



Globalization and Executive Compensation — An Analysis of Pay Practices in U.K. Companies

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Research Question

- How does executive compensation in U.K. companies vary as a function of their extent of globalization?
- How do market interactions with the U.S. impact executive pay?
- Larger underlying question - How do market forces drive convergence in corporate governance around the world?



U.S. versus Global CEO Pay — Some stylized facts

- U.S. CEOs receive higher total compensation.
- CEO total annual pay in a U.S. \$200 Million company in 1997 (Murphy 1999)
 - U.S. \$901 K
 - U.K. \$490 K
 - Australia \$477 K
 - Netherlands \$443 K
 - Canada \$441 K



U.S. versus Global CEO Pay — Some stylized facts

- A larger fraction of U.S. CEO pay is equity based.
- CEO pay structure in 1997 (Conyon and Murphy 2000) and 2002 -2007 (our data)

	Cash	Stock based
U.S – 1997	37%	63% (mostly options)
U.S – 2002-2007	28%	72%
U.K – 1997	75%	25% (mostly restricted stock)
U.K – 2002-2007	49%	51%



U.S. – U.K. CEO Pay Comparison

(in '000's US Dollars)	U.K.	U.S.
Salary	\$840	\$713
Bonus	\$784	\$855
Restricted Stock	\$1,586	\$1,249
Options	\$49	\$1,986
Other Compensation	\$91	\$692
Total Compensation	\$3,350	\$5,495
Log(Total Compensation)	14.43	14.86
N	1463	7663



U.S. – U.K. CEO Pay Comparison

	Pooled	U.S.	U.K.	p Value
Log(Assets)	0.395***	0.398***	0.389***	0.686
Market to Book	0.151***	0.142***	0.239***	0.027
R&D	0.313	0.342	-0.238	0.418
ROA	0.491**	0.526**	0.005	0.154
Returns	0.075*	0.076*	0.073	0.974
Volatility	0.165	0.197	-0.009	0.300
Log(Tenure)	-0.022*	-0.025*	0.013	0.162
UK	-0.473***			
Constant	11.524***	11.515***	10.897***	0.019
N	9126	7663	1463	
Adjusted R ²	0.288	0.289		



U.S. versus U.K. Pay

- Multi country comparisons are hard due to lack of good compensation data across countries.
 - Towers Perrin data is based on self reported surveys (Murphy 1999)
- Recent research
 - Conyon and Murphy (2000)
 - Conyon, Core, and Guay (2006)
 - Research in international business literature
- Our goal is not to address why pay levels are different across countries (e.g. tax laws)
 - We explore a mechanism that can drive them towards convergence.



Convergence in Corporate Governance

- Force of global competition will result in a complete convergence of governance systems across countries (Hansmann and Kraakman, 2001)
- Path dependencies and complementarities in governance mechanisms will prevent such a convergence (Bebchuk and Roe, 1999)
- Functional Convergence – Partial convergence among groups of countries that interact closely through market transactions (Khanna, Kogan, Palepu, 2002)



Why would doing business globally affect CEO pay for companies?

- Competition for global talent
 - Limited supply of managers capable of managing a global business.
 - Going global allows tapping a larger pool of people.
- Why would U.S. interaction matter?
 - Because U.S. pay structures are different.
 - U.S., through its product and capital markets, can exert a big influence on global companies.



Why would U.S. interaction matter?

- Labor market related
 - Doing business in the U.S. requires CEOs with different skills.
 - Competition for talent with domestic companies.
 - Benchmarking with U.S. pay
 - U.S. acquisitions can create internal pay inequity
 - “Foreign companies acquiring U.S. subsidiaries face huge internal pay inequities, often resolved by increasing home country executive pay.” (Murphy 1999)
- Risk
 - Litigation, regulation, etc.



Prior Research

- Impact of the U.S.
 - Bonding - Companies listing in the U.S. bond themselves to a higher quality governance regime
 - Doidge et al, 2004, Lel and Miller, 2008
 - U.S. institutional investors exhibit a preference for U.S. GAAP based accounting when they invest in non-U.S. firms (Bradshaw, Bushee and Miller, 2004)
 - Companies with market interactions with the U.S. provide better disclosure and disclosures like U.S. companies. (Khanna, Palepu and Srinivasan, 2004)



Why examine U.K companies?

