

THE CASE FOR HUMAN CAPITAL ANALYSIS IN THE FINANCIAL MARKETS: CREATING A QUALITATIVE PICTURE OF ORGANISATIONS FOR THE PURPOSE OF MAKING MORE TRANSPARENT INVESTMENT RECOMMENDATIONS

Dr CAROL ROYAL
School of Industrial Relations & Organisational Behaviour
University of New South Wales
SYDNEY NSW 2052
Australia

LORETTA O'DONNELL
Australian Graduate School of Management
University of New South Wales
SYDNEY NSW 2052
and
Macquarie Graduate School of Management
Macquarie University
SYDNEY NSW 2109

Abstract

Human capital analysis has implications beyond the field of human resource management. It is essential to the work of securities analysts, their clients and their industry. This paper poses the question: “Can securities analysts, their clients, and their industry, benefit from using human capital analysis alongside financial analysis for the purposes of making more transparent investment recommendations?” The research conducted by Royal & Althauser (2002), Royal (2001), Royal (2000), Dunphy & Griffiths (1998), Dunphy (2000), Collins & Porras (1994), Collins (2001), Bassi, Lev, Low, McMurrer & Sissfield (2001), Dunphy & Stace (2001), Turner & Crawford (1998) and others noted in this paper, all combine to answer this key question in the affirmative. Research evidence shows that qualitative research into human capital is currently not systematically adopted by human resource practitioners and even less so by securities analysts in the finance industry. However, qualitative human capital analysis can illuminate the working of an organisation in a way that primary financial data on its own cannot achieve. When assessing which organisations are sustainable, a truly complementary approach requires both qualitative human capital analysis and traditional, financial, quantitative analysis. In essence, an integrated approach is needed for the purpose of making more transparent investment recommendations. A model for outlining the human resource drivers of sustainable human capital is introduced and discussed in response to this need.

Key words

human capital analysis; sustainable corporation; qualitative research techniques; securities analysts; investment research products.

INTRODUCTION

The media, investing public, regulatory agencies, and politicians have become increasingly concerned with the credibility problems associated with the independence and objectivity of brokerage houses and their securities analysts' (sell-side) research products. Newspaper headlines, both globally and locally, have echoed such common sentiments as "Deals and Deal Makers: Outlook for Analysts: Skepticism and Blame" (Gasparino 2001) in the *Wall St Journal*, (June 13, 2002, c1); "Shoot All the Analysts" in the *Financial Times*, (March 20, 2001:21); "Analysts on Wall Street, Sell? Dishonest research, gullible investors", *The Economist*, (May 11, 2002: 68); "Wall Street, What Glitters ain't gold", *The Economist*, (April 13, 2002:70); "Stockbrokers Under Pressure", by Collins (2002) in *The Australian Financial Review*, (May 23, 2002: 20); "Research Shake-Up On The Cards" by Whyte (2002) in *The Australian Financial Review*, (May 23, 2002:21); "Investors Seek to Recoup Millions", *The Australian Financial Review* (May 23 2002:20) and "The Truth about Australian Stockbrokers", "Australian Stockbrokers Exposed", by Clegg & Whyte (2002) in *The Weekend Australian Financial Review* (May 25-6, 2002: 1:21-3).

At the heart of the controversy is the validity of the research products of sell-side securities analysts who work for brokering houses. They may be compromised by the 'disparate incentives of investment banks' clients ("investors") on the one hand who want unbiased research, and those of most corporate financing clients ("issuers") who benefit from optimistic research' (Boni & Womack, 2002:1).

The increasing levels of controversy and concerns about the objectivity and independence of sell -side research and the current moves both globally and locally to take a number of actions to improve credibility call for a range of possible solutions to be debated. Such actions are likely to be more substantial if they address the critical issue associated with the exact nature of what is included, and what is excluded, in the securities analysts' research product. Central to this is the pressing need, in the continuous disclosure environment which has been operational in Australia since 1994 (Gallery, Gallery & Hsu, 2002) and, specifically, the voluntary industry guidelines, to provide the investing public with transparency in investment recommendations.

This is a substantive issue, as research Szarycz (2001) indicates that more than 50% of shares issued by US based companies have become controlled by institutional investors who are becoming increasingly concerned with the evaluation of a firm's internal performance. Often, these measures are primarily quantitative and financial, and use measures such as Economic Value Added (EVA), Cash

Flow Return On Investing (CFROI), Balanced Scorecard, Value Based Management (VBM) and Activity Based Costing (ABC).

However, the main argument of this paper is that additional analytical techniques can be adopted by securities analysts to provide a clearer picture of organizations. These techniques are needed in order to analyse human capital, which is linked to future financial performance. These qualitative techniques can be used in conjunction with the current techniques used by securities analysts. Current analytical techniques rely heavily on the analysis of financial data to create models, which then form the basis of earnings estimates and most recommendations. Yet, most models use lag indicators of past performance rather than lead indicators of future performance, more likely to be gleaned from human capital data (Watson Wyatt Worldwide Research 2002).

In addition, post-Enron, a clearer understanding of the intangible drivers of a firm's value becomes increasingly important. Professor Chris Ittner, (2002) Wharton accounting professor admits that companies often move beyond the obvious deduction of tangible assets from market value to gain a value of intangible assets, and, in fact, do not have systematic measures for intangible assets. Wharton researchers have created an index linking firms' market values to a series of characteristics called the Value Creation Index. One of the lowest ranked characteristics was mastery of technology. Innovation ranked first, followed by management and employee quality. To fully access the data available on these characteristics, tools other than traditional financial analysis tools are required.

