# Corporate Long-Range Quantitative Goals: *Profit or Growth?*

## JOSEPH AHARONY AND ELI NOY

**JOSEPH AHARONY**
is a professor of accounting at Tel Aviv University in Tel Aviv, Israel.
yossia@tauex.tau.ac.il

**ELI NOY**
is a junior faculty member at Tel Aviv University, Faculty of Management in Tel Aviv, Israel.
elinoy@post.tau.ac.il

When making strategic investment decisions in corporate equity, private wealth management firms often confront the dilemma of whether to pursue firms whose long-range strategic quantitative goals center on profits or those whose goals center on growth. To provide insight for these two important aspects, one needs to look more closely into the corporate strategic business behavior.

Business strategy is not an aim in itself but "a set of objectives, policies and plans that taken together define the scope of the enterprise and its approach to survival and success" (Rumelt [1980]). Noy [1998] argues that one of the five components of "total strategy" must be an explicit statement of the firm's long-range quantitative goals (LRQGs) that represent the aspiration of the firm for "survival and success," where the other four components represent the "policies and plans" to reach these goals. The purpose of this research is to test the hypothesis that having long-range quantitative goals of profit and growth is a major part of the strategy definition of firms, that both goals are equally important, and firms having such goals outperform those that have none.

The question of what is "survival and success" and what are the "set of objectives" is part of the longstanding and ongoing controversy about the theory of the firm and may be summed up by the argument made by Penrose [1995, p. 26]: "firms are motivated by the need for profit and growth," which are the LRQGs. The same arguments, as to the need to define LRQGs as part of the definition of strategy, were made by other scholars that offered such explicit definitions of strategy as "profit objectives as well as risk-return guidelines" (Andrews [1980]); "the way the firm obtains the return on its investments" (Hambrick and Fredrickson [2001]); "the goal structure of the business—long or short range investment" (Abell [2006]).

Not having specific-enough goals like LRQGs, different people in the firm may have different interpretations as to what "survival and success" means. Any strategic plan that is not accompanied by the quantitative aspect of this "survival and success," namely LRQGs, cannot be tested as to its feasibility, cannot be controlled, nor can corrective action be taken during its implementation (Noy [1998, 2001]). What is more, there is no way to check if the goals were or were not reached ex post if the goals were not specific ex ante. Looking into such corporate documents as letters to shareholders in the annual financial reports or management presentations at investors' meetings, we find that LRQGs are mostly expressed in terms of targets of profit and growth, supporting Penrose's [1995] ideas. The components of LRQGs and the influence of LRQGs on firm performance have, thus far, not been evaluated empirically.

The need for LRQGs has become an important issue on the corporate business

strategy agenda. Noy [1998, 2001] argues that establishing LRQGs is essential for the definition of corporate strategy as well as for testing the feasibility of the corporate strategic plan. Goold and Quinn [1993] consider LRQGs to be mandatory for effectively implementing strategic control systems. Some scholars argue that the lack of LRQGs is an important reason for corporate failures in implementing strategic plans (Mintzberg [1994]; Wilson [1994]; Simpson [1998]), and still the question as to the nature of the LRQG remains open.

We started our search to find an answer to the question of the nature of LRQGs by looking at the arguments presented by scholars dealing with the theory of the firm. The commonly held assumption that firms aim only to maximize expected profits (Baumel [1962]; Marris [1964]; Tirole [1988]) faces some challenges. Cyert and March [1963] argue that on one hand, profits are not the only objective of the firm and have to be balanced against organizational objectives of the various participants of the organization, such as directors, managers, or employees; on the other hand, they support the concept presented by Simon [1952] and Margolis [1958] of satisfactory profit to replace maximum profit as one of the firm's objectives. Drucker [1995] argues against a single objective of the firm of maximizing profit and suggests that "to manage a business is to balance a variety of needs and goals." And finally Penrose [1995] argues that "firms are motivated by the need for profit and growth." Miller and Cardinal [1994], in their comprehensive review covering more than two decades of research on strategic planning and firm performance, perceive growth and profit as the performance measures similar to the arguments presented by Penrose [1995]. The latest addition to the concept that profit and growth are decisively firms' goals was made by Chakravarthy and Lorange [2007], who argue in their book, which is a result of empirical research, that public companies anywhere in the world are driven by two goals: profit and growth.

These views may imply that profit and growth, as long-range quantitative goals, are the two main driving forces within the domain of the firm's strategic behavior, and are supporting their need for strategy formulation, strategic planning, testing the feasibility of strategic plans, strategic control, and sometimes even as the framework for bonus payments.

Pursuing this approach that profit and growth are the best representatives of LRQGs brings us to the question of whether profit and growth are equally important as LRQGs or whether one has a more dominant impact than the other on corporate long-range performance. March [1991] developed a theory that argues that a profit goal is "exploitation" prone and mainly positively affects the short-range profits, while a growth goal is "exploration" inclined and as such might negatively affect short-range profits. He argues that in order to achieve survival and prosperity, the LRQG strategy should balance between resources appropriated to exploitation, which will enhance profit, and those directed to exploration, which will ensure growth. His arguments are seconded by Chakravarthy and Lorange [2007], who suggest a way to do the balancing between profit and growth, which they labeled "profitable growth."

The way of balancing profit and growth has major importance to members of any organization. In order to have them understand their goals and, especially when they have to choose between alternative decisions either to enhance profit and slow growth or the other way around, the firm has to state explicitly their long-range goals, either balancing both goals of profit and growth or have either profit or growth as the dominant goal.

The findings of Canals [2000, 2001], in his case study analysis of Spain's Banco Popular, suggests the supremacy of growth over profit as the LRQG. Following a strategy that always aimed at seeking profitability rather than growth, the bank, as Canals describes it, focused its efforts on cost reduction and efficiency improvements rather than investing in growth-oriented projects. When its fortunes nevertheless declined, the bank continued to invest ever-increasing funds in an effort to remain competitive, but profit margins continued to slide, seriously jeopardizing its solvency. It was only after it made a major strategic change—putting growth as its dominant long-range goal—that the bank was able to turn around the negative trend. One more argument to support the supremacy of growth over profit is presented by Slywotzky and Wise [2002], who argue that there is no substitute for "revenue growth," which is the foundation of steady earnings and share price growth.

