

Behaviour and Investment Actions within Fund Managers and their Markets - A grounded theory of fund management.

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John Holland, University of Glasgow, West Quadrangle, Main Building, University Avenue, Glasgow, G12 8QQ, UK, Email J.B.Holland@accfin.gla.ac.uk, Phone 00 44 (0) 141 330 4136

Abstract

The financial crisis of 2007-09 has raised questions concerning orthodox ideas of how financial markets operate and how financial institutions behave in such market settings. The crisis has revealed the need for new thinking in these areas. Much effort is being expended on how to improve behavioural concepts of markets, transactions and decision rules. This paper takes an alternative view and provides an example of new ways to develop a conceptual framework to think about the behaviour of financial institutions in an active market setting. Fund managers (FMs) are used here as an example of how this new thinking, based on grounded theory and relevant theoretical analysis, can be developed.

This paper reveals new empirical patterns from (grounded theory) field research concerning FM investment decision making behaviour. These illustrate new insights into FM context, organisation, decision processes and behaviour. These are discussed within relevant theory. FM investment decision making process in the FMs is explored as both a goal seeking structured task sequence (Cyert and March, 1963) and as a process of sense making (Weick, 1979). These occurred together as one process. They reveal different but related insights into the same phenomena of the inductive, iterative, pattern seeking cycle evident in actual FM decision making. Both were means to cope and reduce the uncertainty associated with equity investments (Hellman, p236, 2000) and to find new information and investments of value. Active FMs also developed *creative* dimensions to their decision processes and contexts (Nonaka & Toyama, (2005), Ford and Gioia (2000)). Behaviour was a major factor in the FM cases. Simon's (1957) ideas and developments in '*behavioral finance*' (Shefrin and Statman, (1985), Tversky and Kahneman (1992)) were used to explore opportunistic FM behaviour. The *Resource Based view* (RBV) of the firm (Barney, 1970, Clulow et al 2003) and the 'Grounded Theory of FM' were used to specify the conditions for FM relative success and failure.

These empirical findings and integrated theoretical concepts can help FMs (and others) think about how to create robust forms of FM organisation, decision processes, and behaviour and thus how to reduce FM vulnerability to ongoing uncertainty and the occasional financial crisis. These concepts can also form the combined basis for a predictive model for FM performance based on a coherent explanation of the nature of FM.

Paper outline and structure

The paper begins with a brief summary of the literature. This is followed by a section on the FM field research methods and a summary of the empirical patterns found in the FM cases. Empirical patterns from (grounded) field research revealed that FM context and investment processes elements; their properties of shared purpose, knowledge, order, coherence, and creativity; and the relative peer group strengths of properties; all purposefully interacted as collective and integrated FM organisational means to reduce the complexity of new information flows, to interpret this information and take investment decisions. These connected causal patterns constituted a grounded theory of fund management, and were used to structure the theoretical analysis.

The following six sections discuss these empirical results (or the grounded theory of fund management) within relevant theory and literature. This places the grounded theory of fund management within a wider conceptual frame. The paper begins in the first result sections by discussing FM internal organizational order, external order, and FM knowledge. These constituted the informed and organised contexts for investment decision processes. These are followed by a results section exploring investment decision behaviour, action and process in decision making. These are analysed as structured task sequences and as associated processes of sense making.

The active FMs also developed *creative* dimensions to their decision processes and contexts. The section on creativity explores how FMs understood these dimensions and how they used them to enhance creativity in investment decisions. The next two results section focus on behaviour in the FMs within Simon's (1957) ideas and developments in '*behavioral finance*'. The final section use the resource based view of the firm (RBV) to explore ideas of competitive advantage arising in the cases. This analysis places the empirical patterns observed in the cases within a broader conceptual framework. It revealed a robust and novel theoretical framework to interpret the FM case data and the distinctive empirical patterns emerging from this data.

Literature

Field research and analysis on the nature of FM has been limited since Clarkson (1963). However, research by Holland and Doran (1998), Hellman (1996, 2000), Arsnwald (2001), Holland (1995, 2001, 2003, 2004, 2006), and Holland and Johanson (2003) have generated many new insights into FM behaviour and actions, and provide an important starting point for this research.