This is not to say that securities analysts and the equity markets are currently not performing to a high level. The public baying for the blood of the analysts may not be an accurate reflection of need for more structural reform within the capital markets themselves. The point made by *The Economist* (June 8, 2002: 11-12) is that, in spite of the recent corporate scandals, "America's capital markets have done a pretty good job for the economy. All the evidence is that deep and liquid capital markets are quicker, cheaper and more efficient, if sometimes more brutal, than it is when done by banks. The country's equity culture should be praised and needs to be revived, not tossed out of the window". The risk of regulatory overreaction may actually distort the good work done by analysts. Even so, the authors of this paper argue that it is the traditional, quantitative, financial research investment product which needs review.

This paper poses a key question: "Can securities analysts, their clients, and their industry benefit from systematically embedding qualitative human capital analysis alongside quantitative financial analysis for the purpose of making more transparent investment recommendations?"

The paper forms part of a wider study, which examines the nature of work in the turbulence of mergers and acquisitions in investment banking in Australia Royal (2000). It will address a number of these key issues by: examining what brokerage securities analysts do and the forces for changing their research products, analysing the limitations of the quantitative financial approach to creating equity

research products and the use of systems theory as a context for critique of the current system, highlighting the importance of qualitative research and human capital analysis, providing qualitative research evidence applying sustainable human resource indicators in assessing future financial performance, deriving a model for analysing human capital as a means for providing more transparent investment recommendations, assessing the current and future skills base of securities analysts, highlighting the challenges for implementing human capital analysis in the financial markets and finally, recommending urgent changes that need to occur in the industry in order for these to be effective.

For the purposes of this paper, *human capital* refers to the sustainability of people management systems which are likely to have an impact on the share price of a firm. *Sustainable* human resource management systems are those which are internally consistent, consistent with the firm's corporate strategy and consistent with the broader context in which the firm is operating.

WHAT DO SECURITIES ANALYSTS DO? - UNDERSTANDING THE NATURE OF THE SECURITIES ANALYSTS' RESEARCH PRODUCT.

The ASIC annual report (2000/2001:60) indicates that there are 2,250 securities dealers, inclusive of securities analysts, in Australia. Generally, these securities analysts are employed by a brokerage firm, bank or investment banking institution. However, current organizational structures require securities analysts to meet the needs of diverse stakeholders. The April 2001 issue of *Institutional Investor*, quotes the chief investment officer for large cap value stocks for Putnam Investments, "Our approach to the market generally has been that sell-side analysts are serving so many masters besides us that we increasingly need to rely on our own research" (Schack, 2001).

The analysts' nominal function is to conduct thorough research investigations into all aspects of the current and prospective financial condition of publicly listed companies and to provide an analysis of the findings in the form of a research report, which serves as a basis for making an investment recommendation (Royal & Althausen, 2002). Recommendations are made on a "relative basis comparing a companies' performance within a sector or industry and examinations should cover all pertinent publicly available information about the company and its business. It is not limited to financial statements, [and includes] research on the company, industry, product or sector, and public statements by and interviews with executives of the company, its customers and suppliers" (Fernandez 2001: 3).

In terms of their job characteristics, securities analysts are occupational knowledge intensive specialists. Their tasks involve more than information dissemination, but a continual cycle of data collecting on an industry or individual company from customers, suppliers and management. The data is then processed by applying complex theoretical financial models and specialised knowledge, to form earnings estimates and stock recommendations (Royal & Althausen 2002).

The primary source of data for securities analysts is financial data. This is consistent with the prominence of financial models such as the Capital Asset Pricing Model (CAPM) and its variations, as well as the significance of the analysis of the beta (market volatility) of a stock (Mitchell, 2001). Financial analysis is also consistent with the qualifications, experience and skill set of most securities analysts in Australia. Research evidence into the Equities division of two local foreign-owned investment banks suggests that securities analysts are seen to be “elite of the Equities business in terms of knowledge base and intellect with 93 per cent of people having an undergraduate qualification in Finance, Business [or specialised fields such as Engineering] and over 50 per cent having a postgraduate degree or diploma in Finance, Commerce, or Business Administration” (Royal, 2000: 172, 173).

Sophisticated skills in qualitative research will become increasingly important as securities analysts continue to systematically access non-financial data in making earnings forecasts. Specifically, securities analysts will need to access high levels of competency in non-traditional analytical techniques to assess share price sensitive areas such as sustainable human resource management practices, organisational change and organisational behaviour and their links to corporate performance, all of which can be grouped under the general term of human capital. Appropriate methodologies for analysing human capital include: qualitative case study techniques, i.e. interviews, participant observation, surveys, oral histories, archival, documentary analysis and content analysis, refer to Table 1. Most securities analysts do not currently utilise these skills and techniques in a systematic way (Royal, 2000).