## RESEARCH HYPOTHESIS

In his article "Total Strategy—The Missing Link," Noy [1998] argues that "total strategy" is composed of five determined strategic decisions that a company must make:

1. *What are our markets?* What are the needs (existing or to be developed) of the markets and customers that our firm wants to satisfy?

2. *What should be our generic competitive advantage?* The four generic strategies presented by Michael Porter [1980, 1985] are "Cost Leadership," "Differentiation," "Cost Focus," and "Differentiation Focus."
3. *Are we going to be technology leaders or followers?* The firm has to choose between being proactive (leaders) or to not make a market disruption and choose to be a "fast follower" to the leader or just a "follower" in what and when it is advantageous to the firm.
4. *What is our attitude to risk?* What risks, and to what extent, are we willing to take in the various activities of the firm, such as product development, entering new markets, financial risks, or risks in investing in tangible assets.
5. *What are our long-range quantitative goals?*

The first four components are the principal policies to achieve the explicit goals that are defined in the fifth component.

The first hypothesis is trying to confirm the existence of the fifth component—LRQGs in a firm's strategy and, as such, helps corroborate the argument presented in Noy [1998] as well as components in other strategy definitions, namely "profit objectives as well as risk-return guidelines" (Andrews [1980]) and "the way the firm obtains the return on its investments" (Hambrick and Fredrickson [2001]):

**$H_1$**: *Most firms explicitly use long-range quantitative goals.*

The second hypothesis is aimed at validating the related argument to LRQGs in this article that the quantitative targets should be profit and growth. This part of the argument is presented by other scholars (e.g., Penrose [1995], Slywotzky and Wise [2002], Chakravarthy and Lorange [2007]). Being aware that in trying to balance exploitation and exploration (March [1991]) some firms might prefer to be exploitation oriented and as such have only profit goals, while other firms might choose to be exploration oriented and have only growth goals, our second hypothesis is as follows:

**$H_2$**: *Firms explicitly use growth and/or profit as their long-range quantitative goals.*

The arguments presented by Canals [2000, 2001] and Slywotzky and Wise [2002] suggest that growth has a stronger influence on the firm's long-range performance. March [1991] argues that there is a possible conflict between growth goals and profit goals as to resource allocation, but

Chakravarthy and Lorange [2007] suggest a way to reach both goals. The question to be tested is whether growth should be the dominant LRQG as it better serves the long-range comprehensive goal of the firm's survival and success. Or, in other words, is profit really trailing growth? Our third hypothesis aims at testing this argument.

**$H_3$**: *Growth is more important than profit as a long-range quantitative corporate goal in its effects on the firm's long-range performance.*

The question of the influence of having a strategy and strategic planning on the performance of firms is a subject of inconsistent findings. Miller and Cardinal [1994] developed an encompassing contingency model that might explain this inconsistency. The empirical testing of their model suggests that strategic planning positively influences firm performance of growth and profitability. Two other empirical researches support the positive association between strategic planning and performance (Brews and Hunt [1999]; Andersen [2000]). We argue that LRQGs are a vital part of strategic planning; no strategic plan can be tested for its feasibility, its implementation cannot be controlled, and no corrective action can be taken along the implementation (Noy [1998, 2001]). Based on those arguments we will test the assumption that firms having LRQG will outperform firms without LRQG.

**$H_4$**: *In the long run, firms with LRQG outperform those without explicitly stated LRQG.*

## SAMPLE AND METHODOLOGY

The four hypotheses are tested empirically using data from the Standard and Poor's 500 largest publicly traded U.S. firms. The relevant information concerning explicit long-range quantitative growth and profit goals will be investigated in each of the following documents: the letters to shareholders in the annual financial reports, management letters and strategy declarations, and management presentations at shareholders' or investors' meetings. Quantitative performance data and other quantitative data as well as industry affiliation (SIC group) will be retrieved from Compustat database.

To test hypothesis **$H_1$** that firms explicitly use long-range quantitative goals, we examine whether the proportion of firms in the sample with explicit LRQG data is significantly larger than the remaining part, which did not

specify any long-range goal in any of the documents published. The null hypothesis is that the proportion of each group in the population is 50%. A significant chi-square test for equal proportions will reject the null hypothesis that the two proportions are equal; that is, if the proportion of firms with explicit LRQG data will be significantly larger than the proportion of firms without LRQG data, it will support the hypothesis $H_1$ that firms explicitly use long-range quantitative goals. We will supplement the chi-square test with a Z test and an Exact test (Agresti [2002]).

Of the sample firms with explicitly stated LRQGs, we will compute the percentage of the firms that stated at least growth or profit and those that stated LRQG but neither growth nor profit. A significant chi-square test will reject the null hypothesis that the proportion of firms with goals other than profit and growth is 50%, thus supporting hypothesis $H_2$ that firms explicitly use profit and/or growth as their long-range quantitative goals.

To test hypothesis $H_3$ as to the relative importance of growth versus profit as LRQG, we carry out an OLS regression analysis in which the average annual percentage change in net income for firms that have numerical LRQGs along five years will be the dependent variable and having or not having growth and having or not having profit will be dummy variables. To control for non-LRQG attributes that might influence the annual percentage change in income, we will also record the following data:

1. The market value of the firms at the beginning of the period.
2. Leverage—total liabilities/total assets.
3. The industry group to which the firm belongs.

The regression result should show us the magnitude and significance of the influence of growth goals compared to profit goals on the change of income of firms along the tested period.

For the test of hypothesis $H_4$ we carry out an OLS regression analysis in which the average annual percentage change in net income for all the firms in the sample—those that have as well as those that do not have LRQG—over five years will be the dependent variable and having or not having LRQG will be dummy variables. To control for non-LRQG attributes that might influence the annual percentage change in income, we also record the following data:

1. The market value of the firms at the beginning of the period.

2. Leverage—total liabilities/total assets.
3. The industry group to which the firm belongs.

The regression results should show us the magnitude and significance of the influence of having LRQG compared to not having LRQG on the change of income of firms along the tested period.

