UBS Investment Research

SRI Spotlight-Human Capital

Employee Satisfaction and Equity Prices

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■ Company Managements Care About Human Capital

According to an informal straw poll taken at the end of 2007, the top issues on the CIO agenda for 2008 were said to include hiring and retaining the best staff; and IT innovation/new methodologies. The issue of human capital is critical to the success of many firms, but, human capital is not often a formal input to financial analysis.

■ We Highlight a Paper from the Wharton School

A 2007 paper written by Professor Alex Edmans (Wharton) exploits a specific "human capital" data set built up by the Great Place to Work Institute since the start of 1998. The paper addresses a key question for most investors - "Does the Stock Market Fully Value Intangibles?" - by focusing on employee satisfaction.

■ Employee Satisfaction: a Long Horizon Driver of Intangible Value

Firms that are "good to work for" (as represented here) appear to outperform in the medium term, earning "over double the market return" between Jan '98 & the end of '05, & "a mthly 4-factor alpha of 0.64%". But, since then, listed stocks covered by UBS have underperformed, though with notable exceptions in tech.

■ Opportunity: Market Drivers Currently Unlikely to be Long Horizon

Considering 8 years of positive alpha calculated by the writer of the study & two years of under performance observed on the basis of a very superficial analysis, the question is whether the "model" will adjust to meet the market – or whether the market has temporarily diverged from the "model". A VCAM analysis suggests that the consumer sector is likely to be a good place to look for value in the context of this specific universe, in 2008 market conditions.

Investment Conclusions

Employee satisfaction is a long term driver of value. In the short run, the dominant driver of share price volatility is more likely to be increased uncertainty and risk aversion arising from the credit crunch, and uncertainty surrounding financial markets and economies, as well as increased political risk in some regions. In current market conditions, long term drivers of intangible value may be taking a back seat. (Nevertheless we think the performance of some names - in tech, financials & consumer - is noteworthy in this context).

The next (2008) release of the 100 Best Places to Work is expected in mid January. We believe it will be useful, from an investment perspective, to look at the valuation of additions to the list.

For long term investors who take value drivers like human capital into account, we believe market conditions in '08 will throw out opportunities in the context of firms ranked highly for human capital performance, represented here by measures of "employee satisfaction". This is where the survey-based work of the Great Place to Work Institute and the related constituents of the Fortune Magazine's "Best Companies to Work For[1]" list may be relevant to investors.

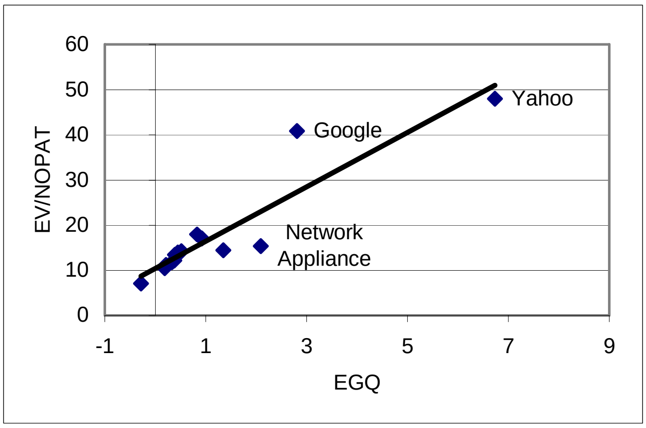
Consumer-driven stocks and sectors in particular are meeting heavy headwinds. Here, for some firms, financial market conditions may be so extreme that this leads to human capital destruction, compromising the ability to create economic value in the long run. For others, we think credit market related turbulence and its impact on growth and consumption will be a short term set back, particularly for firms combining strong human capital performance with sound financials.

Strong human capital performance in combination with sound financials: the place to look for value opportunities in 2008, in sectors driven down by the credit crunch.

We apply UBS's proprietary Value Creation Analysis Model (VCAM) to assess valuations for stocks covered by UBS, in the universe in focus in the academic paper discussed here. Relative to other stocks in this universe and also relative to sector averages, we think the valuation[2] of some names that have moved significantly over a year (eg Starbucks and Timberland which have both fallen sharply, and, Google, which has significantly outperformed) may be interesting. However, we also discuss (p. 10) the difficulty of interpreting such information in volatile markets: will it be the market or the model that adjusts?

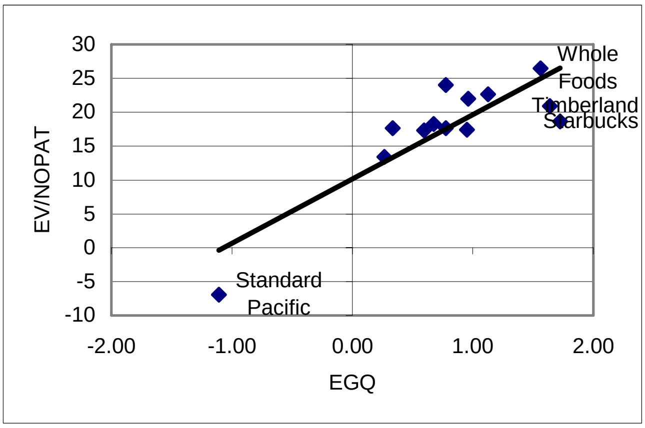
A valuation framework; but, interpretation presents challenges in volatile markets.

Chart 1: Technology Sector



Source: UBS-VCAM

Chart 2:Consumer Goods and Services



Source: UBS-VCAM

[1] The next release is expected in mid January 2008

[2] "EV/NOPAT" in VCAM refers to the first estimated fiscal period. FY'07 or FY '08, depending on the firm's year end.

Employee Satisfaction and Equity Prices

Employee satisfaction: a driver of intangible value

According to an informal straw poll taken at the end of 2007, the top three issues on the CIO agenda for 2008 were said to be: Business alignment and strategy; **hiring and retaining the best staff**; and **IT innovation/new methodologies**[3]. The issue of human capital (which is fundamental to two of these three CEO concerns) is critical to the success of many firms, but, human capital is rarely a direct input to financial analysis. The main reason is likely to be the lack of accepted or even consistently available performance metrics, as well as uncertainties around timing.