Table 1: Selected Examples of Qualitative Research Techniques for Human Capital Analysis

Structured and semi – structured interviews
Content analysis of interview data and documentary sources.
Industry performance analysis
Survey instruments (application of statistical analysis)
Media analysis
Archival and historical analysis
Focus Groups
Oral histories
Corporate ownership analysis
Participant observation

FORCES FOR CHANGING THE RESEARCH PRODUCTS OF SECURITIES ANALYSTS

One of the critical forces for change in this area is predicated on recent public dissatisfaction with both the process and the performance of financial analysts, both in Australia and in the US, as noted in the newspaper headlines above. This dissatisfaction is exacerbated in a more volatile economic climate. In contrast, research by Watson Wyatt Worldwide Research (2002) links specific human resource management practices to above average returns to shareholders. The data indicates that human capital significantly affects current and prospective financial future performance. Furthermore, the data suggest, superior human capital management is a leading – rather than lagging – indicator of improved financial success.

Using survey data from 51 organisations in North America and Europe, administered in 1999 and 2001, the researchers divided organizations into three groups based on their overall Human Capital Index (HCI) scores. The HCI was derived from matching survey data to market value, returns to shareholders and Tobin's Q to create an index of human capital. Using the organizations' five-year total returns to shareholders, the researchers found that organizations with a low HCI averaged a 21% five-year return, those with a medium HCI averaged 39% and those with a high HCI averaged 64%. This analysis noted that human capital is the chief resource for innovation in the knowledge-based economy, and, once it can be measured, it can be managed and exploited to increase shareholder value.

Therefore, it is important that securities analysts, who inform the financial markets on stock recommendations, have access to the qualitative human capital tools as well as the quantitative financial tools to analyse these drivers of future growth and change. Securities analysts need to understand and to report on the lead, as well as the lag indicators of future financial performance. The share price sensitive issue of human capital cannot be rigorously measured only in traditional, financial terms. Non-financial data must be accessed, in a valid and systematic manner, in order to fully analyse these important performance indicators in order to make more transparent recommendations.

In a regulatory environment in which Australian companies are compelled to provide continuous disclosure of share price sensitive information, securities analysts find themselves in an increasingly competitive environment. Their ongoing challenge is to develop unique, timely insights for their clients, the fund managers. Therefore, the argument for embedding qualitative research techniques, alongside their traditional quantitative financial tools, becomes even more compelling.

Also, in an environment in which the investing public has had a crisis of confidence in investment professionals, it is highly appropriate for securities analysts to be, and to be seen to be, exercising due diligence, and conducting the most thorough analysis possible to ascertain the prospective financial condition of a publicly listed company. Evidence from the Watson Wyatt (2002) study indicate that

quantitative financial analysis, on its own, is not adequate in providing the fullest possible recommendations to the investing public of the prospective financial state of a publicly listed company.

LIMITATIONS OF QUANTITATIVE FINANCIAL ANALYSIS: QUALITATIVE RESEARCH AS A COMPLEMENTARY ANALYTICAL TOOL - THE BEST OF BOTH RESEARCH WORLDS

There are a number of ways of conducting equity research. The securities analyst has some element of choice between quantitative financial data, which is very valuable and, most often is “hard”, objective and rigorous, and that which is qualitative and tends to take a “soft” approach. Academic researchers find that quantitative financial research, on its own, can impede true analytical understanding of an organisation’s performance as quantitative financial data often show that properties shared by all organisations in a sample or in an industry sector, such as banking, may be superficial, obvious or unimportant. Quantitative standard financial measures applicable to all organisations in an industry sector may ignore or understate the differences between organisations within their sector. Quantitative financial research minimises individual social, ethical and management practices, complexity and variety in organisations.

Qualitative human capital research has a wide appeal for assessing organisational performance because it is rich, real and, in a sense, preserves the chronological flow of human capital strategies and practices. It requires minimal front-end instrumentation, and reports produced often have a quality of undeniability which, when used in conjunction with quantitative financial data in the same organisational setting, can produce a more powerful and more valid analysis of current and prospective financial performance.

An emphasis on excellent equity research would make it possible to incorporate both quantitative financial and qualitative human capital research. Together, these techniques provide a more integrated understanding of the dynamics and performance aspects present within different organisational settings. A “best-of-both worlds” approach, which describes and explains organisational systems, management practices and processes, will ultimately lead to better informed investment decisions.

This, however, is not likely to be easy or quick. As noted by Dunphy (2000), some elements in the financial markets are starting to appreciate the limitations of purely financial measures as an indicator of future performance. To compensate, new measures are continuing to arise, which focus on intangible assets, including customer capital, and structural capital. Dunphy (2000) argues that stakeholders as varied as stock exchanges, accountants, auditors and shareholders all have a strong interest in better indications of viability and sustainability than are offered by the traditional financial measures. The move to triple bottom-line accounting could be seen as part of this process. Given the

primary competencies of securities analysts in financial analysis, traditional financially based analytical practices may be slow to change.

Theoretical Context: Fundamental Analysis and Systems Theory

The concept of complementary analytical techniques is consistent with a theory of fundamental analysis, championed by finance professors David Dodd and Benjamin Graham in their classic text *Security Analysis*, first published in 1934. Mitchell (2001) argues that fundamental analysis, in which the firm and its context is all considered to be part of the process of share price valuation, has lost favour since the 1970s with the rise of portfolio theory as well as the popularity of the Capital Asset Pricing Model (CAPM) approach, which has had currency on Wall Street since the 1980s.