- Executive compensation data quality and availability is comparable to U.S.
- U.K. firms have significant economic interactions with the U.S.
- Lower barriers (cultural, language) to labor mobility to the U.S. than in most other countries.



Sample

- U.K. FTSE 350 companies
 - 387 Firms
 - 1,414 Firm Years with all variables
- From 2002–2007
- Compensation data available for all executives who are on the board of directors.
- Pay data includes salary, bonus, restricted stock, benefits in kind, and option grants.
- Source - Hemscott



Outcome variables

- Total Compensation
- Composition of Pay
 - Equity Compensation to Total Compensation
- Pay for Performance Sensitivity
 - Work in progress
- Executive turnover
 - Work in progress



CEO Compensation

(in 000's of £)

	Mean	Std. Dev.	Q1	Median	Q3
Salary	468	232	315	418	575
Bonus	453	720	119	264	506
Benefits in Kind	50	92	15	24	41
Restricted Stock	960	813	0	0	465
Options	25	17	0	0	0
Total Compensation	1,956	8,209	611	929	1,661
Log(Total Compensation)	13.86	0.84	13.32	13.74	14.32



Firm Characteristics

	Mean	Std. Dev.	Q1	Median	Q3
Assets ('000 £)	4369	12978	555	1242	3512
Log(Assets)	7.25	1.39	6.32	7.13	8.16
Market to Book	1.83	1.37	1.18	1.49	2.03
R&D	0.01	0.03	0.00	0.00	0.00
ROA	0.06	0.12	0.03	0.05	0.09
Returns	0.08	0.26	-0.05	0.06	0.19
Volatility	0.30	0.29	0.20	0.26	0.35



Measuring Global Interactions

- Geographic distribution of sales
 - Ratio of sales outside U.K. to total sales
 - Ratio of sales in U.S. to total sales
- Geographic distribution of assets
 - Ratio of assets outside U.K. to total assets
 - Ratio of assets in U.S. to total assets
- Global M&A transactions
 - Has the firm made acquisitions in the U.S.?
 - Has the firm made acquisitions in globally (excluding the U.S.)?



Measuring Global Interactions

- Cross Listings
 - Listing in the U.S. (Exchange or OTC)
 - Listing outside the U.K. (non-U.S.)
- Manager specific biographic information
 - Education (U.S. and global education)
 - Work experience (U.S. and global work experience)



Foreign Sales

	Mean	Std. Dev.	Q1	Median	Q3
Global (%)	0.43	0.38	0.01	0.39	0.80
Global > 10%	0.66	0.47	0.00	1.00	1.00
US (%)	0.15	0.20	0.00	0.00	0.29
US > 10%	0.42	0.49	0.00	0.00	1.00
Non-US (%)	0.27	0.29	0.00	0.18	0.48
Non-US > 10%	0.58	0.49	0.00	1.00	1.00



Foreign Assets

	Mean	Std. Dev.	Q1	Median	Q3
Global (%)	0.46	0.77	0.00	0.37	0.79
Global > 10%	0.64	0.48	0.00	1.00	1.00
US (%)	0.17	0.55	0.00	0.00	0.26
US > 10%	0.41	0.49	0.00	0.00	1.00
Non-US (%)	0.29	0.62	0.00	0.13	0.049
Non-US > 10%	0.53	0.50	0.00	1.00	1.00



Global Mergers & Acquisitions

	Mean	Std. Dev.	Q1	Median	Q3
Global Acquisitions	0.41	0.49	0.00	0.00	1.00
U.S. Acquisitions	0.23	0.42	0.00	0.00	0.00
Non-U.S Acquisitions	0.18	0.52	0.00	0.00	0.00



Cross Listings

	Mean	Std. Dev.	Q1	Median	Q3
NYSE/NASDAQ/AMEX	0.10	0.30	0.00	0.00	0.00
OTC	0.15	0.36	0.00	0.00	0.00



CEO Biography

	Mean	Std. Dev.	Q1	Median	Q3
Global Education	0.09	0.29	0.00	0.00	0.00
Global Experience	0.37	0.48	0.00	0.00	1.00
US Education	0.04	0.19	0.00	0.00	0.00
US Experience	0.12	0.32	0.00	0.00	0.00
Non-US Education	0.05	0.33	0.00	0.00	0.00
Non-US Experience	0.25	0.56	0.00	0.00	1.00