## SAMPLE AND DATA CHARACTERISTICS

The websites of Standard and Poor's 500 largest publicly traded U.S. firms as of August 2001 served as the basis for the empirical analysis of the hypotheses concerning explicit long-range quantitative growth and profit goals. The aim of this analysis was to confirm the availability of each of the following documents: a letter to shareholders in the annual financial reports, management letters and strategy declarations, and management presentations at shareholders' or investors' meetings. The reason for focusing on these documents is that they cover all the public vehicles by which a firm may communicate its official LRQG. At the same time, the information on the websites of these closely watched publicly traded sample firms may be perceived as reliable, since even though most forward-looking statements are covered by the common legal reservation (e.g., Harley-Davidson [2004]), any deliberately false or misleading information may be a reason for legal action by investors. With the limitation that some of the sample firms for which LRQG information could not be found might have chosen not to make it public, even though it was available internally, the study thus covered all possible publicly available sources of LRQGs, including financial analysts' forecasts, whenever direct links to such forecasts appeared in a sample firm website. Several studies have supported the reliability of analysts' forecasts, which allow the firm to communicate its LRQG without any formal commitment, finding that the analysts make forecasts mostly in collaboration with the firms' top management after obtaining relevant input (Amir et al. [1999]; National Investor Relations Institute [2001]). Although it is possible that the 500 largest U.S. firms were able to hide other potentially important information regarding their LRQG that the study did not detect, it seems unlikely in view of the close watch that all stakeholders keep on these firms.

The websites of the firms listed in Standard & Poor's 500 index yielded relevant explicit LRQG data for 285 (57%) of the firms in 321 documents. Of these, 126 documents (39%) were letters of the chairman of the board

of directors to shareholders in the annual financial reports, 93 (29%) were financial analysts' forecasts linked directly to the firms' websites, 86 (27%) were formal management presentations at meetings of shareholders or investors, 12 (4%) were strategy statements, and four documents (1%) were mission statements. The remaining 215 Standard & Poor 500 firms (43% of the entire sample) did not specify any long-range goals in any of the documents published as of August 2001 that the study inspected.

## EMPIRICAL RESULTS

To test hypothesis $H_1$ that firms explicitly use long-range quantitative goals, the study examined whether the proportion of firms in the sample with explicit LRQG data (57%) is significantly larger than the remaining 43% that did not specify any long-range goal in any of the documents published as of August 2001 that the study inspected. The null hypothesis is that the proportion of each group in the population is 50%. A chi-square test for equal proportions rejects the null hypothesis that the two proportions are equal (at a significance level of $p < 0.01$); that is, the proportion of firms with explicit LRQG data is significantly larger than the proportion of firms without LRQG data, supporting hypothesis $H_1$ that firms explicitly use long-range quantitative goals. A Z test and an Exact test give similar results (Agresti [2002]).

Exhibit 1 presents the frequency distribution by type of LRQG among the 285 sample firms that specified at least one goal. It shows that 210 firms (73.7%) specified both growth and profit as their LRQG, and of these, 18 also specified some additional LRQG. Thirty-eight firms (13.3%) focused on growth as their main LRQG whereas twenty-four firms (8.4%) centered on profit. Finally, only 13 firms (4.6%) stated LRQGs other than growth or profit, such as market leadership, market share, leading market position, percentage of earnings from diversified activities, percentage of new products, percentage of income from international activities, percentage of free cash flow, and percentage of new customers. Thus, of the sample firms with explicitly stated LRQGs in the year 2001, the vast majority (95.4%) stated at least growth or profit, and 73.7% stated both growth and profit. A chi-square test strongly rejects (at a significance level of $p < 0.0001$) the null hypothesis that the proportion of firms with goals other than profit and growth is 50%, thus supporting hypothesis $H_2$ that firms explicitly use profit and/or growth as their long-range quantitative goals.

# EXHIBIT 1

**Frequency Distribution of Sample Firms by Type of Long-Range Quantitative Goals (as of August 2001)**

| | Firms with LRQG | |
|---|---|---|
| Type of LRQG | Frequency | Percent |
| Growth & profit only | 192 | 67.4 |
| Growth & profit and others | 18 | 6.3 |
| Growth only | 33 | 11.5 |
| Growth and others | 5 | 1.8 |
| Profit only | 20 | 7.0 |
| Profit and others | 4 | 1.4 |
| Others only | 13 | 4.6 |
| Total profit and/or growth | 272 | 95.4 |
| Total | 285 | 100 |

As the remaining research hypotheses focus on profit and growth as LRQG, the rest of the empirical analysis uses data from the 272 firms that stated profit and/or growth as their LRQG versus the 215 firms that did not specify any long-range goal in any of the documents published in 2001 that the study inspected.

Among the 272 firms that stated at least growth or profit as their LRQG, the specific operational measures of the profit and growth goals take different forms. Exhibit 2 shows the frequency distribution of the main types of measures used to quantify profit by the 234 sample firms that stated it as at least one of their LRQG. Exhibit 3 provides a similar frequency distribution of the main types of measures used to quantify growth by the 248 sample firms that stated it as at least one of their LRQG. Some firms use more than one measure for each goal and, as the evidence in Exhibits 2 and 3, respectively, indicates, 100% of the quantitative profit goals and 90.7% of the quantitative growth goals appear in accounting figures that are indicators of economic viability. Some of them, such as EPS, net profit, sales, gross margin, EBITDA, appear as official GAAP measures, while others, such as ROE and ROA, appear as pro forma accounts.

The finding that most firms explicitly use LRQGs and explicitly define them in terms of profit and/or growth lays the ground for testing hypothesis $H_3$ regarding the relative importance of profit and growth in affecting corporate long-range performance.

The following regression assessed the relative importance of growth and profit as long-range quantitative corporate goals:

## Exhibit 2

**Frequency Distribution of Sample Firms by Type of Long-Range Quantitative Profit Goals (as of August 2001)**

| Type of Profit Goal | Frequency | Percent |
|---|---|---|
| Earnings per share (EPS) | 86 | 30.7 |
| Net profit | 67 | 23.9 |
| Return on equity (ROE) or return on assets (ROA) | 33 | 11.8 |
| Gross margin | 23 | 8.2 |
| Earnings before interest, tax, depreciation and amortization (EBITDA) | 14 | 5.0 |
| Return on invested capital after tax (ROICAT) | 5 | 1.8 |
| Others[1] | 52 | 18.6 |
| Total[2] | 280 | 100 |
| Accounting figures[3] | 280 | 100 |

*Notes: [1]Indirect profit accounting data such as cash flow, savings, debt to equity, debt amortization, synergies out of integration, etc.; [2]The total number of sample firms is 234. Some firms may use more than one profit goal measure; [3]Any figure which has an economic value.*