Field research by Holland and Doran (1998) in 1993-94, revealed how fund managers (FMs) in 27 large UK financial institutions sought to acquire a private information and influence advantage from their investee companies. The immediate target for information acquisition and influence was a set of intermediate corporate variables and states such as management quality, and the coherence of plans for succession and for corporate strategy. Changes in these were expected to have a direct impact on the company earnings, cash flows and other financial fundamentals. The case FMs expected that this 'relationship' knowledge and wide experience of companies in the same industry and economy, would provide them with the means to develop superior models to translate information on intermediate variables into earnings, and cash flow estimates. It was also expected to give them the means to develop superior valuation models and to combine these with a continuous flow of new information to identify 'cheap' and 'expensive' shares. They also used this private information to control risk in the wider portfolio. The resulting fund performance was the means for the FMs to satisfy a fiduciary duty to supply their clients with their preferred mix of return, diversification and liquidity

Hellman (2000) used field interviews and documents to investigate the reasons for institutional investors' investment actions on the Swedish stock market. Investor action, based on fundamental opinions about investments in company stocks, was restricted or reinforced by investor contexts and market premises, the role of valuation models and quantitative analysis in comparison with qualitative judgements. Actions also depended on how uncertainty was dealt with during investment decision-making processes. Non-public information was central to the formation of fundamental opinions about companies, and the fund managers adjusted to other market participants' expectations, equity valuation methods and ways of using accounting figures.

Arsnwald (2001) conducted a broadly based questionnaire in which he asked German fund managers for their basic views and practices. The fund managers primarily recognised underlying economic information as a source of superior value. However, destabilising behavioural factors arose from the choice of information sources and investment strategies and styles. Company news, and analysts' earnings revisions were thought to impart as strong a market impulse as the perceived mispricing of stocks relative to the market or sector. Those fund managers who appeared to be best suited to conduct fundamental arbitrage were constrained by time horizons and the fear of market movements. Agency problems were also shown to have a bearing on equity fund managers' investment behaviour.

Further field research by Holland (2006) in 1997-2000 probed these areas further and developed early versions of the grounded theory of fund management. The resulting case themes included the

nature of the private information agenda including intellectual capital; the corporate value creation process; dynamic links between intellectual capital variables; role of private information on intellectual capital in stock valuation; and the role of private information on intellectual capital in risk control and asset allocation decisions. The themes linked the FM case data in a coherent form and provided a simplified overview of much detailed and complex case data. They provided a reference point for each FM's individual practice. They also emphasised the purposeful, dynamic nature of this aspect of financial institution decision making and illustrated how the case institutions actively sought to exploit unique private sources of information on corporate intellectual capital in their fund management decisions

Research methods

Prior FM research by the author, conducted in 2 stages during 1994 to 2000, led to publications on fund management investment behaviour. (Holland and Doran, 1998; Holland, 2005, 2006), and their corporate governance role (Holland, 1995, 2002). This FM case data revealed very rich and complex insights into many areas of FM 'action and behaviour' and early versions of the grounded theory of fund management. However, a comprehensive and complete theory of fund management was too complex for the researcher to articulate, and for readers of papers or conference listeners to digest. Hence the results were broken down into simpler papers concerning FM investment decisions and FM role in corporate governance. This situation highlighted the interim state of 'theoretical saturation' reached in the 1st and 2nd stages of case data processing and stimulated a 3rd stage of data collection and processing in 2004-09. This 3rd stage work extends the previous research by revealing the nature of the knowledge, order, coherence and creativity properties of context and process (and their relative strengths) in FM investment decisions. The paper thus develops a coherent model of fund management

The new field research in 20 large international fund managers (FMs) in 2004-09 was designed to probe investment decision making behaviour in more detail, to expand on previous work, and to develop a coherent model of FM. The 2004-09 research involved interviews with managers in large international fund managers (FMs) in 2004-09. These FMs operated in Edinburgh, London, Frankfurt, Tokyo and other world financial centres. New fund manager behaviour and action concepts (at open, axial and selective coding levels) arose from the additional 3rd stage processing (during 2004-2009) of the new case data and the prior FM case data. In addition, new literature and theory (on 'the learning organisation', 'the knowledge creating firm', institutional theory and structuration theory) of significance to the phenomena was also identified. The paper, therefore, constitutes an exercise in 'theoretical sensitivity' whereby new work allows the author to return to the original data with a new perspective (Strauss and Corbin, 1998).

The original case concepts were investigated in more depth using the same grounded theory approach and additional open, axial and selective codes were generated. This led to the further development of new axial codes concerning FM context, process, behaviour and advantage. Sub categories such as properties and strengths of context and process were also developed. These new and refined axial codes were then used to develop theoretical constructs (selective coding) and associated 'maps of causal elements' that were constructed into two more developed, distinct but related grounded theories of 'fund management action' and 'FM learning and knowledge creation' (Strauss and Corbin, 1998). The new FM 'action' model is the focus of this paper. This expanded, developed and provided new detailed insights into the original FM 'action and behaviour' grounded theory models (Holland and Doran (1998), Holland (2006) by showing how they involved more elaborate structures, function, content, elements and processes. These resulting codes were then checked to demonstrate that they

were connected to original quotations in the source material and, thus, provided traceability or grounding. Case quotes were used to illustrate the codes.