Exploiting an available "human capital" data set

A 2007 paper by Professor Alex Edmans (Wharton) exploits a specific "human capital" data set (based on a combination of survey data and document searches) built up by the Great Place to Work Institute since the start of 1998. It is mainly available for US firms, but we think the conclusions arising from this work are more generally relevant. The paper addresses a key question for most investors - "Does the Stock Market Fully Value Intangibles?" - by focusing on employee satisfaction.

A body of theory indicates that high levels of employee satisfaction may be associated with high retention rates as well as stronger motivation – both critical to the performance of a firm's human capital.

Before proceeding to the data analysis, the writer refers to a body of theory that explains why "employee satisfaction" might be positive for motivation (therefore performance in the core competitive areas for the firm) as well as retention, addressing both of the key CEO concerns above. He explains that the impact of employee satisfaction is unlikely to manifest itself through accounting returns because it is likely to be long horizon: "One of the key issues with investing in intangible assets is that the benefits may not manifest in accounting variables for many years" (p. 6).

Conclusion: the paper suggests that employee satisfaction can be a relevant input to long term investment decisions.

The main conclusions arising from the analysis and reported in the paper were as follows:

- Higher employee satisfaction is associated with stronger company (share price) performance.
- The stock market does not fully value intangibles even when they are made visible by a publicly available survey.
- Investment in intangibles may generally not be incorporated into short-term prices.

The Universe, and the Data Set

The universe of companies in focus in the study is the Fortune Magazine[4] "Best Companies to Work for in America[5]." The data set of rankings is based on a 57 question survey created by the Great Place to Work Institute (66% of the score) as well as the GPTW Institute's own research, covering the firm's demographics, pay and benefits, and culture[6].

[3] Financial Times Special Report, December 5th 2007.

[4] http://money.cnn.com/magazines/fortune/rankings/

[5] http://www.greatplacetowork.com/best/list-bestusa.htm

[6] http://www.greatplacetowork.com/best/nominations/nom-100best_timeline.php

The Great Place to Work website also contains European, Latin American and Asian lists, but this does not allow the same study to be repeated for these regions because many of the firms are the local branches of foreign firms – for instance we were able to identify only a dozen or so listed European firms in the list of 100 “European” companies. The paper under discussion here therefore focuses only on the US universe. (Of the 31 listed firms covered by UBS in the 100 “Best Companies to Work for in America”, 29 are US listed; one is listed in London, and one in Taiwan). However we do not believe this quite specific geographic focus invalidates the broad conclusions, and we would anticipate growing interest in research in the field of human capital globally speaking.

The geographic focus of the data is biased toward the US. We do not think this invalidates the broad conclusions for human capital and share prices.

Last but not least: the writer points out that the study only focuses on the top “tail” of the potential distribution of firms ranked from best to worst. Data is not available for firms outside the top 100; nor is the extent of the fall in ranking available for those that drop out. This can be seen as an information gap in current market conditions.

Alex Edmans’ Research Methodology

The writer created four portfolios, as described in Table 1 below. He conducted a number of risk-adjusted performance comparisons. He describes his expectations for each portfolio, and then sets out to test each hypothesis (see table) on the basis of data running from 1998-2005. In each case, the outcome of the analysis is consistent with expectations, suggesting that companies that are “good to work for” tend to outperform over the medium term: the basket of stocks “earned over double the market return” between January 1998 and the end of 2005, and “a monthly four-factor alpha of 0.64%”. (Source as table note).

The outcome of the analysis is to suggest that companies that are “good to work for” tend to outperform over the medium term: the basket of stocks “earned over double the market return” between January 1998 and the end of 2005, and “a monthly four-factor alpha of 0.64%”.

The usual caveats – that past performance is not predictive of future performance; that many more such studies would be needed to prove the case; that an 8 year time span is too short to prove the case for a long term value driver; or that the time period in question was in some way unique - should be born in mind. However the results at least suggest that it may at times potentially improve investment performance to take human capital into account in stock selection, where it is possible to obtain sufficient information.

Table 1: Employee Satisfaction and Equity Prices

Portfolio	How Constructed	Performance Expectations	Realised Risk Adjusted Performance
Portfolio 1	Equally weighted portfolio, the listed companies, rebalanced each year to reflect the changes to the Best Companies list.	Outperform benchmark	Outperforms
Portfolio 2	Equally weighted portfolio, constituents held constant from inception.	Outperform benchmark	Outperforms
Portfolio 3	Equally weighted portfolio, adds new firms, does not drop those that drop out.	Outperform benchmark	Outperforms
Portfolio 4	Companies dropped from the list.	Underperforms portfolios I-III, but not the benchmark.	Outperforms, but underperforms portfolios 1-3.

Source: Does the Stock Market Fully Value Intangibles? Employee Satisfaction and Equity Prices. Professor Alex Edmans, Wharton School, University of Pennsylvania, 30 October 2007.

Investment Implications

Day to day, many other factors drive stock prices....

At UBS, we think it reasonable that firms that handle their human capital better than others should out perform, in the long run. We think it likely that intangibles are not always efficiently priced. And, we recognise that it may be difficult to prove either of these beliefs on the basis of quantifiable metrics. In this specific context, on the basis of this study, we believe it reasonable to believe that information about membership of this list may at times be relevant to share price performance or valuation, in combination with other information. To emphasize (and to state the obvious) taking membership of the Fortune 100 "Best Companies to Work For" list as the sole criterion for investment would not be rational since, day to day, many other factors drive stock prices.

