA.1 presents probit results from the determinants of DORs with the same industry forecasting experience between 1989 and 2008.

Table IA.2 presents robustness tests with changes within brokerage house resources for earnings forecasts, market reactions, investment value of buy/sell recommendations, labor market outcomes and broker trading commissions.

Table IA.3 presents robustness tests with several proxies of subordinate analyst effort for earnings forecasts, market reactions, investment value of buy/sell recommendations, labor market outcomes and broker trading commissions.

Table IA.4 presents results for the association between DOR same industry forecasting experience and subordinate analyst effort.

Table IA.5 presents robustness tests with DOR same industry forecasting experience defined by 6-digit GICS codes for earnings forecasts, market reactions, investment value of buy/sell recommendations, labor market outcomes and broker trading commissions.

Table IA.1 DOR Forecasting experience: Propensity Score analysis

This table presents probit results from the determinants of DORs with the same industry forecasting experience between 1989 and 2008. Information on DORs are obtained from *Nelson Information's Directory of Investment Research* where DORs are defined as domestic research executives holding titles Head of Equity, Head of Equity Research, Head of Research, Director of Equity, Director of Equity Research, and Director of Research. Refer to Appendix B for a detailed description of variables. Analyst data are from *I/B/E/S*. *T*-statistics are in parentheses with heteroskedastic-consistent standard errors. Broker and year fixed effects are included. *, **, and *** indicate statistical significance at the 10%, 5%, and 1%, respectively.

	Model 1
<i>Average Fexp</i>	-16.76** (-2.55)
<i>Average Gexp</i>	3.62 (1.32)
<i>Average Port Size</i>	3.50** (2.32)
<i>Average Port GIC</i>	2.17 (0.48)
<i>Top10</i>	-3.84 (-0.20)
<i>No of All Star</i>	-0.25*** (-2.61)
<i>Average Broker Ind. Specialization</i>	40.14 (1.38)
<i>Average Pin</i>	-35.71 (-1.07)
<i>Average Pout</i>	30.01 (0.94)
<i>Broker Fixed Effects</i>	Yes
<i>Year Fixed Effects</i>	Yes
<i>Adj R²</i>	2.69%
<i>N</i>	1,442

Table IA.2 Robustness: DOR forecasting experience and changes in brokerage house resources

This table presents robustness test results for analyst earnings forecasts, market reactions, investment value of buy/sell recommendations, analyst labor market outcomes and broker trading commissions. (R) denotes non-demeaned variables. Information on DORs are obtained from *Nelson Information's Directory of Investment Research* where DORs are defined as domestic research executives holding titles Head of Equity, Head of Equity Research, Head of Research, Director of Equity, Director of Equity Research, and Director of Research. Refer to Appendix B for a detailed description of variables. Analyst data are from I/B/E/S. Stock price data are obtained from CRSP. *T*-statistics are in parentheses with heteroskedastic-robust standard errors clustered at the analyst level. Broker fixed effects are included in all models. *, **, and *** indicate statistical significance at the 10%, 5%, and 1%, respectively.