One effect of this focus has been for securities analysts to rely more on their own, largely mathematical models of earnings forecasts, rather than a broader analysis of the firm and the context in which it operates. Stocks are seen largely through the lens of risk and return, and the beta factor, the volatility compared to the market sector. The uniqueness of each stock is minimized in the mathematical modeling. One commentator on this phenomenon, Bernstein (2001) describes the recent increase the level of reportage on firms, in terms of earnings models, as increasing the “noise”, or extraneous data, available to investors, but without a concomitant increase in analysis. He notes that business journalists are sometimes indistinguishable from securities analysts, indicating the increasing trend to generating more information on stocks is often more akin to observation or reporting, and less often pure analysis. This is a long way from the original tradition of fundamental analysis.

The fundamental analysis approach is also consistent with a systems view of organizations, in which a firm is seen in the context of its broader environment, and internal and external connections and interdependencies are made explicit (Senge, 1992; Lewin & Regine, 1999; Trevelyan & O'Donnell, 2001). According to systems theory, most complex systems respond to their environment, adapt and often become even more complex as they continue to evolve. Observers of organizations, including securities analysts, need to be aware of the complexity of the system, whether it is an open or closed system, and the potential ripple effects of changes in structure, strategy and process (Trevelyan & O'Donnell, 2001). Standard quantitative financial analysis does not fully account for this increase in complexity, and the potential effects on financial performance.

Open systems theory, as articulated in Flood & Jackson (1991) is also relevant to the concept of the sustainable corporation. Open systems theory attempts to describe how open systems relate to the environment, and how systems contain elements, which are interdependent and intradependent. This is congruent with the move towards seeing organizations as having elements of both closed and open systems (Gebert & Boerner, 1999), and the organisations' interdependence with community and the context in which it operates (Blattel-Mink, Kramer & Mischau, 2000; Googins, 1997; Lewis, Kagan & Heaton, 2000; Glendon, 1998).

A similar argument by Ghoshal & Bartlett (1997) is demonstrated in their analysis of the individualized corporation. They quote the experience of Dr. Yoshiro Maruta, head of the Kao domestic household cleaning market, on his view of the concept of self-renewing capability, a primary element for understanding the sustainable organization. They note that Kao's capacity for regeneration, self-renewing capability, organisational flexibility and strategic challenge and managing creative disequilibria are fundamental to its success. These capabilities do not appear in traditional financial analysis by securities analysts.

However, complexity, even within open systems, is frequently based on deceptively few simple rules, often focused on distributed rather than central control. Lewin and Regine, (1999: 28) note that complexity science focuses on the nature of interactions among individual "agents" in a complex adaptive system, and monitors their effects. In the context of securities analysts reporting on listed companies, a qualitative analysis of a firm, as noted above in Collins (2001), is more likely to uncover these types of patterns, and their underlying simple rules, and their effects on future organizational performance, than a purely quantitative financial approach used in isolation.

When analyzing knowledge-intensive firms, in particular, securities analysts need to be able to value the intellectual capital of the firm in order to provide earnings forecasts. This is significant, as in these types of firms, the workers are the owners of the capital, not necessarily in a strict sense of ownership of stock, but in terms of being owners of the means of production, (Drucker, cited in Mitchell 2001: 159). As noted by Stacey (2001), intellectual capital can be divided into two main categories, defined as human capital and invisible assets, or "non-thinking" capital. These can be analysed, using apparently valid quantitative financial methods. For instance, human capital can be divided into three main areas: competence (eg average duration of employment, hours of training per employee, IT literacy), attitude (eg a leadership index, a motivation index) and intellectual agility (eg savings from employee suggestions, company diversification index). The second area of human capital is often seen as invisible assets and processes, "non-thinking" capital, such as relationships, eg customer retention, length of supplier relationship; internal efficiency (eg revenues from patents, processes completed without error); renewal and development (percentage of business from new products, new patents filed, training costs per hour per employee).

These types of measures can be combined into a weighted intellectual capital index, which, on the surface, has meaning and rigour. Yet, as Stacey argues, the reality of the intellectual capital of an organization can be quite different. He notes that measuring knowledge in an organisation is more than numbers of hours in training sessions, or number of patents held, even though these are often mistaken for intellectual property. They are mistaken for knowledge itself but knowledge genuinely exists only when it is used in the context of communication processes between people.

If Stacey (2001) is correct, then qualitative human capital tools need to be used in conjunction with quantitative financial tools in order to access the reality of the organizational culture, in which knowledge is actually used by individuals in the firm. This requires a high level of understanding of organizations' cultural issues, such as interpersonal communication, both formal and informal (Carlopio & O'Donnell 1994), particularly in knowledge-intensive, network organizations (O'Donnell, 1994).

The move to the concept of creating more sustainable organizations, as espoused by Dunphy & Griffiths (1998) and Roome (1998) can be seen within the interdependence inherent in open systems. Just as organizations need financially and environmentally sustainable practices, organizations also need socially sustainable practices to prosper in the long term (Glendon, 1998; Senge, 1992).

THE IMPORTANCE OF QUALITATIVE RESEARCH AND HUMAN CAPITAL ANALYSIS

The competencies of traditional equity research securities analysts rely heavily on making "quantitative forecasts typically expressed as numeric estimates of future earnings, including point estimates, range estimates and open-ended (maximum or minimum) estimates" (Gallery, Gallery & Hsu, 2002: 10), and collecting and incorporating new information on an industry, or individual stock into their analysis and financial models in order to make recommendations to their clients through oral or written reports (Michaely & Womack, 1999).