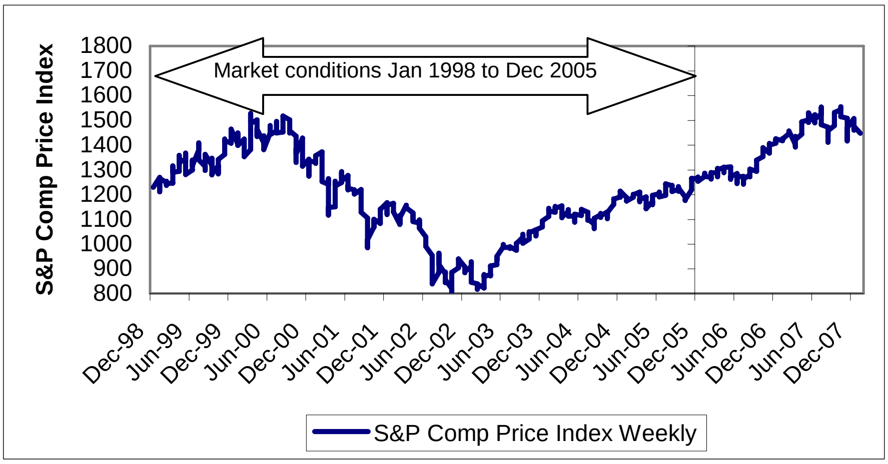
...and anyway if there is an anomaly won't it be priced in, especially after the publication of this Wharton School paper?

One other consideration is the possibility that the writer's paper, which has been presented to a reasonably wide audience, may potentially have caused any "mis-pricing" to disappear. However: in current conditions we think this unlikely. The dominant driver of share price volatility currently is likely to be increased uncertainty and risk aversion arising from the credit crunch, and uncertainty surrounding financial markets and economies, as well as increased political risk in some regions. For long term investors who might typically take value drivers such as human capital into consideration, we believe current market conditions should, at some stage, throw out investment opportunities.

The time period of the study is relatively short (January 1998 to December 2005) but there were some significant changes in market conditions.

In light of current stock market volatility, it is worth bearing in mind that the alpha generated between 1998 and 2005 period was affected by the 2000 technology crash and subsequent recovery. On the one hand, this suggests that performance of the stocks in the basket was robust to significant changes in conditions.

Chart 3: Evolution of S&P 500 Price Index, Jan 1998 – Dec 2005 and Beyond

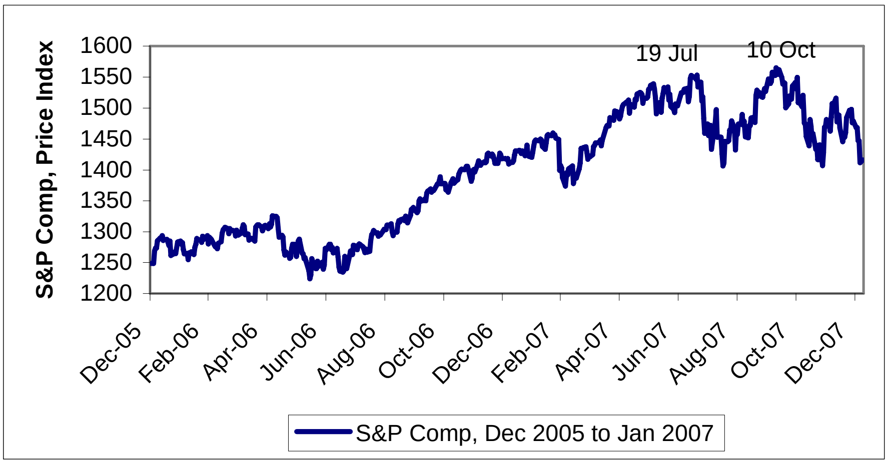


Source: Primark Datastream

In 2006 and 2007, the two years since the study, it is likely that share prices were driven more by sentiment than by fundamentals.

On the other hand, since the study was completed, conditions have also changed: 2006 saw the continuation of the post 2002 uptrend (with a pause in May); while in 2007 the market (year on year) went sideways, but with a significant increase in volatility. Over this period, some stocks and sectors reached fairly heady multiples, and this was followed by the credit crunch suggesting that sentiment (rather than "fundamentals") was probably the dominant market driver.

Chart 4: Evolution of S&P 500 Price Index, Beyond the Study



Source: Primark Datastream

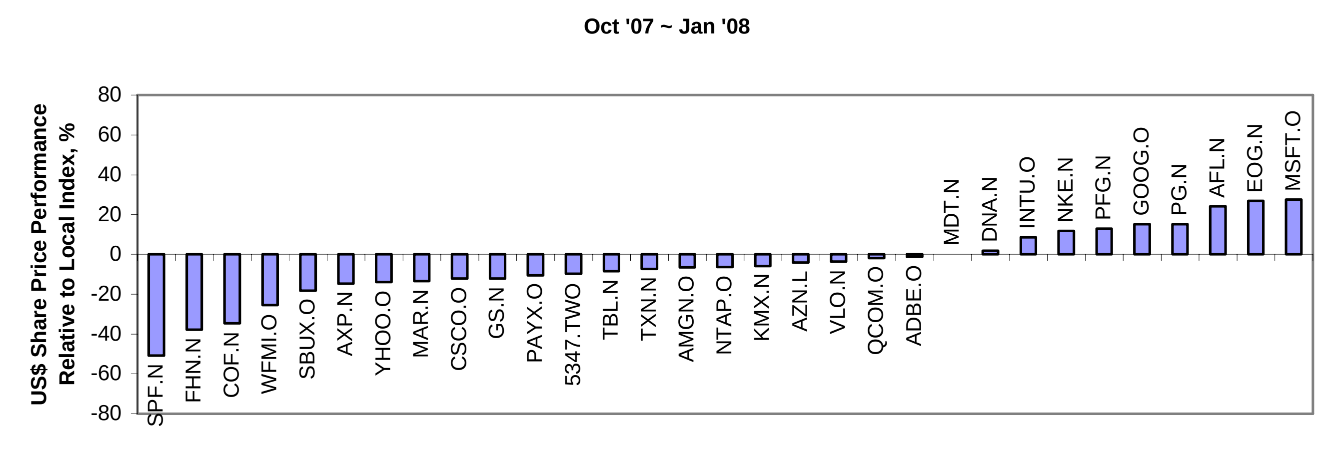
We do not have access to the model used by the writer to run his numbers, so we present some basic returns numbers for a representative sample: the stocks selected as the 100 "Best Companies to Work in America" at start of 2007, that are also currently covered by UBS. Performance numbers are in US$ and relative to the local index throughout.

