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Employee Satisfaction…

…and Equity Prices, Revisited

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■ Forthcoming: Journal of Financial Economics

Exactly two years ago we wrote about an article by Alex Edmans (Wharton) on the subject of employee satisfaction and equity prices. Human capital comes up repeatedly (directly, or indirectly) as core to the performance of many sectors in UBS research, but can present analytical challenges. We therefore welcome the chance to revisit the subject on the basis of a significantly revised edition of Alex's paper, which is to appear in the *Journal of Financial Economics*.

■ Key Conclusions According to Alex's Article

A value-weighted portfolio of the "100 Best Companies to Work For in America" earned an annual four-factor alpha of 3.5% (0.29% monthly) from 1984-2009. The "Best Companies" as defined here continue to outperform for around 4 years after appearing in the list. Their earnings announcements tend to surprise on the upside.

■ ESG Analyser Identifies Sectors Where Human Capital Matters

Employee satisfaction may be "an SRI screen that can improve returns" over the long run, says Alex. In our view this does not necessarily lead to a buy & hold strategy: excess returns rarely arrive smoothly, in equity markets. We therefore think it reasonable to focus on Buy-rated stocks in the "Best 100" list that are also in sectors likely to be relatively sensitive to the performance of human capital.

■ Six Plays on Employee Satisfaction

Google, Intel, Microsoft, NetApp, Qualcomm and Salesforce.com emerged from the combination of viewpoints explored here. We note that this is only one of several approaches, & that the data is only available for a subset of US companies.

Investment Conclusions

Analysis based on the data of the Great Place to Work Institute, updated and revised.

Exactly two years ago, we wrote about an article written by Alex Edmans (Wharton),[1] which addressed the interesting issue of intangibles in general, and employee satisfaction in particular. His analysis (based, as our readers may remember, on data associated with the "Best Companies to Work For" as defined by the Great Place to Work Institute),[2] has been comprehensively updated and revised.

Employee satisfaction appears to be "an SRI screen that can improve returns".

For all investors (including SRI investors) the key point of the revised version is that it strengthens the idea that employee satisfaction appears to be "an SRI screen that can improve returns" (p. 4). This is not to suggest that to buy and hold a portfolio of the 100 stocks is necessarily the optimal strategy. First, inputs other than human capital may dominate from time to time. Secondly, excess returns tend not to arrive in a straight line – in our 2008 note we highlighted a significant if short-run period of under performance between 2005 and 2007 for many of the companies in the "Best 100". Also, see page 7 in this note for a suggestion of volatility in the later years in the analysis. Overall, this paper suggests the "Best Companies to Work For" as defined here may be a good starting point, in combination with other relevant investment information.

Building on UBS's ESG integration work.

Noting that this is not the only possible approach, but seeking to build on our ESG integration work to date, we therefore apply an ESG Analyser sector overlay to this list. Specifically, we select UBS-covered Buy-rated stocks from the "Best 100 companies" list in sectors we identified in the European ESG Analyser as being driven by human capital, and where employee satisfaction is thus likely to dominate other factors.

Our screen left us with six plays on employee satisfaction.

Table 1: Six Plays on Employee Satisfaction

Rank	Company	GMI	GMI Red Flags	Rating	Price	PT	+/-%	MCap (US$mn)	Analyst
4	Google	4.5	3	Buy	618.14	720.00	16.5%	148,532.86	Brian Pitz
98	Intel	9.5	1	Buy	20.94	25	19.4%	116,740.50	Uche Orji
51	Microsoft	9	1	Buy	28.00	35	25.0%	243,460.00	Brent Thill
7	NetApp	5.5	1	Buy	57.87	58	0.2%	19,417.70	Maynard Um
9	Qualcomm	8	1	Buy	52.03	58	11.5%	85,348.60	Maynard Um
43	Salesforce.com	6.5	1	Buy	142.20	165	16.0%	18,612.27	Brent Thill

Source: UBS and GMI

[1] Employee Satisfaction and Equity Prices. Julie Hudson CFA, 10 January 2008.

[2] http://www.greatplacetowork.com/what_we_do/lists-us-bestusa.htm

Employee Satisfaction revisited

Human capital appears frequently as core to sector performance in the ESG Analyser. It presents analytical challenges. This is both good and bad news – see below.

In the European ESG Analyser, published in May 2010 by the SRI team, the subject of human capital comes up frequently (either directly, or under the guise of intellectual property or other intangibles) as a core driver of the sectors we cover in equity research. For your reference, an extract is presented overleaf – see page 5. Human capital is a notoriously challenging issue to analyse, so Alex's updated article 'Does the Stock Market Value Intangibles? Employee Satisfaction and equity Prices' (which is about to be published in the *Journal of Financial Economics*) has arrived with good timing.