## Exhibit 3

**Frequency Distribution of Sample Firms by Type of Long-Range Quantitative Growth Goals (as of August 2001)**

| Type of Growth Goal | Frequency | Percent |
|---|---|---|
| Growth in net profit | 116 | 33.8 |
| Growth in sales | 80 | 23.3 |
| Growth in earnings per share | 65 | 19.0 |
| Others[1] | 82 | 23.9 |
| Total[2] | 343 | 100 |
| Accounting figures[3] | 311 | 90.7 |

*Notes: [1]Mostly production or service capacity growth, in the whole corporation or in specific segments; [2]The total number of sample firms is 248. Some firms may use more than one growth goal measure; [3]Any figure that has an economic value.*

$$AACI_j = a_0 + a_1 DP_j + a_2 DG_j + a_3 (DP_j)(DG_j)$$
$$+ a_4 LN(MV)_j + a_5 LEV_j + a_6 IND1_j$$
$$+ a_5 IND2_j + a_8 IND3_j + a_9 IND4_j$$
$$+ a_{10} IND5_j + \varepsilon_j \qquad (1)$$

where

$AACI_j$ = the average annual percentage change in net income for firm j in the five-year period 1995 to 2000 (computed from the Compustat measure Mnemonic CNI5, calculated as the fifth root of the rate of change between the 1995 net income and the 2000 net income minus 1),

$DP_j$ = a dummy variable, equal to 1 when firm j provides a defined numerical long-range profit goal and 0 otherwise,

$DG_j$ = a dummy variable, equal to 1 when firm j provides a defined numerical long-range growth goal and 0 otherwise,

$(DP_j)(DG_j)$ = an interaction dummy variable, equal to 1 when firm j provides both a defined numerical long-range profit goal and a defined numerical long-range growth goal, and 0 otherwise,

$Ln(MV)_j$ = the natural logarithm of total market value of equity for firm j as of fiscal year-end 2001,

$LEV_j$ = total liabilities/total assets for firm j as of fiscal year-end 2001,

$IND1_j$ = a dummy variable, equal to 1 when firm j is from the Mining & Construction major SIC Divisions B and C, respectively, and 0 otherwise,

$IND2_j$ = a dummy variable, equal to 1 when firm j is from the Manufacturing major SIC Division D and 0 otherwise,

$IND3_j$ = a dummy variable, equal to 1 when firm j is from the Public Utilities major SIC Division E and 0 otherwise,

$IND4_j$ = a dummy variable, equal to 1 when firm j is from the Wholesale & Retail major SIC Divisions F and G, respectively, and 0 otherwise,

$IND5_j$ = a dummy variable, equal to 1 when firm j is from the Financial Services major SIC Division H and 0 otherwise,

$IND6_j$ = a dummy variable, equal to 1 when firm j is from the Services & Public Administration major SIC Divisions I and J, respectively, and 0 otherwise (which is included in the regression constant),

$\varepsilon_j$ = an error term satisfying the OLS regression requirements.

After removing the 89 firms that did not have the positive 1995 and 2000 net income figures required for calculating the dependent variable, $AACI_j$, only 411 sample firms entered the regression for which the results are presented in Exhibits 5 and 6.

One may question the validity of identifying corporate LRQGs as of August 2001 while measuring long-range performance (AACI) over the preceding period,

1995–2000. One may also argue that the empirical results may be sensitive to the time period chosen for measuring AACI. A random search of the sample firms' websites in the years prior to 2001 for relevant documentation concerning declaration of long-term strategic goals was a first step in the direction of alleviating these concerns and validating the empirical results. The search yielded only a very limited number of firms for which any documentation could be found. The second step was a repeat of the empirical analysis with AACI measured from various other five-year periods, namely 1996 through 2001, 1997 through 2003, and 1998 through 2003 (the most recent year with data available on Compustat). Although this step resulted in the deletion of many more sample firms due to negative post-2000 earnings following the burst of the capital market bubble, the results obtained with the reduced samples remained substantially the same, implying that adopting LRQGs is an integral part of a firm's strategy and management culture, not just a passing fad.

Ln(MV) and LEV in Equation (1) are continuous control variables for size and financial leverage differences, respectively, across the sample firms, while the purpose of the discrete industry dummy variables is to detect any possible effects of the firm's industry affiliation. The importance of controlling for possible industry effects is that the common attributes that firms belonging to the same industry share may vary across industries. This is especially true of profit (Cave and Ghemawat [1992]). Exhibit 4 shows that the distribution of the entire sample of 500 firms across the six major two-digit SIC industry groups is very similar to that of the 411 firms with sufficient data to enter the regression analyses. A chi-square test cannot reject the null hypothesis that the proportion of firms in each industry for the 411 firms is the same as the corresponding proportion of firms in the entire sample of 500 firms ($\chi^2 = 2.9637$: p-value > 70%).

The Appendix shows the correlations made between all possible pairs of variables (including the dummy variable D0 to be discussed in the context of Equation (2)) to learn about the statistical relationship among the variables included in regression Equation (1). Pearson correlation coefficients appear in bold in the upper triangle, while Spearman correlation coefficients appear in the lower triangle. Clearly, the correlation coefficient between the two continuous variables, Ln(MV) and LEV, is very low and statistically insignificant. Further, the correlation coefficients of both Ln(MV) and LEV with any of the dummy independent variables included in regression Equation (1) are quite low and mostly statistically insignificant. Two notable exceptions are the significant negative correlation between LEV and IND2 (the Manufacturing Division) of –0.33 and the significant positive

## Exhibit 4

**Sample Firms' Classification by the Six Major Two-Digit SIC Industry Divisions (as of August 2001)**

| Major Industry Division | 2-Digit SIC Code | Dummy Variable | Entire Sample of S&P 500 | | Sample Firms Included in the Regression Analysis | |
|---|---|---|---|---|---|---|
| | | | Frequency | Percent | Frequency | Percent |
| Mining & Construction | 10–17 | IND1 | 24 | 4.8 | 17 | 4.2 |
| Manufacturing | 20–39 | IND2 | 228 | 45.6 | 190 | 46.2 |
| Public Utilities | 40–49 | IND3 | 69 | 13.8 | 53 | 12.9 |
| Wholesale & Retail | 50–59 | IND4 | 51 | 10.2 | 45 | 10.9 |
| Financial Services | 60–67 | IND5 | 77 | 15.4 | 71 | 17.3 |
| Services and Public Administration | 70–99 | IND6 | 51 | 10.2 | 35 | 8.5 |
| **Total** | | | **500** | **100%** | **411** | **100%** |

*Note: IND6 is included in the regression constant.*

correlation between LEV and IND5 (the Financial Services Division) of 0.47.