	PMAFE	Upgrade CARs	Downgrade CARs	Buy recs	Sell recs	All-Star	Commissions
<i>DOR with analyst experience (same industry)</i>	-3.19*** (-4.27)	0.38*** (3.40)	-0.42*** (-2.95)	0.32*** (3.21)	-0.32*** (-2.78)	63.08*** (3.64)	0.14*** (23.02)
<i>DOR with analyst experience (other industry)</i>	0.50 (0.83)	0.01 (0.12)	0.01 (0.06)	0.02 (0.25)	-0.06 (-0.72)	13.11 (1.34)	0.01 (1.27)
<i>Absolute(EPS change)</i>		6.06*** (17.24)	-4.54*** (-17.13)				
<i>DAge (R)</i>	0.45*** (90.63)	0.00 (0.66)	0.00** (-2.09)				
<i>Size</i>				-0.29*** (-18.69)	0.11*** (6.25)	21.79*** (3.17)	
<i>BM</i>				-0.04 (-1.24)	-0.01 (-0.32)		
<i>DGexp(R)</i>	-0.12** (-2.08)	-0.01 (-0.93)	0.00 (-0.51)	0.00 (0.15)	-0.01 (-1.32)	4.92*** (3.78)	0.00** (2.52)
<i>DFexp(R)</i>	-0.18** (-2.13)	0.00 (0.39)	0.01 (0.70)	0.01* (1.71)	0.00 (0.56)		
<i>DPortsize(R)</i>	0.15*** (3.51)	-0.01* (-1.78)	0.01 (1.45)	0.00 (-0.10)	0.01 (1.33)	8.28*** (6.57)	0.00*** (3.28)
<i>DTop10(R)</i>	-5.49*** (-6.97)	0.32*** (2.86)	-0.30** (-2.20)	0.12 (1.00)	-0.31** (-2.36)		0.09*** (13.48)
<i>DGics(R)</i>	0.51*** (3.00)	0.01 (0.28)	0.04* (1.69)	-0.04*** (-3.39)	-0.01 (-0.77)	-2.33 (-0.44)	
<i>All-star</i>	-2.87*** (-3.94)	0.49*** (5.69)	-0.43*** (-4.19)	0.09 (1.16)	-0.23** (-2.39)	462.92*** (27.42)	0.01*** (35.77)
<i>Affiliated</i>	0.15 (0.30)	-0.11 (-1.37)	-0.53*** (-4.44)	0.08 (1.05)	-0.09 (-0.92)		
<i>Past 6m ret</i>				2.27*** (4.27)	3.31*** (4.32)		
<i>DBroker Ind. Specialization (R)</i>	-0.26 (-0.09)	-0.13 (-0.34)	0.38 (0.86)	0.21 (0.73)	-0.87*** (-2.65)	77.24 (0.45)	0.52*** (33.75)
<i>DPin (R)</i>	-1.72* (-1.65)	0.18 (1.34)	0.13 (0.77)	0.09 (0.79)	-0.11 (-0.89)	173.26*** (3.18)	0.01** (2.54)
<i>DPout (R)</i>	0.51 (0.47)	0.04 (0.25)	-0.07 (-0.38)	-0.16 (-1.35)	-0.02 (-0.19)	-80.87 (-1.35)	-0.02*** (-4.00)
<i>Ln(Freq)</i>	-6.32*** (-14.46)	0.06 (0.84)	-0.01 (-0.11)	0.07 (1.41)	-0.23*** (-3.84)	233.86*** (8.50)	0.02*** (3.35)
<i>No of analysts</i>						1.06** (2.09)	0.00*** (20.77)
<i>PMAFE</i>						-24.92 (-1.12)	-0.01** (-2.25)
<i>Buy Return</i>						2.42	2.76***

						(1.36)	(3.67)
<i>Sell Return</i>						-0.55	-1.55**
						(-0.26)	(-2.41)
<i>No of SEOs</i>							0.06***
							(65.00)
<i>Lag (Broker share)</i>							18.56***
							(602.50)
<i>Change in DBroker Ind.</i>							
<i>Specialization (R)</i>	-2.53	-0.43	-0.16	0.12	-0.06	-8.33	0.19***
	(-1.13)	(-1.41)	(-0.45)	(0.50)	(-0.25)	(-1.44)	(12.34)
<i>Broker Fixed Effects</i>	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<i>Year Fixed Effects</i>	No	Yes	Yes	Yes	Yes	Yes	Yes
<i>Adj R²</i>	19.33%	14.19%	10.56%	0.02%	0.02%	43.84%	15.92%

Table IA.3 Robustness: DOR forecasting experience and additional proxies for subordinate analyst effort

This table presents robustness test results for analyst earnings forecasts, market reactions, investment value of buy/sell recommendations, analyst labor market outcomes and broker trading commissions. (R) denotes non-demeaned variables. Information on DORs are obtained from *Nelson Information's Directory of Investment Research* where DORs are defined as domestic research executives holding titles Head of Equity, Head of Equity Research, Head of Research, Director of Equity, Director of Equity Research, and Director of Research. Refer to Appendix B for a detailed description of variables. Analyst data are from I/B/E/S. Stock price data are obtained from CRSP. *T*-statistics are in parentheses with heteroskedastic-robust standard errors clustered at the analyst level. Broker fixed effects are included in all models. *, **, and *** indicate statistical significance at the 10%, 5%, and 1%, respectively.