In contrast, qualitative analyses of human capital adopt a wide range of organisational case study techniques. These techniques include: interviews of management and staff, focus groups, historical analysis, oral histories participant observation, surveys, content analysis, archival and documentary sources. Others are listed as Table 1. Qualitative research can highlight the complexity of issues surrounding the drivers of the value of the firm. As Hakim (1987) notes, qualitative research can be used in an intellectually rigorous manner, and can offer a richly detailed 'portrait' as a preliminary process to further investigation. A theoretical overview can be seen in the discussion of the configurational approach defined by Delery & Doty (1996). In the highly interdependent system contemporary organization, quantitative, financial data and qualitative, human capital data are both essential for understanding drivers of sustainable growth.

Qualitative is different from quantitative financial research in that exploration, description and explanation can be 'illuminating in one context blur our sight in another' (Royal, (2000: 58; Gummesson, 1976: 76). Securities analysts who adopt multiple sources of evidence increase the transparency of any research products.

In one specific industry sector in Australia, human capital research in the investment banking industry by Royal & Althausen (2002), Royal (2001), Royal (2000), and another qualitatively based study of US human capital (Kalleberg, Knoke, Marsden & Spaeth, 1996) found that sustainable people-centred practices that emphasise long term relationships with their employees, and which view the

employment relationship as being more than one party in a straightforward economic exchange and which encourage organisational membership, perform better with regard to product development and innovation, attracting and retaining good staff and ultimately financial performance.

QUALITATIVE RESEARCH EVIDENCE - APPLYING SUSTAINABLE HUMAN RESOURCE INDICATORS IN ASSESSING FUTURE FINANCIAL PERFORMANCE.

A Boston Consulting Group study of one hundred companies in Germany, covering ten industrial sectors over a seven year period from 1987-1994 (Bilmes, Wetzker & Xhonneux, 1997), found that those companies which produced a greater total shareholder return than their competitors also scored highly on such measures as: expenditure per employee, contribution of employees as reflected in mission statements, promotion opportunities and flexible work hours, among other innovative human resource management practices. The emphasis in the more successful companies was on building employee capacity.

In support of these findings, a study by Collins (2001) compared companies in the same industry, which sustained success over many years with those that had not. The methodology used by Collins was an innovative combination of traditional financial analysis, complemented by a selection of qualitative approaches. Collins screened companies using Fortune 500 data, then CRSP data, then by industry and was left with eleven companies from which demonstrated long-term sustainability of both financial and human capital. He found those companies, which achieved sustained long-term performance behaved differently from those whose performance was erratic or poor. Visionary companies put a greater percentage of year's earnings back into the company, returning less in cash dividends to shareholders. Visionary firms invested more heavily in management practices and human capital - specifically in training, recruiting and the professional development of staff - and in R&D and property and plant. These companies were also early adopters or innovators in their industry (Collins & Porras, 1994). This distinctive pattern of behaviour has had some impressive results; visionary companies outperformed the US market by a factor of 15 at the time of the study. They were six times more successful than the comparison companies.

Another research study Schuster (1986) also aimed to assess the critical contribution of human capital. He used employee surveys and interviews of 1300 of the largest U.S. industrials and non-industrials to research whether a significant relationship exists between the way in which organisations manage their employees and profitability. His findings included a statistically positive relationship between the use of employee-centred management practices and superior financial performance. Also, an average return on equity of those firms at the time using one or more innovative HR practices was 11% higher than those firms not using any of the practices.

Another specific example of the value of human capital is in research by Ranft & Lord (2000) which highlights the fundamental primacy of human capital in mergers, takeovers and alliances in high

technology firms. The researchers recognize that strategically significant intellectual property, in some cases, rests within individuals, rather than in the firm itself. Also, other researchers have noted that issues of knowledge management can have an impact on the efficiency and the performance of the firm (Gupta, Iyer, & Aronson, 2000).

One Canadian study of the biotechnology industry, Woiceshyn & Hartel (2000), found that key barriers to commercial success in the 41 Canadian firms surveyed were: small size, private ownership and human resource problems, characterised by lack of development of complementary skills outside research and development and effective transfer of learning. They note that the management team's ability can mean the difference between success and failure. Clearly, human capital within biotech firms can have a significant impact on the success of the enterprise. Securities analysts who fail to include these insights are missing opportunities to add value to their clients' investment choices.

A study by the American Management Association (1966) indicated a strong correlation between increased training budgets and larger profits and productivity flowing from workforce reductions. The study found that organisations performed better when they were strategically well-positioned in the changing environment and pushed the pace of internal organisational change fast enough to match the external pace of change, cited in Dunphy (2000).

A major study of 243 case studies in Australia and New Zealand to determine the capabilities that drive corporate renewal Turner & Crawford (1998) found specific clusters of competencies affect performance, including business technology (operational), market responsiveness (operational), performance management (operational/reshaping), engagement and development of employees (reshaping). Quantitative financial analysis, as typically used by securities analysts, would not be able to distinguish these performance-related capabilities.