Share Price Performance in 2007 – Stocks Covered by UBS

In any given year, about one third of the 100 "Best Companies to Work For" are unlisted. Of the 2007 listed universe, UBS currently covers 31 firms, or about one third of the total list. We look at index relative price performance for the stocks covered by UBS in the 2007 universe over the following time periods: end 2005 to January 2008 (the full time period since the end of the study); end 2005 to January 2007 (the first year after the study); January 2007-January 2008 (one year's performance for the Best Companies as released in January 2007). We also consider the performance of the universe since each of the two market peaks labelled in Chart 4: July 2007-January 2008 and October 2007-January 2008. As noted above, share price performance is currently likely to have more to do with short term market concerns rather than long term value creation. As the following charts show, membership of the list of 100 "Best Companies to Work for in America" does not translate to immunity against short term market volatility. Median index relative performance for this part of the Best Companies to Work For universe is consistently negative.

Membership of the list of 100 Best Companies to Work for in America does not translate to immunity against short term market volatility. Median US$ index relative performance for the 31 stocks covered by UBS in the 2007 "Best Companies to Work For" universe is consistently negative in the two years since the study.

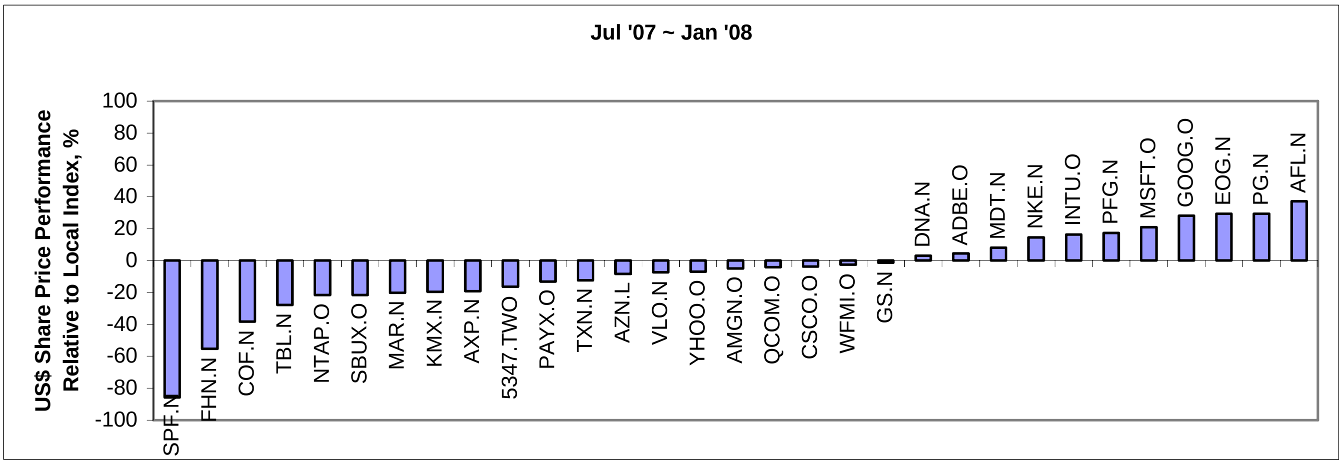
Chart 5: "Best Companies to Work For" Covered by UBS - Benchmark Relative Share Price Performance Oct '07~Jan '08



Source: Primark Datastream

Best five performers October '07~January '08: Microsoft Corp, EOG resources, AFLAC Inc., P&G, Google Inc. Worst performers: Standard Pacific Corporation, First Horizon National Corporation, Capital One Financial, Whole Foods Market Inc and Starbucks Corporation. Median index relative performance: 6.4%.

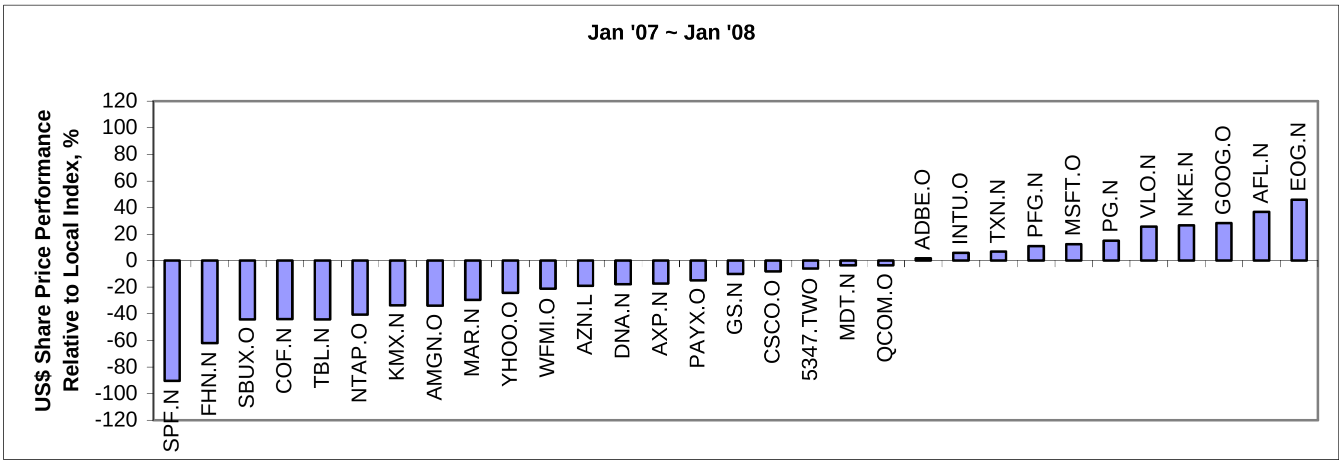
Chart 6: "Best Companies to Work For" Covered by UBS - Benchmark Relative Share Price Performance Jul '07~Jan '08



Source: Primark Datastream

Best five performers July 07~January '08: AFLAC Inc.; P&G; EOG Resources; Google Inc; Microsoft Corp.. Worst five performers: Standard Pacific Corp.; First Horizon National Corporation; Capital One Financial Corp.; Timberland Co.; Network Appliance. Median index relative performance -5.0%.