The revised paper – which has been through a rigorous process of peer review within academia – is extremely interesting in a number of respects – summarised below.

Additional points to note

The 100 "best Companies to Work For" Outperform Over 15 Years

Outperformance

A value-weighted portfolio of the "100 Best Companies to Work For in America" earned an annual four-factor alpha of 3.5% (0.29% monthly) from 1984-2009, and 2.1% above industry benchmarks.[3]

Positive Performance Persists for Four years

Persistence

Section 3.4 in Alex's note shows that the effect is quite long-lived – the "Best Companies" continue to outperform for around 4 years after initially featuring in the list.

'Best companies' Surprise on the Upside

Positive surprises

Section 3.3 in Alex's note shows that the "Best Companies" exhibit superior earnings surprises in comparison to peer firms. They also exhibit higher market reactions to their earnings announcements than peer firms.

Intangibles Are Not Immediately Reflected in the Market

Intangibles present an analytical challenge – therefore, they may contain investment information!

In his concluding paragraphs (p. 24) Alex comments: "[An] intangible only affects the stock price when it subsequently manifests in tangibles that are valued by the market, such as earnings announcements.'

European ESG Analyser

Focusing on sectors likely to be sensitive to human capital performance, according to analyst responses to the ESG Analyser (internal) survey.

Although UBS's Analyser relates to European stocks, we believe the sector conclusions apply to stocks in similar sectors anywhere in the world, particularly when it comes to what drives the performance of stocks within the sector. We therefore apply an ESG Analyser overlay. We identified in the European ESG Analyser sectors driven by human capital, or significantly affected by it, and where employee satisfaction is therefore likely to be important. Within these

[3] 'Does the Stock market Fully Value Intangibles? Employee Satisfaction and Equity Prices. Alex Edmans. Wharton School, University of Pennsylvania. Journal of Financial Economics, Forthcoming. The paper can be found at the following link: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=985735

sectors, we selected stocks from the small number of UBS-covered Buy-rated companies in the "Best 100 companies" list. This leaves the following list:

Table 2: Six Plays on Employee Satisfaction

Rank	Company	GMI	GMI Red Flags	Rating	Price	PT	+/-%	MCap (US$mn)	Analyst
4	Google	4.5	3	Buy	618.14	720.00	16.5%	148,532.86	Brian Pitz
98	Intel	9.5	1	Buy	20.94	25	19.4%	116,740.50	Uche Orji
51	Microsoft	9	1	Buy	28.00	35	25.0%	243,460.00	Brent Thill
7	NetApp	5.5	1	Buy	57.87	58	0.2%	19,417.70	Maynard Um
9	Qualcomm	8	1	Buy	52.03	58	11.5%	85,348.60	Maynard Um
43	Salesforce.com	6.5	1	Buy	142.20	165	16.0%	18,612.27	Brent Thill

Source: UBS and GMI[4]

It is a short list because UBS currently covers just 26 of the 99 US companies in the list of 100. (We did not include the one UK company in the list in the above analysis). Of these, thirteen stocks are Buy-rated, but two of them are under review.

The 2010 list of companies is shown at the following link: http://money.cnn.com/magazines/fortune/bestcompanies/2010/full_list/

[4] We would like to thank Shilpa Salian, employee of Cognizant Group, for her assistance in preparing this research report. Cognizant staff provide research support services to UBS.

Table 3: European ESG Analyser Extract – Sectors Where Analysts Cited Employees as a Core Driver of the Business, or as an ESG Issue Affecting Core Drivers