A study conducted by Kotter & Heskett (1992) looked at corporate culture and its effect on performance. Their findings suggest that corporate culture has a major effect on corporate performance and, although difficult to change, corporate culture can be made more performance enhancing. Also, researchers O'Reilly & Pfeffer (2000) examine successful companies that use ordinary people to achieve extraordinary results and find that an organisation that has well-articulated values, puts culture first, has a strong alignment and consistency in the people-centred practices that express those values, and where senior management maintain these values, are able to compete very successfully. Dunphy & Stace (2001), provide case studies of companies which improved financial performance as a result of appropriate leadership styles and change management strategies.

In terms of predicting future performance, extensive research by Cox & Blake (1991), concluded there are six areas where specific human capital practices are highly related to organisational performance. For instance, sound diversity management can create a competitive advantage through: cost advantages – through savings in integrating poor workers; resource acquisition – companies

known for being good employers of women and ethnic minorities attract the best of the labour pool; marketing – diversity increases cultural sensitivity across and within cultures; creativity – heterogeneous groups tend to be more creative because of the wider range of views held by group members, and because of the potential for synergy; problem solving – similar to creativity, a more heterogeneous group tends to explore issues from a diverse range of perspectives and system flexibility – in a diverse organization, the organizational systems become more fluid, less standardized and offer greater potential flexibility. Securities analysts need to be able to assess these practices systematically.

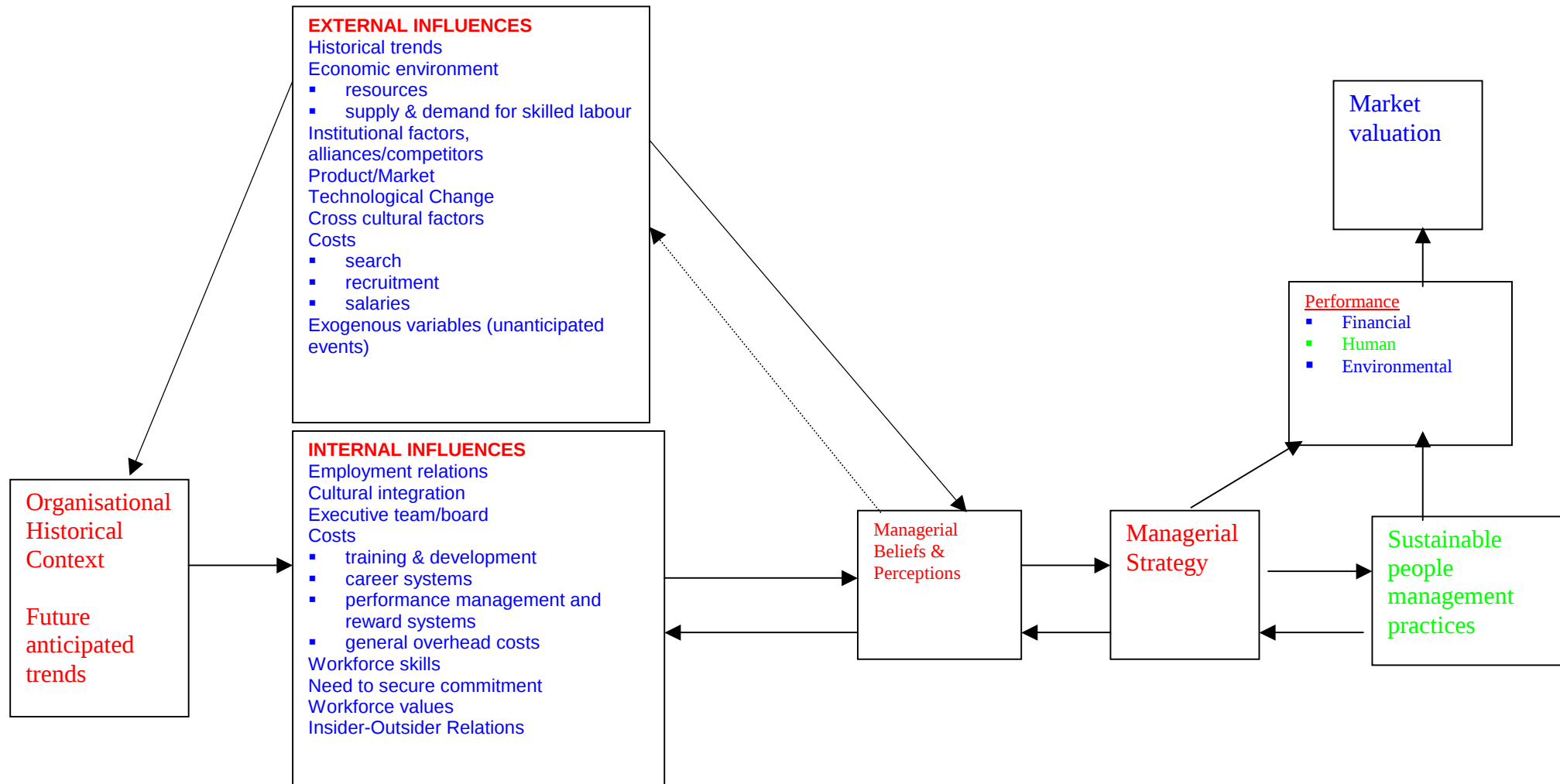
On a very specific level, for an examination of the dollar cost associated with exit of high performing managerial women (Abbott, De Cieri & Iverson, 1997), describe the organization's need to attract and retain valued employees as a strategically important economic decision. Work and family policies have been reported to enhance an employee's quality of work life, reduce absenteeism and turnover. Without work/ family policies and a culture accepting multiple commitments, employees may decide to leave the organization, resulting in loss of skill, disruption of client relationships and significant dollar cost to the organization. This case study documents the total costs of the exit of high performing women at managerial level within a large professional services business. Total costs (direct and indirect) associated with separation, replacement and training of these and new employees are considerable.