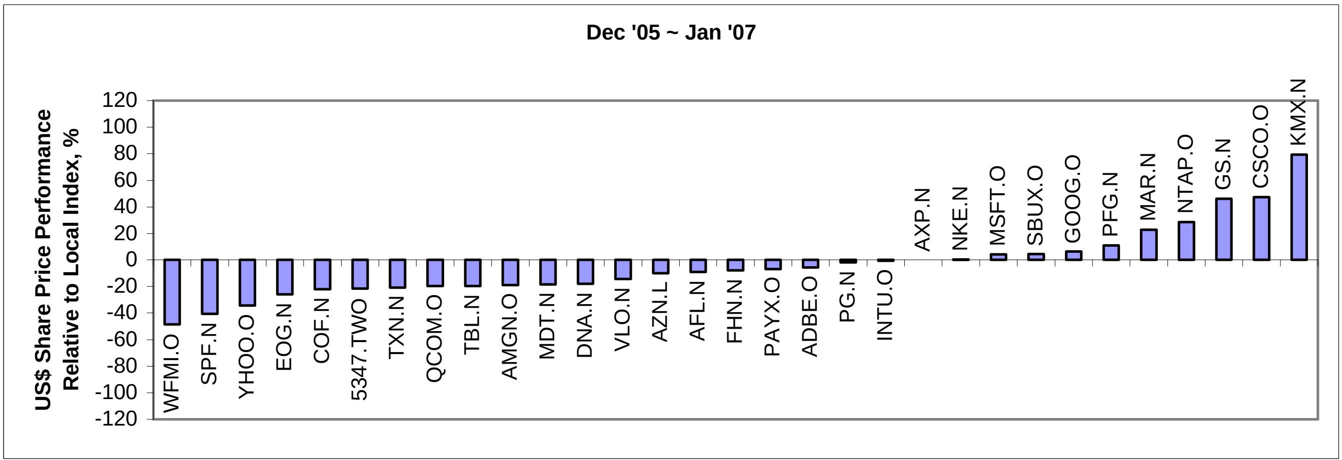
Chart 7: "Best Companies to Work For" Covered by UBS - Benchmark Relative Share Price Performance Jan '07~Jan '08



Source: Primark Datastream

Best five performers January 07 ~ January '08: EOG Resources; AFLAC Inc.; Google Inc.; Nike Inc; Valero Energy Corporation. Worst five performers: Standard Pacific Corp.; First Horizon National Corporation; Starbucks Corp.; Capital One; Timberland Co. Median index relative performance -10.2%

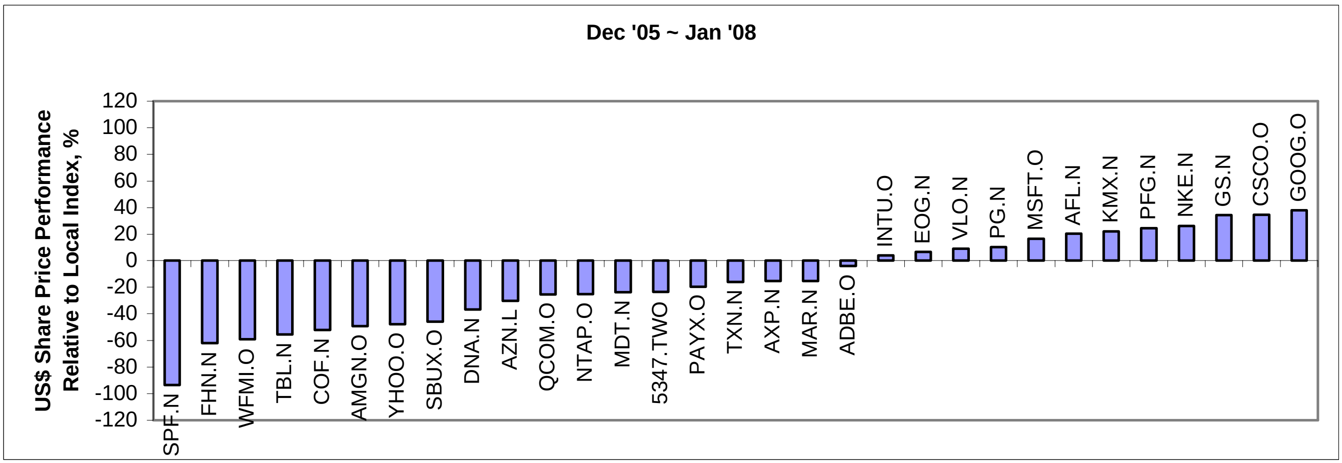
Chart 8: "Best Companies to Work For" Covered by UBS - Benchmark Relative Share Price Performance Dec '05~Jan '07



Source: Primark Datastream

Best five performers December 2005~January 2007: CarMax; Cisco Systems Inc.; Goldman Sachs; Network Appliance Inc.; Marriott International, Inc.. Worst five performers: Whole Foods Market, Inc.; Standard Pacific Corp.; Yahoo Inc.; EOG Resources; Capital One Financial Corp. Median index relative performance -7.9%

Chart 9: "Best Companies to Work For" Covered by UBS - Benchmark Relative Share Price Performance Dec '05~Jan '08



Source: Primark Datastream

Best five performers December '05~January '08: Google Inc.; Cisco Systems Inc.; Goldman Sachs; Nike Inc.; AFLAC Inc. Worst five performers: Standard Pacific Corp.; First Horizon National Corporation; Whole Foods Market, Inc.; Capital One Financial Corp; Timberland. Median index relative performance: -17.4%

This is not a rigorous study of performance; we have not risk adjusted the numbers, and returns are price returns, not total returns. Nevertheless, given the extent of median index underperformance as well as the consistent direction, we think it reasonable to suggest that human capital was probably not been the dominant driver of share price performance in 2006 and 2007. This raises the key question: do two years of underperformance invalidate the belief that, over the long run, human capital drives intangible value creation, in turn a long term driver of share prices? Conversely, does this two year performance divergence mean that current market conditions will bring along an opportunity to buy long term value creation through strong human capital management at reasonable valuations?