The high positive correlation (0.74) between the two main variables of interest, DP (which serves as an indicator of firms providing defined numerical long-range profit goals) and DG (which indicates firms providing defined numerical long-range growth goals), is no surprise, as 160 sample firms out of the 411 that entered the regression analysis provide both defined numerical profit and growth goals. Discernible interaction effects may thus impede separate assessment of the relative importance of growth and profit as long-range quantitative corporate goals. To test for this possibility, Equation (1) includes the interaction variable $(DP_j)(DG_j)$ which obtains a value of

one for any sample firm j that provides both defined numerical long-range profit and growth goals, and zero otherwise. The calculation of the variance inflation factor (Neter et al. [1983]) for all regression variables, as discussed later in this article, aimed to address concerns about the high correlation between DP and DG giving rise to multicollinearity problem in the regression analysis. The results indicate the absence of serious multicollinearity problems in regression Equation (1).

The regression results for Equation (1), which appear in Exhibit 5, focus on the two indicator variables, DP and DG, with the aim of assessing the relative importance of profit and growth as long-range quantitative corporate goals. Thus, to examine whether they have a significant incremental effect,

# EXHIBIT 5
## Regression Results of Equation (1)

| | Estimated Coefficients | | | | |
|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) |
| DP | | | −12.41 | −9.41 | −10.35 |
| | | | (−1.74) | (−1.37) | (−1.54) |
| DG | | | 13.91 | 14.80 | 14.53 |
| | | | (2.44**) | (2.71**) | (2.72**) |
| (DP)(DG) | | | −2.92 | −4.75 | −2.63 |
| | | | (−0.32) | (−0.54) | (−0.30) |
| Ln(MV) | 5.32 | 5.17 | | 5.16 | 4.96 |
| | (4.46***) | (4.40***) | | (4.34***) | (4.24***) |
| LEV | −0.33 | −0.46 | | −0.34 | −0.47 |
| | (−4.78***) | (−5.74***) | | (−4.84***) | (−5.92***) |
| IND1 (Mining & Construction) | | 13.25 (1.57) | | | 12.77 (1.51) |
| IND2 (Manufacturing) | | −16.27 (−3.11**) | | | −15.95 (−3.07**) |
| IND3 (Public Utilities) | | −7.19 (−1.15) | | | −6.22 (−1.00) |
| IND4 (Wholesale & Retail) | | −14.46 (−2.26*) | | | −15.37 (−2.42*) |
| IND5 (Financial Services) | | −0.78 (−0.12) | | | −0.02 (−0.00) |
| Constant | −9.77 | 8.92 | 18.30 | −9.16 | 10.05 |
| | (−0.83) | (0.69) | (8.48***) | (−0.77) | (0.78) |
| Adjusted R² | 0.087 | 0.141 | 0.018 | 0.103 | 0.158 |

Notes: 411 observations; t-statistics are in parentheses.

***Significant at the 0.0001 level or less (one-tailed test); **Significant at the 0.01 level or less (one-tailed test); *Significant at the 0.05 level or less (one-tailed test).

the two variables of interest entered the regression after the control variables. Accordingly, in column 1 only the size and leverage variables enter and then in column 2 the industry dummies. As expected, size is positively related to the corporate long-range performance measure (AACI) while leverage is negatively related. Both these coefficient estimates are highly statistically significant and the adjusted $R^2$ is 8.7%. Adding the industry fixed effects to the regression to control for the possible effect of a firm's industry affiliation results in an increase of the adjusted $R^2$ to 14.1%. Only two industry dummies—IND2 (Manufacturing) and IND4 (Wholesale & Retail)—exhibit statistically significant coefficient estimates, both negatively associated with the dependent variable.

A run of regression Equation (1) without the control variables tested for the possibility that discernible interaction effects may obscure the ability to separately assess the relative importance of growth and profit as long-range quantitative corporate goals. The results presented in column 3 of Exhibit 5 indicate that the estimated coefficient of the interaction variable is statistically insignificant, and while the estimated coefficient of the profit indicator, DP, is negative but insignificant, that of the growth indicator, DG, is positive and highly significant. The interaction effects thus appear not to obscure the ability to separately assess the relative importance of growth and profit as long-range quantitative corporate goals.

To examine whether the two indicator variables of interest have significant incremental effects, they were added first to the two continuous control variables, size and leverage, and then also to the industry control dummies to run regression Equation (1) in its entirety. As columns 4 and 5, respectively, show, the results and conclusions remain unchanged. The growth indicator coefficient, DG, is positive and highly significant while the profit indicator coefficient, DP, is negative but insignificant, as is the coefficient of the interaction variable. The magnitudes, signs, and statistical significance of all control variables are very similar to those reported in the first two columns of Exhibit 5. The adjusted $R^2$ increases from 14.1% for the partial model that includes only the control variables (column 2) to 15.8% for the full model (column 5). F statistics test the significance of the incremental contribution of DP, DG, and the interaction variable, DP × DG, when all the control variables are already included in the model. The null hypothesis is that $a_1 = a_2 = a_3 = 0$. The results suggest that these variables have significant incremental explanatory power (at $p < 0.02$), rejecting the null

hypothesis. A chi-square test provides similar results (Maddala [2001]).

The variance inflation factor (VIF) tested for multicollinearity among the independent variables in Equation (1) for all regression variables. Following Neter et al. [1983], who suggest that a VIF level below 10 indicates the absence of multicollinearity problems, the results of these tests indicate no serious multicollinearity problem in the regression analysis. Except for the interaction variable, which has a VIF value of 9.4 in the full model, none of the independent variables has a VIF value exceeding 5.8.

To conclude, the regression results are consistent with hypothesis $H_3$ that growth is more important than profit as a long-range quantitative corporate goal in its effect on the firm's long-range performance. They suggest that in the long run, other things being equal, one may expect firms with long-range growth goals to outperform those with long-range profitability goals.

The following regression examines hypothesis $H_4$, namely whether, in the long run, firms with explicitly stated LRQG outperform those that do not state their LRQG explicitly:

$$AACI_j = b_0 + b_1 D0_j + b_2 DP_j + b_3 DG_j + b_4 Ln(MV)_j + b_5 LEV_j + b_6 IND1_j + b_7 IND2_j + b_8 IND3_j + b_9 IND4_j + b_{10} IND5_j + \varepsilon_j$$

(2)

where

$D0_j$ = a dummy variable, equal to one when firm j does not state any long-range goal, and zero otherwise.