Researchers such as Royal (2000), Collins (2001), Dunphy (2000), Turner & Crawford (1998), Watson Wyatt Worldwide Research (2002) and Bassi et al. (2001) use rigorous qualitative techniques to provide evidence for their findings on the positive relationship between sophisticated use of human capital and future financial performance of the firm. Examples of these techniques appear in Table 1. Some, but not all, of these techniques are commonly used by securities analysts to calculate earnings forecasts. This body of research strongly indicates the value to securities analysts, and their clients, of systematically embedding insights from both qualitative human capital analysis and quantitative financial analysis in making more transparent stock recommendations.

DERIVING A MODEL FOR ANALYSING HUMAN CAPITAL

Studies carried out by Royal (2000, 2002), in the investment banking industry used surveys and interviews across all levels of the organization, participant observation, archival and business documentation, oral histories and content analysis, (see Table 1) to determine key indicators, and drivers of performance. In light of these studies and those discussed in the previous section which examine sustainable human resource indicators in assessing future financial performance lead Royal to develop the model which appears in Figure 1. 'The Model of the Drivers of Sustainable People Management Systems' (Figure 1) indicates the important role of human capital analysis in

FIGURE 1: DRIVERS OF SUSTAINABLE PEOPLE MANAGEMENT SYSTEMS



understanding the drivers of the value of the firm. It illustrates the drivers of sustainable people management systems and the importance of various interrelated features that recur throughout a company's history. These features include changing internal and external pressures and managerial beliefs and perceptions, all of which interact and shape management strategy, ultimately resulting in the adoption of internalised labour market structures that are appropriate to a company and within its industry.

More specifically, internal influences that affect managerial beliefs and perceptions and management strategy include the state of the employment relations, cultural factors, costs associated with the need to secure commitment of employees (such as reward, performance management, career and development systems) and insider-outsider relations.

External influences that affect managerial beliefs and perceptions and management strategy include historical trends, the competitive nature of the economic environment, institutional factors, the nature of the product, technological changes and the costs associated with recruitment. It is crucial to state in any qualitative analysis of this kind that whilst the internal and external influences are interrelated, they have not evolved in a linear fashion.

By considering a company's development over time, the features discussed in the model above should serve only as a guide to what drives sustainable people management systems and not necessarily as a blueprint for the conclusive reasons for their existence in every company, across a variety of industries at any one time. The model cannot explain the exact order of their occurrence, for the simple reason that each company has its own unique history, often with gaps, which over time lends itself to more or less emphasis on one or more features discussed in the model.

However, while it is unlikely that one can simply ascertain the exact casual relationship, the application of this qualitative model (as seen in Figure 1) will provide a level of analysis which would form the basis of a complementary equity research product. Using this model, securities analysts would be able to identify emerging patterns in human capital that ultimately affect financial performance and market valuation. This would go some way to providing the investing public a more accurate and transparent information about the nature of a publicly listed company's current and future financial performance.

The skill base of securities analysts is strongly geared towards quantitative financial analytical techniques, with 93 per cent of people having an undergraduate qualification in Finance, Business [or specialised fields such as Engineering] and over 50 per cent having a postgraduate degree or diploma in Finance, Commerce, or Business Administration, (Royal, 2000: 172, 173).

Just as securities analysts require the appropriate competencies, skills, knowledge and abilities in order to form earnings estimates and investment recommendations, i.e. formal qualifications in

Finance, Accounting, Economics and Commerce, different competencies, skills and knowledge and abilities are required to meet the demands of the analysis of human capital. These include firstly, qualifications and/or formal training in the fields of sustainable human resource management, organisational change and/or organisational behaviour and their links to corporate performance. Secondly, qualifications and/or formal training in qualitative research techniques, i.e. interviews, participant observation, surveys, oral histories, historical/archival and documentary analysis, and content analysis (see Figure 1).

Currently, however, securities analysts have qualifications in finance, accounting, business, commerce and economics, which enable them to conduct financial analysis, estimate earnings and make investment recommendations (Royal, 2000; Royal & Althausen, 2002). Therefore, in order for there to be a complementary qualitative oriented equity research product which would allow for more transparent investment recommendations to occur there are three possible options: firstly, that securities analysts undertake additional formal degree qualifications to provide the theoretical underpinnings in human capital analysis covering the fields of sustainable human resource management, organisational change and organisational behaviour, while simultaneously undertaking formal qualitative research methodology qualifications. Secondly, brokerage firms buy the competencies and skills in from the external labour market. This would complement any equity research team. Financial markets would benefit from human capital analysts, working alongside quantitative financial analysts, at both the broker and fund manager levels, to provide independent research on relevant human capital practices, which are likely to influence future shareholder wealth. Thirdly, brokerage firms could buy a qualitative complementary research product from an independent research services firm.