Sector	Core Drivers	Environmental and Social Issues Potentially Affecting Core Drivers or Financials
Airlines	Passenger demand, supply of seats, oil and employee disruptions.	Oil price spike, ETS mechanism to come in from 2012 to hit profits. Labour disruption as competition threatens legacy working practices.
Autos	Customers, credit availability, GDP, unemployment, raw materials.	10-15% of total workforce are involved in auto industry in most European countries, CO2 regulation, government intervention.
Banks	Reputation, human capital, customers.	Risks are mostly social: taxpayers dissatisfaction, social distress if lending issues remain and progress, customers dissatisfaction, staff cuts, working conditions
Biotechnology	Technological know-how, Patents, Human Capital (Scientists etc), Financial Capital.	Changes in government regulations, Health and Safety Norms, Good manufacturing practices, Conducting Clinical trials (Animal testing, Human Testing).
Chemicals - Specialty	Product differentiation and innovation, human capital, value added for customers.	Global increase in wealth, scarcity of resources, carbon taxation/costs.
Food Retail	Inflation, raw material prices, disposable incomes.	Supply chain. Human capital. Customer health. Greenhouse gas emissions from stores (eg refrigeration, energy usage for heating and lighting), and truck fleet.
Gen Retail	Quality of production, customer perception and brand reputation.	Concern over provenance of materials, ensuring that no labour has been exploited and minimising the domestic energy use of household appliances and carbon footprint of retailer.
Leisure - Hotels	Business travel (customers), brand execution (reputation, which attracts customers and drives room growth).	Terrorism, disease scares (e.g. SARS, swine 'flu), rising fuel costs curtailing travel, falling communication costs reducing the need to travel, environmental regulation.
Leisure - Pubs	Demand for eating and drinking out of home, input costs, availability of high quality site managers.	Healthy living, concern about anti-social behaviour, changing social practice e.g. substituting wine for beer, demand for quality and explicit provenance raises costs (no sign of this demand yet), low pay means high staff turnover.
Luxury	Brand strength, geographical split (emerging Asia favourable), category exposure (hard luxury favourable for LT growth), price point exposure, exposure to de-stocking and re-stocking, exposure to male demand, GDP growth, exchange rates.	Rise of male spending on luxury products; threat of change in consumers' wealth and tastes; regulation and customer expectations in the area of sustainability (eg energy and raw material usage in production; raw materials in the supply chain for textiles and leather goods; use of fur in products); reliance on growth in emerging markets; conditions for employees in production; threat of counterfeit products; the threat of rising taxes and luxury import duties (in emerging markets); external influenced on consumption - such as terrorism and epidemics.
Media- Agencies	GDP, human capital, reputation.	Economic backdrop, labour market.
Medtech and Diagnostics	Technological know-how, Patents, Human Capital (Scientists etc), Financial Capital, access to raw materials, reputation, customers.	Changes in government regulations, Health and Safety Norms, Good manufacturing practices, health economics, regulatory change, product liability issues, reputational risk. Cost reduction pressures driving production offshore increases supply chain risk.
Pharma	Patients, product, healthcare providers, government, human capital (e.g. for innovation), financial capital.	Government regulation/intervention, health and safety, environmental regulations (e.g. waste disposal), clinical trial regulation (e.g. use of animal testing), working conditions for staff, healthcare infrastructure/guidelines development, improved access to neglected disease medicines.
Software and Services	Intellectual capital is the most important resource, so human capital is key. Customer loyalty also critical, since maintenance payments help fund R&D.	Labour relations are key; restructuring can cause frayed relationships. Outsourcing can bring benefits to clients, but can cause social tensions - especially with public sector clients.
Support Services - Staffing	Economic Cycle, Wage inflation, Product mix (temp-Perm, Blue Collar-Specialist), headcount, Labour laws regulation in different countries (thereby penetration rates).	Environmental Issues: none of note. Social Issues: Unemployment levels and govt policy to curb them. Job cuts (Hire & Fire policy), Use of Temp Staff can be politically sensitive.
Tech Hardware	Intellectual property rights, global distribution/local feel, technological strength, Chinese competition, mobile data usage.	Health risks of mobile phones, power concerns for semiconductor manufacturing, recycling of handsets, and social exclusion from internet usage.
Telecommunications	Customers, product, human capital, license to operate (access to bandwidth).	Risks: Electro-magnetic radiation; children and mobiles; the digital divide; working conditions for staff, staff cuts; "unsuitable content". Opportunity: increased home/flexible working.

Source: UBS

A Note on Environmental Issues in Technology Sectors

The relevance of human capital to environmental risk.

In our view, human capital is the key ESG issue for many technology stocks. However, companies in this sector can have a significant impact on the environment, particularly because of the way technology, which can be energy intensive, is used. Innovation in the technology sector has without question resulted in significant improvements – hence, the performance of mobile phone and laptop batteries has been made possible not only by improved battery technology but also because of miniaturisation.

In the Software sector in the ESG Analyser we made the following comments:

- "A significant structural change is currently under way in this industry. Software and IT services face the dual challenge and opportunity of a shift to software-as-a-service (SaaS). By re-designing their offerings to enable customers to access them over the internet, we believe paying on a "per-usage" basis will improve software companies' competitiveness – and failure will compromise it".
- "Green IT" initiatives are becoming increasingly important as a means of differentiating vendors' offerings, by for instance emphasising the low-power cost of datacentres built near natural cooling features, or where excess heat is recycled for social benefits.