All other variables are as defined previously.

The focus is on the indicator variable D0, which distinguishes between sample firms that do not state long-range goals and those that do. As the Appendix shows, high correlations exist between each of the pairs deriving from the three main variables of interest, DP, DG, and D0. A calculation of VIF for all regression variables made to dispel concerns about a multicollinearity problem among the independent variables in Equation (2) shows that including the interaction variable, DP × DG, gives a VIF value for each of the three variables, DP, DG, and DP × DG, that is higher than 10. Of the three, the interaction variable has the highest VIF value (16.2), a clear indication of a multicollinearity problem. Deleting

the interaction variable from the regression equation resolved this problem, and the results reported are for this version of Equation (2).

The regression results of the version of Equation 2 without the interaction variable appear in Exhibit 6, again in modular fashion. Column 1 shows the results without any control variables; column 2 shows the results of adding the three indicator variables to the two continuous control variables, size and leverage; column 3 shows the results of rerunning regression Equation (2) after also adding the industry control dummies.

In each regression form, the coefficient of D0 is positive but statistically insignificant while the growth

# EXHIBIT 6
**Regression Results of Equation (2)**

| | Estimated Coefficients[(2)] | | |
| --- | --- | --- | --- |
| | (1) | (2) | (3) |
| D0 | 7.39 | 5.75 | 5.86 |
| | (1.15) | (0.94) | (0.98) |
| DP | −11.43 | −10.15 | −9.77 |
| | (−2.25*) | (−2.08*) | (−2.06*) |
| DG | 17.00 | 16.24 | 16.86 |
| | (2.95**) | (2.94**) | (3.13**) |
| Ln(MV) | | 5.11 | 4.96 |
| | | (4.31***) | (4.25***) |
| LEV | | −0.33 | −0.46 |
| | | (−4.79***) | (−5.80***) |
| IND1 | | | 13.91 |
| (Mining & | | | (1.66) |
| Construction) | | | |
| IND2 | | | −15.68 |
| (Manufacturing) | | | (−3.03**) |
| IND3 | | | −6.00 |
| (Public Utilities) | | | (−0.97) |
| IND4 | | | −15.37 |
| (Wholesale & | | | (−2.42***) |
| Retail) | | | |
| IND5 | | | −0.29 |
| (Financial Services) | | | (−0.05) |
| Constant | 11.97 | −13.70 | 4.39 |
| | (2.00*) | (−1.05) | (0.31) |
| | | | |
| Adjusted $R^2$ | 0.021 | 0.104 | 0.160 |

*Notes: 411 observations; t-statistics are in parentheses.*

****Significant at the 0.0001 level or less (one-tailed test); **Significant at the 0.01 level or less (one-tailed test); *Significant at the 0.05 level or less (one-tailed test).*

indicator coefficient, DG, is positive and highly significant and the profit indicator coefficient, DP, is negative and statistically significant. The magnitudes, signs, and statistical significance of the control variables are very similar to those reported in Exhibit 5 for Equation (1). The adjusted $R^2$ increases from 14.1% for the partial model that includes only the control variables (see Exhibit 5, column 2) to 16.0% for the full model (Exhibit 6, column 3). F statistics test the significance of the incremental contribution of D0, DP, and DG when all the control variables are already included in the model. The null hypothesis is that $b_1 = b_2 = b_3 = 0$. The results suggest that these variables have significant incremental explanatory power (at $p < 0.008$), rejecting the null hypothesis. A chi-square test provides similar results.

The VIF calculations testing for a multicollinearity problem among the independent variables in Equation (2) indicate the absence of multicollinearity problems in the regression analyses. The highest VIF value is 4.6 for the variable D0 in the full model, which is below the multicollinearity threshold alert level.

The statistically insignificant coefficient of D0 does not support hypothesis $H_4$ that in the long run firms with explicitly stated LRQG outperform those that do not explicitly state their LRQG. A possible explanation for these results may be seen in the evidence that the coefficient of DG—the long-range numerical growth goal—is significantly positive while that of DP—the long-range numerical profit goal—is significantly negative. Further, out of 272 companies that had LRQG, 210 had both profit and growth goals. Thus, the positive effect of the quantitative growth goals may have been offset by the negative effect of the quantitative profit goal.

# DISCUSSION

Following the argument of Penrose [1995] that firms are motivated above all by the drive to achieve long-run profit and growth as a prerequisite for survival and for the fulfillment of other social or non-economic objectives, this article examines empirically whether firms determine *a priori* long-range quantitative goals and the way they define these goals and incorporate them in their strategic commitment. The article focuses on the issues of whether firms use both profit and growth goals and whether profit goals trail growth goals or vice versa.

The empirical results provide strong evidence that most firms do have long-range quantitative goals in the form of profit and growth targets, mostly measured in accounting terms. The LRQG is providing the firm with the needed component of strategy as well as the attributes for testing the feasibility of the strategic plan and setting the reference for strategic control.

The most important finding is the supremacy of the long-range quantitative growth goals over the long-range quantitative profitability goals. These findings substantiate a recent argument that although managers may be able to temporarily boost earnings by slashing costs, this practice is "no substitute to revenue growth which is the foundation of steady earnings and share price growth"

(Slywotzky and Wise [2002]). There are other arguments that support the supremacy of growth over profit; firms that consider profit as their main long-range objective may be inclined to focus their efforts on cost reduction and efficiency improvements or on other short-range financial activities, rather than engaging in such long-range growth activities as product renewal and market development that will sustain their competitive position. Such firms may be much more susceptible to analysts' pressure to achieve short-range profitability goals. Thus, they may focus their efforts on reducing strategic investments to produce an outcome that may have very impressive short-term effects but harm the long-run survival of the firm. For example, a firm intent on attaining short-term