	PMAFE	Upgrade CARs	Downgrade CARs	Buy recs	Sell recs	All-Star	Commissions
<i>DOR with analyst experience (same industry)</i>	-3.45*** (-4.37)	0.43*** (3.74)	-0.52*** (-3.53)	0.25** (2.40)	-0.33*** (-2.72)	52.20*** (3.87)	0.14*** (23.43)
<i>DOR with analyst experience (other industry)</i>	0.71 (1.10)	0.06 (0.72)	-0.07 (-0.65)	0.02 (0.30)	-0.03 (-0.35)	7.44 (0.80)	0.01 (1.47)
<i>Absolute(EPS change)</i>		5.77*** (15.96)	-4.55*** (-16.33)				
<i>DAge (R)</i>	0.42*** (81.31)	0.00 (0.66)	0.00 (-1.55)				
<i>Size</i>				-0.30*** (-18.68)	0.09*** (4.71)	13.44* (1.89)	
<i>BM</i>				-0.04 (-1.14)	-0.01 (-0.54)		
<i>DGexp(R)</i>	-0.17*** (-2.81)	0.00 (-0.37)	-0.01 (-0.54)	0.00 (0.32)	0.00 (-0.78)	3.66*** (2.84)	0.00** (1.97)
<i>DFexp(R)</i>	-0.22** (-2.53)	0.00 (-0.40)	0.01 (1.11)	0.01 (1.40)	0.01 (0.65)		
<i>DPortsize(R)</i>	0.22*** (4.74)	-0.01 (-1.19)	0.01 (1.03)	0.00 (-0.90)	0.00 (1.12)	8.29*** (6.48)	0.00** (2.13)
<i>DTop10(R)</i>	-5.89*** (-7.12)	0.40*** (3.44)	-0.31** (-2.17)	0.02 (0.18)	-0.26* (-1.90)		0.10*** (13.90)
<i>DGics(R)</i>	0.37** (2.20)	0.00 (0.00)	0.03 (1.29)	-0.05*** (-3.81)	-0.02 (-1.24)	-0.75 (-0.14)	
<i>All-star</i>	-1.77** (-2.35)	0.53*** (6.01)	-0.47*** (-4.49)	0.07 (0.84)	-0.25*** (-2.71)	474.41*** (26.91)	0.01*** (35.12)
<i>Affiliated</i>	-0.31 (-0.58)	-0.06 (-0.74)	-0.55*** (-4.45)	0.11 (1.29)	-0.06 (-0.66)		
<i>Past 6m ret</i>				1.83*** (3.35)	2.87*** (3.92)		
<i>DBroker Ind. Specialization (R)</i>	-0.93 (-0.40)	-0.17 (-0.54)	0.25 (0.65)	0.40 (1.38)	-0.84*** (-2.66)	10.30 (0.07)	0.45*** (31.25)
<i>DPin (R)</i>	-2.36** (-2.15)	0.14 (1.04)	0.10 (0.59)	0.23* (1.90)	-0.05 (-0.35)	137.53*** (3.24)	0.02*** (3.58)
<i>DPout (R)</i>	1.16 (1.00)	0.06 (0.40)	0.04 (0.19)	-0.17 (-1.34)	-0.09 (-0.63)	26.25 (0.55)	-0.03*** (-4.40)
<i>Ln(Freq)</i>	-4.54*** (-9.43)	0.09 (1.08)	-0.02 (-0.17)	-0.01 (-0.23)	-0.41*** (-6.40)	179.38*** (6.33)	0.00 (0.76)
<i>No of Analysts</i>						1.20** (2.44)	0.00*** (20.40)
<i>PMAFE</i>						0.45 (0.02)	0.00 (0.01)