These two trends represent both risk and opportunity in our view. Risk, because the energy (and carbon) costs of data storage may constitute a medium term risk to the evolving industry model described in the first bullet. Opportunity, because human capital may be able to develop innovations to address the energy problem. As examples: Salesforce.com discusses the potential for cloud computing to reduce the environmental impact of hardware and software[5] and NetApp efficient data storage[6] in company reports.

[5] http://www.salesforce.com/company/sustainability/

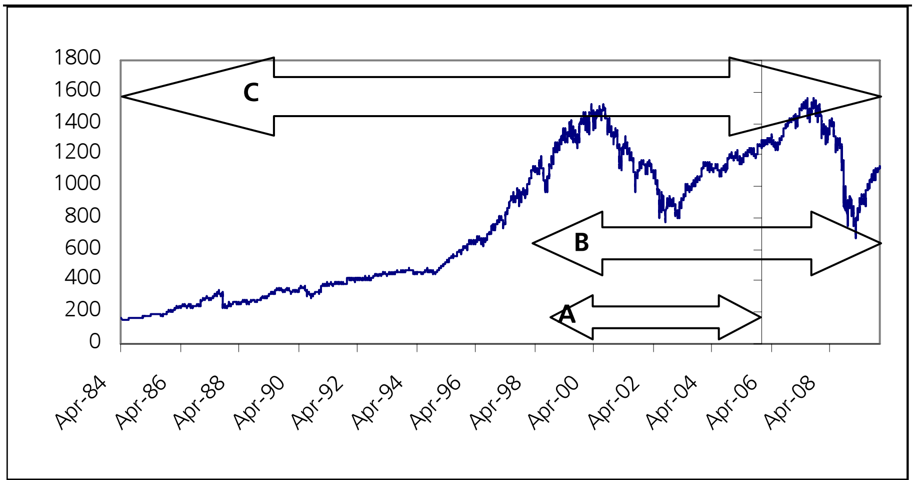
[6] http://media.netapp.com/documents/wp-reducing-datacenter-power-consumption.pdf

Before and After: 2007 Vs 2010

The Data Now Straddles the Credit Crunch and More

In the version of the article the UBS January 2008 UBS report[7] was based upon, Alex's data set ran from 1998 to 2005. The data set in the current article runs from 1984 to 2009.

Chart 1: The S&P 500 Price index



Source: Datastream

The data set in the 2007 version of Alex's note ran over the time period marked A. The new note calculates statistics for two time periods marked B and C, indicating quite distinct market phases are now covered by this study, including the credit crunch.

Alex reviews a number of statistics over two time-periods: April 1984 to December 2009 and February 1998 to December 2009.

Returns to employee satisfaction as shown in the new version of the paper are lower than they were for the short time-period from 1998 to 2005. This may be explained by the fact that there is less information about the list of companies (which was updated less frequently) before 1998. Alex's results also suggest that, after 2005, excess returns were lower. However this is hard to interpret – we do not have enough information to understand whether this could explain the crunch or the other way round. However, the key message from the paper is: outperformance apparently driven by employee satisfaction over the long run.

- **Previously**: Firms that are "good to work for" (as represented here) appear to outperform in the medium term, earning "over double the market return" between January 1998 & the end of 2005, & "a monthly 4-factor alpha of 0.64%".[8]

The 2007 conclusion (data to 2005). Firms that are "good to work for" as defined here outperform.

- **Now**: A value-weighted portfolio of the "100 Best Companies to Work For in America" earned an annual four-factor alpha of 3.5% (0.29% monthly) from 1984-2009, and 2.1% above industry benchmarks.[9] Table 4 shows the monthly four-factor alpha at 0.32%, for risk adjusted returns from Feb 1998 to Dec 2009.

The 2011 conclusion (data to 2009). Firms that are "good to work for" as defined here outperform.

7 Employee Satisfaction and Equity Prices. Julie Hudson CFA, 10 January 2008.

8 Source as above footnote.

9 'Does the Stock market Fully Value Intangibles? Employee Satisfaction and Equity Prices. Alex Edmans. Wharton School, University of Pennsylvania. Journal of Financial Economics, Forthcoming.