## EXHIBIT 7
Lessons to Corporate Managers, Private Wealth Management Firms, and Academicians

| Hypotheses | Empirical Findings | Lessons for Corporate Managers | Lessons for Private Wealth Management Firms | Lessons for Academicians |
|---|---|---|---|---|
| $H_1$: *Firms explicitly use LRQG* | Supported | Firms should include LRQG in formulating their strategy. | | The building blocks of comprehensive strategy formulation include LRQG. |
| $H_2$: *Firms explicitly use growth and/or profit as their LRQG* | Supported | Growth and profit are the most common LRQG but may take various forms. | | Accounting values play a prominent role in the measurement of long-range quantitative profit and growth goals. |
| $H_3$: *Growth is more important than profit as an LRQG in its effects on the firm's long-range performance* | Supported | Growth leads profit as an LRQG but the two are complementary. | Preference should be given to investments in corporate firms with long-range growth goals rather than those with profit goals only. | Further research is needed to substantiate these results using different samples and time periods. |
| $H_4$: *Firms with LRQG outperform those without LRQG, in the long run* | Not supported | | | Further research is needed to examine the possible reasons for the offsetting effects of growth goals and profit goals on the firm's long-range performance. |

profit goals in terms of annual earnings per share (EPS) may acquire firms with lower price-earnings ratios, rather than firms with a long-range strategic fit. It may achieve an increase in its EPS not necessarily through increasing earnings but rather by diverting funds to repurchase its own shares, thus reducing the number of shares for income per share calculation.

Do these results lead us to conclude that all firms with only growth goals significantly outperform firms with only profit goals as well as those without any long-range quantitative goals? Porter [2001] claims that in the last decade many dot-com companies in the New Economy took this conclusion ad-absurdum by adopting only non-accounting and non-economic growth goals, such as number of customers, number of unique users, number of site visitors or click-through rates, and completely disregarded profit goals. These firms were trying to convince themselves, as well as their investors, that the new non-economic definitions of growth by themselves would produce profits in the long run. The theory of "exploration" and "exploitation" (March [1991]) and the subsequent arguments of the way to balance between the two by adopting "profitable growth" support the argument to have both goals of profit and growth, although it might imply, as we argue, that growth is the leading goal.

## CONCLUSION

The results of this study, as summarized in Exhibit 7, have important lessons for corporate managers, private wealth management firms, and academicians. The main lessons for corporate managers are that 1) firms should include LRQGs in formulating their strategic behavior, 2) growth and profit are the most common LRQGs, and 3) growth leads profit as a LRQG but the two are complementary. The recent decision of Jeff Immelt, the CEO of General Electric, to shift his company's mindset by linking bonuses to sales growth with less emphasis on

bottom-line results (Brady [2005]) is supportive testimony for the validity of the results and conclusions.

The lesson for private wealth management firms is that from a long-range perspective, when making investment decisions in corporate equity, preference should be given to investments in corporate firms with long-range growth goals rather than those with profit goals only.

The main lesson for academicians is the very limited empirical research on the effect of exante long-range strategic quantitative goals on the firm's performance. Thus, additional research may prove beneficial and rewarding. Bearing in mind that the building blocks of comprehensive strategy formulation include LRQGs and that accounting values play a prominent role in the measurement of long-range quantitative profit and growth goals, future research needs to substantiate the main results of this study using different samples and time periods and to examine the possible reasons for the offsetting effects of growth goals and profit goals on the firm's long-range performance.

The result of our study may also be visualized in the context of the 2008 global financial and economic turmoil originated in the most-developed Anglo Saxon countries. Documentation of the sequence of events leading up to the crisis (Goodhart [2008], Evans [2008], Park [2008], Tett [2007]) tells us that certain short-term business practices may need to be revisited. To a large extent, the disastrous economic outcome may be attributed to corporate managers who took a narrow short-term view of profit maximization, jeopardizing long-range survival. The evidence points out that the root of problem is greed and excessive risk taking by managers focusing on short-term (90 days) interim financing of structured investment vehicles that had, on average, multiple-year maturities (Goodhart [2008]) and were, typically, off-balance-sheet financial instruments. Pursuing long-range strategic goals may reduce corporate managers' involvement in short-term business practices with disastrous economic consequences.

# APPENDIX

## Correlation Matrix among the Variables in Models (1) and (2)

| Variables | AACI | D0 | DP | DG | Ln(MV) | LEV | IND1 | IND2 | IND3 | IND4 | IND5 | IND6 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AACI | 1.00 | 0.03 | −0.08 | 0.04 | 0.20*** | −0.22*** | 0.15** | −0.10* | −0.01 | −0.05 | 0.02 | 0.12* |
| D0 | 0.02 | 1.00 | −0.79*** | −0.85*** | 0.05 | −0.10* | −0.01 | −0.00 | 0.00 | −0.03 | 0.02 | 0.01 |
| DP | −0.05 | −0.79*** | 1.00 | 0.74*** | −0.08 | 0.07 | −0.04 | −0.00 | 0.01 | 0.02 | −0.00 | −0.01 |
| DG | 0.05 | −0.85*** | 0.74*** | 1.00 | −0.04 | 0.08 | −0.02 | −0.02 | −0.03 | 0.08 | −0.00 | 0.01 |
| Ln(MV) | 0.30*** | 0.04 | −0.06 | −0.02 | 1.00 | 0.04 | −0.09* | −0.03 | 0.01 | −0.09 | 0.15** | 0.00 |
| LEV | −0.15** | −0.10* | 0.07 | 0.08 | 0.08 | 1.00 | −0.04 | −0.33*** | 0.14* | −0.09 | 0.47*** | −0.07 |
| IND1 | 0.09 | −0.02 | −0.03 | −0.02 | −0.09 | −0.06 | 1.00 | −0.19*** | −0.08 | −0.07 | −0.09* | −0.06 |
| IND2 | −0.14* | −0.00 | −0.00 | −0.02 | −0.05 | −0.33*** | −0.19*** | 1.00 | −0.36*** | −0.33*** | −0.42*** | −0.028*** |
| IND3 | −0.02 | 0.00 | 0.01 | −0.02 | 0.03 | 0.15* | −0.08 | −0.36*** | 1.00 | −0.13** | −0.18*** | −0.12* |
| IND4 | −0.01 | −0.03 | 0.02 | 0.08 | −0.09 | −0.12* | −0.07 | −0.33* | −0.13** | 1.00 | −0.16** | −0.11 |
| IND5 | 0.12* | 0.03 | −0.00 | −0.00 | 0.17** | 0.49* | −0.09* | −0.42*** | −0.18*** | −0.16** | 1.00 | −0.14* |
| IND6 | 0.05 | 0.01 | −0.01 | 0.01 | −0.02 | −0.07 | −0.06 | −0.28*** | −0.12* | −0.11 | −0.14* | 1.00 |