<i>Buy Return</i>						2.58	2.16***
						(1.36)	(2.74)
<i>Sell Return</i>						-2.43	-1.87***
						(-1.32)	(-2.86)
<i>No of SEOs</i>							0.06***
							(64.17)
<i>Lag (Broker share)</i>							18.54***
							(593.57)
<i>Coverage terminations</i>	11.51***	0.01	-0.05	-0.59***	-0.99***	-250.30***	-0.07***
	(26.15)	(0.11)	(-0.69)	(-8.53)	(-13.98)	(-7.16)	(-12.74)
<i>First mover</i>	0.36	0.31***	-0.26**	0.05	0.04	23.50	-0.01
	(0.62)	(3.72)	(-2.52)	(0.75)	(0.46)	(0.45)	(-1.61)
<i>Analyst portfolio turnover</i>	6.26***	0.18	-0.28	-0.20	-0.08	-6.71	-0.02*
	(6.03)	(1.29)	(-1.54)	(-1.58)	(-0.52)	(-0.18)	(-1.80)
<i>Broker Fixed Effects</i>	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<i>Year Fixed Effects</i>	No	Yes	Yes	Yes	Yes	Yes	Yes
<i>Adj R²</i>	18.65%	14.19%	10.56%	0.02%	0.02%	39.86%	9.96%

Table IA.4 DOR forecasting experience and subordinate analyst effort

This table presents results of analyst effort between 1989 and 2008. The dependent variable is analyst effort as proxied by forecast frequency (Model 1), portfolio turnover (Model 2), coverage terminations (Model 3) and issuance of first forecast (Model 4). OLS (Logistic) regressions are estimated for models 1 and 2 (3 and 4). Information on DORs are obtained from *Nelson Information's Directory of Investment Research* where DORs are defined as domestic research executives holding titles Head of Equity, Head of Equity Research, Head of Research, Director of Equity, Director of Equity Research, and Director of Research. Refer to Appendix B for a detailed description of variables. For brevity, only the coefficient estimates on key variables are presented; all other explanatory variables are suppressed. Analyst data are from *I/B/E/S*. Stock price data are obtained from CRSP. *T*-statistics are in parentheses with heteroskedastic-robust standard errors clustered at the analyst level. Broker fixed effects are included in all models. *, **, and *** indicate statistical significance at the 10%, 5%, and 1%, respectively.

	Forecast Frequency	Portfolio turnover	Coverage Termination	First Forecast
<i>DOR with analyst experience (same industry)</i>	0.63 (0.55)	-0.46 (-0.85)	-0.97 (-0.44)	3.19 (1.00)
<i>Control Variables</i>	Yes	Yes	Yes	Yes
<i>Broker Fixed Effects</i>	Yes	Yes	Yes	Yes
<i>Year Fixed Effects</i>	Yes	Yes	Yes	Yes
<i>Adj R²</i>	33.80%	14.69%	15.68%	14.36%
<i>N</i>	180,538	164,064	180,538	180,538

Table IA.5 DOR Forecasting experience definition 6-digit GICS Codes

This table presents robustness test results for analyst earnings forecasts, market reactions, investment value of buy/sell recommendations, analyst labor market outcomes and broker trading commissions. (R) denotes non-demeaned variables. DORs are obtained from *Nelson Information's Directory of Investment Research* where DORs are defined as domestic research executives holding titles Head of Equity, Head of Equity Research, Head of Research, Director of Equity, Director of Equity Research, and Director of Research. Refer to Appendix B for a detailed description of variables. Analyst data are from I/B/E/S. Stock price data are obtained from CRSP. *T*-statistics are in parentheses with heteroskedastic-robust standard errors clustered at the analyst level. Broker fixed effects are included in all models. *, **, and *** indicate statistical significance at the 10%, 5%, and 1%, respectively.