Governance

	Mean	Std. Dev.	Q1	Median	Q3
Inside Directors (%)	0.41	0.12	0.033	0.42	0.50
Board Size	9.76	2.91	8.00	9.00	11.00
Log(Board Size)	2.24	0.28	2.08	2.20	2.40
Tenure	5.33	5.00	2.00	4.00	7.00
Log(Tenure)	1.67	0.95	0.693	1.35	1.48



Baseline Regressions

	Log(Total Compensation)	Log(Cash Compensation)	Ratio of Equity to Total
Log(Assets)	0.350***	0.291***	0.059***
Market to Book	0.190***	0.165***	0.018
R&D	-1.198*	-1.082**	-0.378
ROA	-0.084	0.093	-0.386*
Returns	-0.023	0.005	0.031
Volatility	0.048	-0.095	0.112
Log(Tenure)	0.012	0.049***	-0.025
Inside Directors	-0.603***	-0.514***	-0.374**
Log(Board Size)	0.240**	0.225**	-0.024
N	1414	1414	1414
Adjusted R ²	0.440	0.544	0.104



Total Compensation

	Sales (%)	Sales > 10%	Assets > 10%	M&A
U.S.	0.493***	0.217***	0.233***	0.168**
Non-U.S. Global	0.097	0.016	0.060	0.047
NYSE/NASDAQ/AMEX	0.374***	0.416***	0.371***	0.454***
OTC	0.141*	0.145**	0.175**	0.145*



Cash Compensation

	Sales (%)	Sales > 10%	Assets > 10%	M&A
U.S.	0.511***	0.197***	0.255***	0.135**
Non-U.S. Global	0.158**	0.037	0.071*	0.059
NYSE/NASDAQ/AMEX	0.190**	0.239***	0.186**	0.285***
OTC	0.069	0.076	0.082	0.082



Ratio of Equity to Total

	Sales (%)	Sales > 10%	Assets > 10%	M&A
US	-0.002	0.015	-0.010	0.044
Non-US Global	-0.042	0.024	-0.014	0.013
NYSE/NASDAQ/AMEX	0.175**	0.166**	0.181*	0.167**
OTC	-0.005	-0.014	0.013	-0.015



U.S. and Global Interactions

	Log(Total Compensation)	Log(Cash Compensation)	Ratio Equity to Total
U.S. Sales > 10%	0.218***	0.104*	0.112
Non-U.S. Global > 10%	-0.074	-0.020	0.021
U.S. M&A	0.067	0.019	0.032
Non-U.S. Global M&A	0.025	0.021	-0.043
NYSE/NASDAQ/AMEX	0.373***	0.190**	0.176*
OTC	0.157**	0.075	-0.001



Long Window Analysis

	$\Delta\text{Log}(\text{Total Compensation})$	
	Sales	Assets
$\Delta\text{Log}(\text{Assets})$	-0.022	-0.050
$\Delta\text{Market to Book}$	0.028	0.105
$\Delta\text{R\&D}$	-0.443	-3.527
ΔROA	0.991	0.203
$\Delta\text{Returns}$	-0.217	-0.284
$\Delta\text{Volatility}$	0.397	0.293
$\Delta\text{U.S. Sales}(\%)$	0.846**	0.013
$\Delta\text{Non-U.S. Sales}(\%)$	0.181	-0.207



Summary of results

- Level of pay is higher when the firm has
 - U.S. business operations
 - But not driven by extent of non U.S. global business
 - U.S. listing
- Higher pay due to cash compensation and not due to equity grants.



Preliminary interpretation of results

- Business interaction
 - Higher reservation wage
- Cross listing
 - Higher legal and regulatory risk
- Higher pay not associated with higher equity grants
 - Not adopting this aspect of U.S. pay practices.
 - Higher pay not driven equity risk premiums.



Next steps

- Outcome variables
 - Turnover
 - Pay for performance sensitivity
- More globalization variables
 - Industry level global interactions
 - Better manager biographical measures, board biographies.
 - Expand Mergers & Acquisitions analysis
- Governance variables
 - Ownership (manager, institutions), Board, Charter...