Appendix – 27 of the 100 Covered by UBS

Table 4: The Companies in the 2010 "100 best Companies to Work for in America" that Happen to be Covered by UBS

Rank	Company	Rating	Price	Currency	PT	MCap (US$mn)	Analyst
84	Accenture	Neutral	48.28	USD	45	35,870.18	Jason Kupferberg
42	Adobe Systems	Neutral	32.22	USD	32	16,327.55	Brent Thill
37	Aflac	Neutral	56.38	USD	53	26,557.46	Andrew Kligerman
76	Balfour Beatty Construction	Buy	324.40	GBX	330	3,443.09	Gregor Kuglitsch
61	Brocade Communications Systems	Neutral	5.72	USD	6	2,778.04	Nikos Theodosopoulos
10	Camden Property Trust	Buy	54.01	USD	57	3,556.56	Ross Nussbaum
34	Chesapeake Energy	Neutral	26.50	USD	24	17,328.75	William Featherston
16	Cisco	Neutral	20.77	USD	22	117,869.75	Nikos Theodosopoulos
100	Colgate-Palmolive	Neutral	79.18	USD	84	41,434.89	Nik Modi
20	Devon Energy	Buy	78.70	USD	87	33,990.53	William Featherston
67	EOG Resources	Neutral	92.33	USD	95	23,453.27	William Featherston
91	FedEx	Buy	93.87	USD	111	29,531.50	Rick Paterson
90	General Mills	Buy	36.62	USD	41	25,256.81	David Palmer
4	Google	Buy	609.07	USD	720	146,353.43	Brian Pitz
98	Intel	Buy	20.94	USD	25	116,740.50	Uche Orji
94	Intuit	Neutral	48.74	USD	51	15,401.84	Brent Thill
82	Marriott International	Buy (UR)	41.57	USD	42	15,717.62	Robin Farley
78	Mattel	Buy	25.47	USD	30	9,258.35	Robert Carroll
51	Microsoft	Buy	28.00	USD	35	243,460.00	Brent Thill
7	NetApp	Buy	57.87	USD	58	19,417.70	Maynard Um
25	Novo Nordisk	Neutral	653.00	DKK	585	70,056.47	Gbola Amusa, MD, CFA
21	NuStar Energy	Neutral (CBE)	68.71	USD	66	4,439.39	Jeremy Tonet, CFA
54	Paychex	Neutral	31.54	USD	28	11,420.63	Jason Kupferberg
9	Qualcomm	Buy	52.03	USD	58	85,348.60	Maynard Um
43	Salesforce.com	Buy	142.20	USD	165	18,612.27	Brent Thill
93	Starbucks Coffee	Buy (UR)	32.35	USD	33	23,942.23	David Palmer
18	Whole Foods Market	Neutral	49.11	USD	48	8,484.29	Neil Currie

Source: UBS; http://money.cnn.com/magazines/fortune/bestcompanies/2010/full_list/

We would like to thank Shilpa Salian, employee of Cognizant Group, for her assistance in preparing this research report. Cognizant staff provide research support services to UBS.

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Neutral	**Hold/Neutral**	42%	35%
Sell	**Sell**	8%	21%
UBS Short-Term Rating	**Rating Category**	**Coverage[3]**	**IB Services[4]**
Buy	**Buy**	less than 1%	14%
Sell	**Sell**	less than 1%	0%

1:Percentage of companies under coverage globally within the 12-month rating category.
2:Percentage of companies within the 12-month rating category for which investment banking (IB) services were provided within the past 12 months.
3:Percentage of companies under coverage globally within the Short-Term rating category.
4:Percentage of companies within the Short-Term rating category for which investment banking (IB) services were provided within the past 12 months.

Source: UBS. Rating allocations are as of 31 December 2010.

UBS Investment Research: Global Equity Rating Definitions

UBS 12-Month Rating	Definition
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Sell	FSR is > 6% below the MRA.
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Company Disclosures

Company Name	Reuters	12-mo rating	Short-term rating	Price	Price date
Google Inc.[6a, 6b, 6c, 7, 16]	GOOG.O	Buy	N/A	US$609.07	05 Jan 2011
Intel Corp.[5, 6b, 7, 8, 13, 16, 18a]	INTC.O	Buy	N/A	US$20.94	05 Jan 2011
Microsoft Corp.[2, 4, 5, 6a, 6b, 6c, 7, 16, 18b, 22]	MSFT.O	Buy	N/A	US$28.00	05 Jan 2011
NetApp Inc[16]	NTAP.O	Buy	N/A	US$57.87	05 Jan 2011
Qualcomm Inc.[16]	QCOM.O	Buy	N/A	US$52.03	05 Jan 2011
Salesforce.com[16]	CRM.N	Buy	N/A	US$142.20	05 Jan 2011

Source: UBS. All prices as of local market close.
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