	PMAFE	Upgrade CARs	Downgrade CARs	Buy recs	Sell recs	All-Star	Commissions
<i>DOR with analyst experience (same industry)</i>	-5.11*** (-5.92)	0.57*** (4.34)	-0.63*** (-3.78)	0.50*** (4.38)	-0.54*** (-3.91)	86.00*** (5.21)	0.20*** (18.85)
<i>DOR with analyst experience (other industry)</i>	0.23 (0.38)	0.08 (0.99)	-0.06 (-0.63)	0.02 (0.30)	-0.05 (-0.61)	7.91 (0.88)	0.01 (0.94)
<i>Absolute(EPS change)</i>		6.07*** (17.28)	-4.54*** (-17.15)				
<i>DAge (R)</i>	0.45*** (90.63)	0.00 (0.66)	0.00** (-2.11)				
<i>Size</i>				-0.29*** (-18.63)	0.11*** (6.28)	21.05*** (3.21)	
<i>BM</i>				-0.04 (-1.26)	-0.01 (-0.39)		
<i>DGexp(R)</i>	-0.12** (-2.09)	-0.01 (-0.92)	0.00 (-0.52)	0.00 (0.15)	-0.01 (-1.35)	4.61*** (3.81)	0.01*** (11.23)
<i>DFexp(R)</i>	-0.18** (-2.16)	0.00 (0.39)	0.01 (0.68)	0.01* (1.68)	0.00 (0.56)		
<i>DPortsize(R)</i>	0.15*** (3.53)	-0.01* (-1.78)	0.01 (1.45)	0.00 (-0.25)	0.01 (1.47)	8.02*** (6.85)	0.00** (1.96)
<i>DTop10(R)</i>	-5.41*** (-6.88)	0.33*** (2.95)	-0.30** (-2.17)	0.12 (1.00)	-0.30** (-2.28)		0.11*** (11.06)
<i>DGics(R)</i>	0.51*** (3.00)	0.01 (0.26)	0.04* (1.71)	-0.04*** (-3.26)	-0.01 (-0.91)	-2.07 (-0.41)	
<i>All-star</i>	-2.87*** (-3.94)	0.49*** (5.73)	-0.43*** (-4.23)	0.10 (1.20)	-0.23** (-2.40)	461.75*** (28.66)	0.02*** (22.93)
<i>Affiliated</i>	0.19 (0.37)	-0.12 (-1.40)	-0.53*** (-4.40)	0.08 (1.02)	-0.09 (-0.92)		
<i>Past 6m ret</i>				2.25*** (4.23)	3.31*** (4.32)		
<i>DBroker Ind. Specialization (R)</i>	-1.92 (-0.88)	-0.37 (-1.25)	0.26 (0.72)	0.21 (0.79)	-0.82*** (-2.61)	-48.59 (-0.32)	0.50*** (21.95)
<i>DPin (R)</i>	-1.93* (-1.86)	0.16 (1.21)	0.11 (0.65)	0.11 (0.96)	-0.13 (-1.03)	103.14*** (2.60)	0.02** (2.03)
<i>DPout (R)</i>	0.63 (0.58)	0.07 (0.50)	-0.07 (-0.37)	-0.17 (-1.44)	-0.02 (-0.18)	10.65 (0.24)	-0.02* (-1.69)
<i>Ln(Freq)</i>	-6.37*** (-14.55)	0.07 (0.85)	-0.01 (-0.14)	0.07 (1.46)	-0.23*** (-3.83)	215.74*** (8.36)	0.07*** (9.51)
<i>No of Analysts</i>						1.19** (2.53)	0.00*** (6.89)
<i>PMAFE</i>						-29.33 (-1.38)	-0.01** (-2.04)
<i>Buy Return</i>						2.84* (1.50)	

						(1.71)	(1.33)
<i>Sell Return</i>						0.00	-3.70***
						(0.00)	(-3.27)
<i>No of SEOs</i>							0.06***
							(52.87)
<i>Lag (Broker share)</i>							16.44***
							(565.33)
<i>Broker Fixed Effects</i>	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<i>Year Fixed Effects</i>	No	Yes	Yes	Yes	Yes	Yes	Yes
<i>Adj R²</i>	18.65%	14.19%	10.56%	0.02%	0.02%	39.86%	9.96%