*Notes: Pearson correlation coefficients appear in bold in the upper triangle. Spearman correlation coefficients appear in the lower triangle.*

****Significant at the 0.0001 level or less (two-tailed test); **Significant at the 0.002 level or less (two-tailed test); *Significant at the 0.05 level or less (two-tailed test).*

**AACI** = Average annual percentage change in net income in the five-year period 1995 to 2000; **D0** = A dummy variable, equal to 1 when a sample firm does not provide any goal and zero otherwise.; **DP** = A dummy variable, equal to 1 when a sample firm provides a defined numerical long-range profitability goal and zero otherwise; **DG** = A dummy variable, equal to 1 when a sample firm provides a defined numerical long-range growth goal, and zero otherwise; **Ln(MV)** = Natural logarithm of total market value of equity as of fiscal year-end 2001; **LEV** = Total liabilities/total assets as of fiscal year-end 2001; **IND1** = A dummy variable equal to 1 when a sample firm is from the Mining & Construction SIC Divisions and 0 otherwise; **IND2** = A dummy variable equal to 1 when a sample firm is from the Manufacturing SIC Division and 0 otherwise; **IND3** = A dummy variable equal to 1 when a sample firm is from the Public Utility SIC Division and 0 otherwise; **IND4** = A dummy variable equal to 1 when a sample firm is from the Wholesale & Retail SIC Divisions and 0 otherwise; **IND5** = A dummy variable equal to 1 when a sample firm is from the Financial Services SIC Division and 0 otherwise; **IND6** = A dummy variable equal to 1 when a sample firm is from the Services & Public Administration SIC Divisions and 0 otherwise.

## ENDNOTES

We thank Eli Segev from Tel Aviv University for his insightful comments and Yu Long from the Center for Academic Computing at Singapore Management University for insightful assistance in the statistical analysis. All remaining errors are of course ours.

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thoroughly protecting the assets and estates of their clients. The author starts with the observation that, as America's population continues to age, the need to integrate long-term care (LTC) planning with financial and estate plans cannot be overlooked. Ignoring this risk can have negative implications while clients are alive, of course, but it can also result in loss of inheritance, repayment of long-term care costs to the government through estate recovery programs, and other negative estate transfer issues. The author notes that two of the objectives of financial/estate planning and LTC planning are the same: asset protection and preservation of legacy. Financial professionals, including financial planners, wealth managers, estate planning attorneys, and CPAs, are in the best position to assist clients with initiating the development of a written plan for long-term care.

## EFFECTS OF MACROECONOMIC AND FIRM-SPECIFIC FACTORS ON SHAREHOLDER WEALTH: *Some Australian Evidence* 41

MARK B. BARNES AND VINCENT C.S. LEE

In today's hyper-competitive global market there is an increasing focus on revenue growth. Analogously, shareholders and potential investors are interested in shareholder wealth and are also interested in predicted future growth if they were to invest their funds in a firm. This article expands on previous work that explored the variables that drive company wealth creation in the Miscellaneous Industrials sector of the Australian Stock Market. The authors previously studied how a company's growth and wealth creation changed in comparison to the changes in the Miscellaneous Industrial index, using traditional and artificial intelligence (AI) feature selection techniques. Multi-domain models were used to reduce the number of variables to a manageable number. The primary aim of this study is to observe the effect of incluing macroeconomic and firm-specific factors (general market factors) into the multi-domain models. Using these selected variables and factors to explore their abilities to predict out of sample values in shareholder wealth and relative shareholder wealth. They find that the variables selected, linked with the macroeconomic and firm-specific factors improves the understanding of the model. The newly formed multi-domain models are found to be useful to

select both shareholder and relative shareholder wealth; however, they were more effective with regards to shareholder wealth.

## INDIAN IPO: *A Goldmine Sans Index* 62

GUNTUR ANJANA RAJU
AND RUDRESH R. KUNDE

This article provides a detailed analysis of IPOs (initial public offerings) in the various sectors across the Indian primary market from the period January 2005 till March 31, 2007, during which 140 public issues were floated. Forty two issues were floated in 2005, 65 in 2006, and 33 in 2007 (till March 31, 2007). It was observed that during this period, the IPOs gave a return of 33% on average after being listed on the Indian stock exchanges. Due to good returns, IPOs are increasingly becoming an attractive investment avenue for wealth creation. In such a scenario, it is important for the investor to know the sector-wise performance of IPOs, as investors would prefer to take informed decisions and plan their investments in different sectors according to the risk-return characteristics of various sectors. Moreover, in order to gauge the performance of the primary market, development of an IPO index in the Indian context is necessary. The present study throws light on the development of an IPO index and on structuring a model IPO index for the Indian primary market.

## CORPORATE LONG-RANGE QUANTITATIVE GOALS: *Profit or Growth?* 75

JOSEPH AHARONY AND ELI NOY

This article examines two important aspects that private wealth management firms should contemplate when making strategic investment decisions in corporate equity: pursuing firms whose long-range strategic quantitative goals center on profits or those that center on growth. To this end, the authors investigate four specific corporate strategic behavior questions: whether firms explicitly state long-range quantitative goals (LRQG), whether they use growth and profit as their long-range quantitative goals, whether these two goals are equally important, and finally, whether, in the

long run, firms with explicitly stated LRQG outperform those without such goals. The study examines these issues empirically based on content analysis of publicly available documents from the Standard & Poor's 500 Index as of August 2001 and Compustat data. The results show that most firms do have long-range quantitative goals expressed by profit and growth targets, mostly in accounting terms, and that growth goals are more important to corporate managers than profit goals. This evidence provides private wealth management firms with important insight for making strategic investment decisions in corporate equity. Recommendations for corporate managers, private wealth management firms, and academicians complement the findings.

For more than 17 years, Bernard Madoff has operated what was perceived as one of the most successful investment strategies in the world. This strategy ultimately collapsed in December 2008 in what financial experts are calling one of the most detrimental Ponzi schemes in history. Many large and otherwise sophisticated bankers, hedge funds, and funds of funds have been hit by his alleged fraud. In this article, the authors review some of the red flags that any operational due diligence and quantitative analysis should have identified as a concern prior to investing, and highlight some of the salient operational features common to best-of-breed hedge funds that were clearly missing from Madoff.

This article is a review of the *Encyclopedia of Alternative Investments* published by Greg Gregoriou.