In addition, as noted above, recent media coverage has highlighted the perception of conflicts of interest among analysts in investment banks and advisors on corporate finance. It is the view of the authors of this paper that an increased emphasis on human capital analysis will increase the quality of information available to institutional investors, and will help to differentiate investment banking products and services. *The Economist*, (April 13th, 2002: 70), has noted the relevance to this debate of the gullibility of investors. Higher quality information on human capital will give investors more substantial criteria on which to base their investment decisions.

CHALLENGES FOR IMPLEMENTING HUMAN CAPITAL ANALYSIS IN THE FINANCIAL MARKETS - CURRENT AND FUTURE SKILL BASE OF SECURITIES ANALYSTS

From a theoretical perspective, human capital analysis needs to be carefully applied. Theorists such as Delery (1998) emphasize the importance of understanding the mediating variables between Strategic Human Resource Management and performance (Harris & Ogbonna, 2001). Researchers need to be

careful in attempting to define underlying mechanisms through which Human Resource systems affect financial performance. He notes that some Human Resource practices are additive (independent, non overlapping effects on outcomes), some are interactive (depend on other elements in the system) and some may be substitutes for one another. Given this complexity in analysis, securities analysts need to be either comprehensively trained in qualitative techniques, or the analysis should be purchased from relevant experts.

At the same time, in order for human capital analysis to be effective, companies will need to provide access to securities analysts on human resource management practices so they have valid data on which to base their human capital recommendations. This is likely to change the type of relationship typically existing between analyst and company management.

CONCLUDING REMARKS: HOW URGENT ARE THESE CHANGES?

In addition to the need for independence and objectivity and the serious nature of the credibility of sell- side securities analysts and their research products, there is compelling research evidence by Bassi, Lev, Low, McMurrer, & Sissfield (2001) which suggests that non-financial insights make up a large proportion of investment decisions. In their survey of 275 active US institutional investors on their basis for investment, approximately 35% of investment decisions were reported as based on non-financial data, of which over half is HR related. Other non-financial data includes marketing, strategy and quality. Over 60% indicate that between 20-50% of decisions are non financial. Bassi, et. al. (2001: 348) note that, although “the quality of the business plan or strategy is important, investors ultimately place more weight on the ability of the management team to deliver. The focus is on action.” Therefore, securities analysts need to distinguish and to report on the difference between rhetoric and reality in companies. This is not completely possible with traditional mathematical analytical techniques.

At the same time, Bassi et al (2001) make the obvious point that providing unique insights is the key to long-term, profitable, success for a securities analyst. So, the imperative to understand the “information on the human capital function that helps them assess rate of return on investment in human resources and predict future performance” is a critical factor for success for themselves as individual professionals, and for the credibility of the industry as a whole. This fundamental point is essential to understand the argument for securities analysts using the most valid and rigorous research techniques. Specifically, for both securities analysts, their fund manager clients and the industry as a whole “there is obviously money to be made from anything that helps them predict the future better,” (Bassi, et al, 2001: 368). This is true as long as the insights are made available to the investing public and are rigorous and transparent.

The trend to increased disclosure of intangible drivers of value in the post-Enron environment will increase pressures on firms to understand and to disclose these drivers. The concomitant pressure on

the financial markets to report on these intangible drivers is equally likely to increase. This is not to say that major re-regulation is required, but more a harnessing of the strength of the existing equity culture by complementing it with valid human capital analysis.

This paper began by posing a key question: “Can securities analysts, their clients, and their industry benefit from systematically embedding qualitative human capital analysis alongside quantitative financial analysis for the purpose of making more transparent investment recommendations?” The research conducted by Royal & Althausen (2002), Royal (2000), Royal (2001), Dunphy & Griffiths (1998), Dunphy (2000), Collins & Porras (1994), Kalleberg et al. (1996), Collins (2001), Bassi, Lev, Low, McMurrer, & Sissfield (2001), Dunphy & Stace (2001) and Turner & Crawford (1998) and others noted in this paper, all combine to answer this key question in the affirmative.

Human capital analysis has implications beyond the field of human resource management. It is essential to the work of the securities analyst, their clients and their industry. Research evidence indicates that qualitative research is currently not systematically adopted by human resource practitioners and even less so by securities analysts in the finance industry. Qualitative human capital analysis can illuminate the working of an organisation in a way that primary data on its own cannot achieve. When assessing which organisations are sustainable, truly transparent stock recommendations require both qualitative human capital analysis and traditional, quantitative financial analysis. The sustainable human capital model goes some way to meeting this need.

Autobiographical notes:

Carol Royal (PhD, UNSW) is a lecturer in the School of Industrial Relations and Organisational Behaviour, in the Faculty of Commerce and Economics, University of NSW, in Sydney. She has been adjunct faculty at the Australian Graduate School of Management for twelve years. She has had fifteen years consulting to industry on a range of human resource issues. Her research interests include internal labour markets, sustainable human resource management systems, organisational change and the implications for corporate performance. Her doctoral research examined internal labour markets and human resource management practices in the investment banking industry. She holds a MComm and a B.A. both from University of New South Wales.

Loretta O'Donnell (MBA, UNSW) is adjunct faculty at the Australian Graduate School of Management in the University of NSW since 1991. She has consulted in organisational change and people management issues in the public and private sectors. Her doctoral thesis, in process, at Macquarie Graduate School of Management, is on balancing work/life issues in the Australian biotechnology industry. She holds an MBA from AGSM. Since 1983, she has also been working as a consultant.

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