Key question: do two years of underperformance invalidate the belief that, over the long run, human capital drives intangible value creation, which, also over the long run, drives share prices?

One problem about intangibles and valuation, discussed in an April 2005 UBS publication "Corporate Social Responsibilities: Why Try to Quantify the Unquantifiable", is the impossibility of knowing whether a given factor is "in the price" or not. Quoting from this earlier publication in the context of Enterprise Value (EV): "It is impossible to know whether or not or to what extent the market is already discounting environmental and social issues in valuation. This problem is depicted below. If the market is discounting CSR [factors] and the model does not include them, then the model needs to be adjusted". Conversely, if the "model" has taken account of CSR factors (including human capital) and the market is ignoring them, then it is the market (the share price) that will eventually adjust.

Taking into account 8 years of positive alpha rigorously calculated by the writer of the study and two years of under performance observed here, the question is whether the model must adjust to meet the market – or whether the market has temporarily diverged from the "model".

Table 2: Valuation Dilemma

Calculated EV	Market ("Observed") EV:	Includes CSR effects	Excludes CSR effects
	Includes CSR effects	No gap between observed and calculated EV	When market recognises the liability, equity claims on EV will decline
	Excludes CSR effects	Calculated EV needs to be adjusted	No gap between observed and calculated EV

Source: UBS

Putting the key question in another way: taking into account 8 years of positive alpha rigorously calculated by the writer of the study and two years of under performance observed here on the basis of a much more superficial analysis, the question is whether the model will adjust to meet the market – or whether the market has temporarily diverged from the "model". At this juncture we believe is useful to leverage off a proprietary UBS model, the Value Creation Analysis Model – VCAM for short.

The question is whether the market has temporarily diverged from a longer-term model – or, of course, whether the "model" (or set of beliefs) needs adjustment.

A Brief Look at Valuation

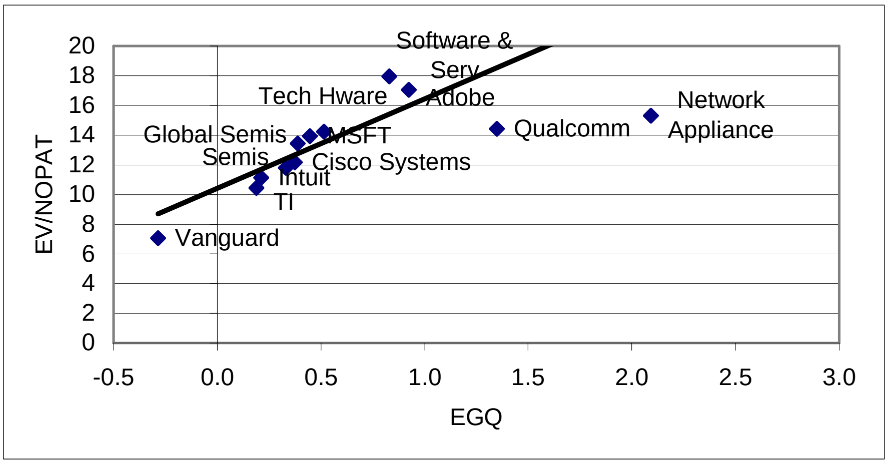
In our quest for valuation opportunities, we apply UBS's Value Creation Analysis Model **(VCAM)** to the stocks on a sector basis to see if "value" is apparent in the aftermath of some significant share price falls. In this model, the **EGQ (Economic Growth Quotient)** is a ratio that represents the value of expected economic profit growth relative to current earnings in perpetuity. **EV/NOPAT** (the ratio of enterprise value to normal operating profit less adjusted tax) is **a degeared PE ratio that allows for differences in effective tax rates**. It seems reasonable to look at these measures in the context of long horizon value generation and intangibles, and to do so at the sector level to control, to some extent, for the different risk profile of the stocks in the universe.

The metric: a "degeared PE" that allows for tax differences Vs the ratio of the value of expected economic profit growth relative to current earnings in perpetuity.

To this end, in the following chart we plot **EV/NOPAT** against the **EGQ** for the ten **technology stocks** covered by UBS in "Best 100" universe, juxtaposing them with S&P 500 industry averages for the semiconductor and equipment, software & services, and technology hardware sectors; as well as the global semiconductor industry (because of the presence of a Taiwanese stock). In technology, individual stock valuation (as reflected in EV/NOPAT) generally appears to be consistent with expectations of ability to generate value in the long run, as reflected in this model. Some adjustment may be due for stocks like Google, or Network Appliance. As above, will it be the model, or the market, that adjusts?

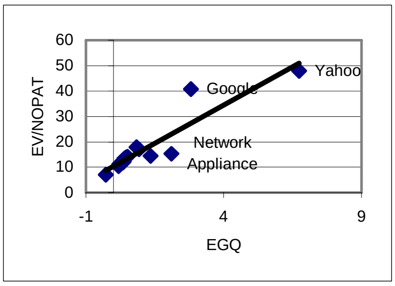
Ten technology stocks and a selection of relevant sector averages.

Chart 11: Technology: Zoom in on Chart 10, Bottom Left Hand Corner



Source: UBS-VCAM

Chart 10: Technology

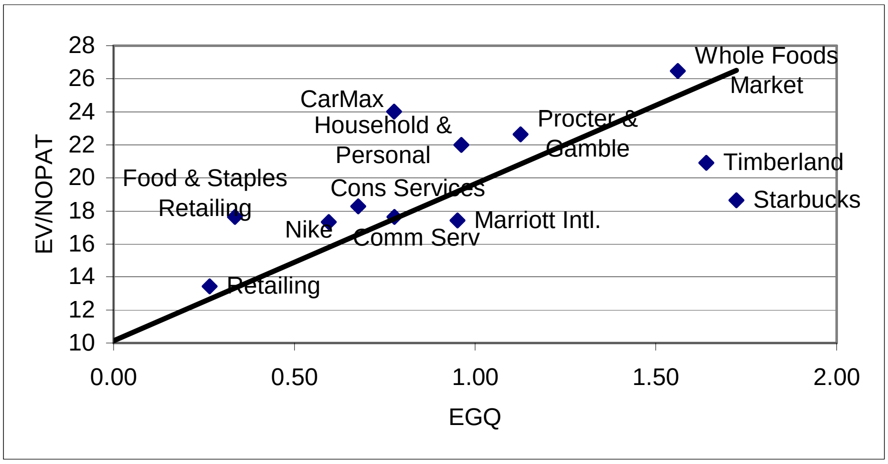


Source: UBS - VCAM

In the following chart we plot the EV/NOPAT against EGQ for the eight consumer stocks covered by UBS in "Best 100" universe, juxtaposing them with S&P 500 industry averages for consumer services, food staples retailing, household & personal and retailing. With 20-20 hindsight, the chart below suggests that the share prices of consumer stocks that have fallen heavily (charts 5-9) were reflecting optimistic growth expectations and the credit crunch has compressed formerly optimistic valuations. On the basis of this model, against the sector, Starbucks and Timberland stand out as potentially interesting. However – this is in relative terms only, and here too the question is whether it will be the model or the market that adjusts? Meanwhile, Standard Pacific (bottom left, chart 12), which has fallen heavily, is raises the possibility that financial turbulence may be putting human capital at risk.

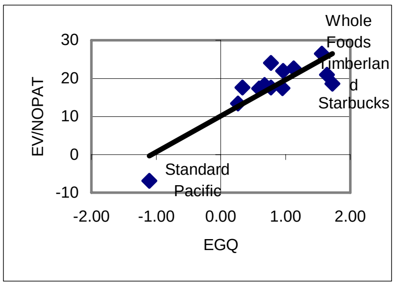
Eight consumer stocks and a selection of relevant sector averages.

Chart 13: Consumer, Zoom In on Chart 12, Top Right Corner



Source: UBS-VCAM

Chart 12: Consumer Services

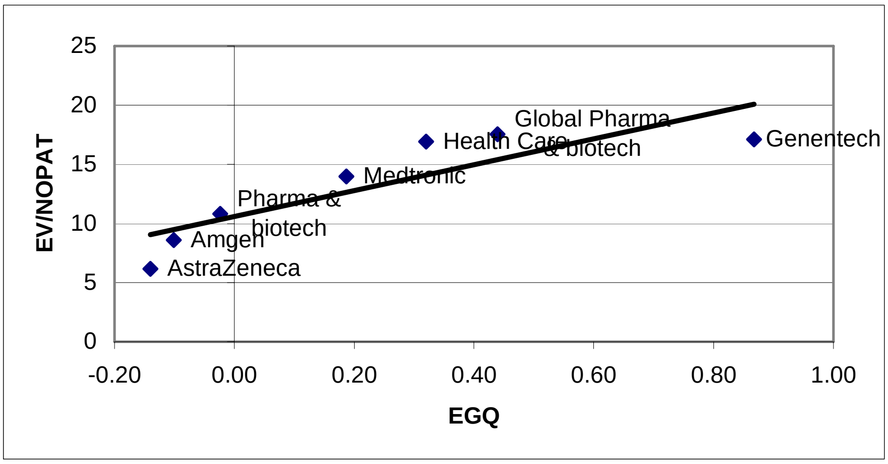


Source: UBS-VCAM

In the following chart we plot the EV/NOPAT against the EGQ for the four pharmaceutical and healthcare stocks covered by UBS in “Best 100” universe, juxtaposing them with S&P 500 industry averages for health care equipment and services, and pharma biotech and life sciences, as well as the global average for pharma and bio (to reflect the presence of a non-US stock). In this case, the suggestion is that either the model or the market could adjust for Genentech (currently rated Buy), or, at the opposite end of the scale, for Astrazeneca (currently rated Sell – see 5th November company note), noting that in this case we may also be observing a country effect.

Four pharmaceutical and healthcare stocks and some relevant sector averages

Chart 14: Pharmaceuticals & Healthcare



Source: UBS-VCAM

Conclusion

In current market conditions, consumer-driven stocks and sectors in particular are meeting heavy headwinds. For some firms in such sectors, **market conditions may be so extreme that they lead to human capital destruction** for the firm, compromising the ability to create economic value in the long run. However, **for others, credit market related turbulence and its impact on growth and consumption will be a short term set back**, and in our view this should apply particularly to firms **combining strong human capital performance with sound financials**. We believe 2008 may be a good year for contrarians to take long term value drivers into consideration in the context of consumer sectors, in particular, as the credit crunch and its consequences evolve.

2008 will be a good year for contrarians to take long term value drivers into consideration in the context of consumer sectors, in particular, as the credit crunch and its consequences evolve.

Appendix: Ratings and Valuations[7]

Table 3: Consumer Stocks

Company	GTPW 2007 Ranking	Industry	Rating	PT, Local FX	Close	% to Target	PER, 2007E	PER, 2008E	EV/EBIT, 2008E	PBR, 2008E	
Nike Inc.	69	Footwear	Buy	76.0	61.5	23.7%	16.1	17.0	11.1	4.2	Jeffrey Edelman
Timberland Co.	78	Footwear	Neutral	19.0	16.3	16.5%	22.6	13.7	15.7	1.9	Jeffrey Edelman
Standard Pacific Corp.	85	Home Construction	Neutral (CBE)	2.5	2.3	7.8%	(0.3)	(0.8)	NA	0.2	David Goldberg
Marriott International, Inc.	89	Lodging	Buy	59.5	32.3	84.2%	15.8	13.5	10.9	14.8	William Truelove
Starbucks Corp.	16	Restaurants	Buy	28.0	19.5	43.8%	35.7	19.1	23.4	7.4	David Palmer
Whole Foods Market, Inc.	5	Food Retailers & Wholesalers	Buy	56.0	35.0	60.0%	35.3	22.3	22.6	2.9	Neil Currie
Procter & Gamble	68	Household Products, Non-Durable	Buy	90.0	72.9	23.4%	20.5	20.9	15.2	3.6	Nik Modi
CarMax	88	Retailers, Specialty	Neutral	23.0	18.4	25.3%	22.4	21.4	13.5	1.3	Brian Nagel, CFA

Source: UBS

Table 4: Energy

Company	GTPW 2007 Ranking	Industry	Rating	PT, Local FX	Close	% to Target	PER, 2007E	PER, 2008E	EV/EBIT, 2008E	PBR, 2008E	
Valero Energy Corporation	22	Oil Companies, Secondary	Buy	88.0	62.0	42.0%	8.2	8.2	6.0	1.7	Mohan Mandrekar, CFA
EOG Resources	83	Oil Companies, Secondary	Neutral	91.0	88.6	2.8%	20.8	14.7	13.7	2.6	William Featherston

Source: UBS

[7] As at January 9th 2008

Table 5: Financial

Company	GTPW 2007 Ranking	Industry	Rating	PT, Local FX	Close	% to Target	PER, 2007E	PER, 2008E	EV/EBIT, 2008E	PBR, 2008E	
First Horizon National Corporation	46	Banks, Ex-S&L	Neutral-Short Term Sell	22.0	15.1	46.2%	(33.0)	15.4	NA	0.9	Eric Wasserstrom
American Express	74	Diversified Financial	Buy	73.0	48.1	51.8%	13.4	12.4	NA	4.4	Eric Wasserstrom
Capital One Financial Corp.	84	Diversified Financial	Neutral	50.0	42.0	19.1%	9.1	6.6	NA	0.6	Eric Wasserstrom
AFLAC Inc.	73	Insurance, Life	Buy	72.0	64.3	11.9%	19.1	16.7	NA	3.3	Andrew Kligerman
Principal Financial Group	77	Insurance, Life	Sell	55.0	65.5	-16.0%	NA	NA	NA	2.2	Andrew Kligerman
Goldman Sachs	36	Investment Services	Buy	250.0	188.1	32.9%	8.5	9.2	NA	1.7	Glenn Schorr, CFA

Source: UBS

Table 6: Pharmaceutical, Biotechnology & Healthcare

Company	GTPW 2007 Ranking	Industry	Rating	PT, Local FX	Close	% to Target	PER, 2007E	PER, 2008E	EV/EBIT, 2008E	PBR, 2008E	
Medtronic, Inc.	72	Advanced Medical Devices	Buy	61.0	50.3	21.3%	20.5	19.2	15.5	4.7	Bruce Nudell, PhD
Genentech, Inc.	2	Biotechnology	Buy	94.0	69.6	35.0%	26.4	22.1	16.4	4.9	Maged Shenouda
Amgen Inc.	40	Biotechnology	Neutral	61.0	47.0	29.7%	22.2	11.1	10.4	2.7	Maged Shenouda
AstraZeneca	71	Pharmaceuticals	Sell	2300.0	2301.0	0.0%	11.3	9.6	8.2	3.8	Gbola Amusa, MD, CFA

Source: UBS

Table 7: Technology, Industrial Services

Company	GTPW 2007 Ranking	Industry	Rating	PT, Local FX	Close	% to Target	PER, 2007E	PER, 2008E	EV/EBIT, 2008E	PBR, 2008E	
Cisco Systems Inc.	11	Communications Technology	Buy	35.0	25.9	35.3%	20.8	17.4	14.2	4.4	Nikos Theodosopoulos
Qualcomm Inc.	14	Communications Technology	Buy	54.0	37.0	46.1%	19.8	19.1	18.6	3.3	Maynard Um
Network Appliance Inc.	6	Computers	Neutral	28.0	22.9	22.2%	43.8	26.2	NA	3.7	Benjamin Reitzes
Google Inc.	1	Internet Services	Buy	785.0	631.5	24.3%	46.4	33.2	NA	5.8	Benjamin Schachter
Yahoo Inc.	44	Internet Services	Buy	36.0	21.7	65.8%	53.1	46.9	24.5	2.6	Benjamin Schachter
Texas Instruments Inc.	87	Semiconductors	Neutral	36.5	30.0	21.6%	16.6	14.9	11.5	3.9	Uche Orji
Vanguard	95	Semiconductors	Neutral	27.3	22.5	21.1%	10.8	11.7	5.3	1.7	William Dong
Adobe Systems Inc.	31	Software	Buy	52.0	39.4	32.1%	29.0	23.7	21.3	3.9	Heather Bellini, CFA
Intuit Inc.	33	Software	Neutral	33.0	30.9	6.9%	23.3	21.3	14.2	6.2	Heather Bellini, CFA
Microsoft Corp.	50	Software	Buy	40.0	34.0	17.7%	18.6	18.3	12.7	11.6	Heather Bellini, CFA
Paychex	70	Industrial Services	Buy	49.0	33.6	46.1%	28.5	21.3	21.6	9.1	Adam Frisch

Source: UBS

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UBS Investment Research: Global Equity Rating Allocations

UBS 12-Month Rating	Rating Category	Coverage[1]	IB Services[2]
Buy	**Buy**	55%	39%
Neutral	**Hold/Neutral**	36%	36%
Sell	**Sell**	8%	20%
UBS Short-Term Rating	**Rating Category**	**Coverage[3]**	**IB Services[4]**
Buy	**Buy**	less than 1%	25%
Sell	**Sell**	less than 1%	50%

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 2007.

UBS Investment Research: Global Equity Rating Definitions

UBS 12-Month Rating	Definition
Buy	FSR is > 6% above the MRA.
Neutral	FSR is between -6% and 6% of the MRA.
Sell	FSR is > 6% below the MRA.
UBS Short-Term Rating	**Definition**
Buy	Buy: Stock price expected to rise within three months from the time the rating was assigned because of a specific catalyst or event.
Sell	Sell: Stock price expected to fall within three months from the time the rating was assigned because of a specific catalyst or event.

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Additional Prices: AstraZeneca, 2,234p (08 Jan 2008); Genentech, Inc., US$68.14 (08 Jan 2008); Google Inc., US$631.68 (08 Jan 2008); Standard Pacific Corp., US$2.62 (08 Jan 2008); Starbucks Corp., US$19.86 (08 Jan 2008); Timberland Co., US$16.44 (08 Jan 2008); Source: UBS. All prices as of local market close.

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