Empirical patterns in the grounded theory

Empirical patterns from field research revealed that FM context and investment processes elements; each with their properties of shared purpose, order, creative, knowledge and coherence; and the relative peer group strengths of properties – all purposefully interacted as collective FM organisational means to reduce the complexity of new information flows, to interpret this information and take investment decisions. These patterns were used to structure the theoretical analysis. In grounded theory terms (Strauss and Corbin 1998), the investment process elements corresponded to causal conditions, actions, interactions and consequences. Context was made up more immediate decision context (intervening conditions) and wider contexts. These FM context and process elements, their properties and strengths, and their purposeful interactions formed core concepts (axial codes) at the heart of the grounded theory of fund management.

Active Fund managers (FMs) (across a range of FM style or peer groups) faced major problems of informational search and estimation when making investment decisions such as stock selection and asset allocation under uncertainty. Active FMs shared fundamental **beliefs about** imperfections in markets and believed that their superior skills were the means to succeed in investment decisions. As a result, the active FMs sought structured, adaptive and creative decision responses to their problems of economic and financial uncertainty. These purposeful decision processes were conducted within knowledge intensive internal and external contexts in part ‘owned’ as intangible assets by FMs as individuals, teams and firms.

Context

The external contexts for investment decisions consisted of the wider environment, and the more immediate ‘investment society’ or external places for investment action. FM specific external networks and relations within this wider external order were important FM response means. Investment constraints and FM performance contracts arose in this investment society.

Internal context and response systems for investment decisions included, FM philosophy, FM knowledge, FM objectives and strategic choice. These influenced decisions on investment policy or risk return preferences (as an additional context) and investment products and gave clear purpose to investment decisions. Internal context also included the FM organisational structure and hierarchy or internal places for investment action. The investment decision processes occurred within (‘intervening conditions’ or) the more immediate context of ‘investment society and markets’ which mediated external stimuli, sense making and meaning creation about new information and actions. These investment decision processes also occurred within a wider ‘context’ of the macro economic, social and political world, which ‘moderated’ the processes and more immediate contextual influences.

Process

Routine investment decision processes, set in internal and external contexts, were in the form of structured stock selection and asset allocation processes with well defined tasks or phases in sequence. During investment decision making, such as stock selection (SL) or asset allocation (AL), the FMs typically followed a sequence of steps such as active search (driven by FM philosophy and policy), external stimuli, and screening of companies and information. This was followed by information production, interpretation, FM estimation processes, valuation, mosaic formation, assessment of whether an FM advantage existed, and investment decision actions or eventual decisions. These were followed by consequences and feedback. Routine also involved the predictable structure of part of the working day and of formal meetings and communications. Such routine elements were also interactive, dynamic

and iterative in nature and thus the sequence and priority of tasks, meetings and the day could vary with circumstances. These routine and iterative processes were involved in information production, investment decision making, risk management, and return generation, with many dynamic interactions between them.

Creative elements were added to routine investment processes to overcome barriers and enhance performance. Creative elements were also added by adapting the structure of the working day and by encouraging informal conversations and meetings. Each FM sought its own unique balance between routine and creative elements in the pursuit of its aims, depending on its degree of 'activity' and its philosophy. There was tension between routine and creativity aims and processes.

FMs used the information created during screening and analysis to test and evaluate a sole choice perceived to be available or alternatives often in the simple form of hypothesis and counter hypothesis. These were assessed against 'just enough' information within FM own theory, criteria, heuristics, categories or themes etc. They employed fundamental analysis relative to assumptions of a near efficient market. They employed subjective analysis when interpreting the behaviour of investors, the market, investee companies, and their own behaviour and emotions. They 'weighed' their objective and subjective views. This information processing led to enhanced FM understanding, meaning and confidence in the FM 'mosaic' about company value creation and in the identification of 'nuggets' of value relevant information. This in turn created the conditions for choice between the merits of the competing hypotheses and for immediate or deferred investment action

Behaviour

Behaviour was a major factor in the FM cases and the GT of FM. The FM cases revealed much insight into a variety of FM *behaviour* in investment decision making processes above. The FMs used objective and emotional information in their assessment of alternatives and in final decisions. FMs faced psychological constraints at the level of FM individuals. FM own ways of 'seeing and thinking', in the form of own theories and heuristics, also limited FMs perception and thinking. The case FMs used their own theories of behaviour in markets to explain aggregate market behaviour and price behaviour. They sought to identify and exploit tendencies, errors and mistakes in other investors. They sought to control their own behaviour, limitations and impulses leading to ill considered actions. The FM internal 'behavioural advantage' was an important internal **organisational** means to exploit FM's external behavioural advantage in the form of FM **knowledge and theory** of markets and external behaviour.

Competitive advantage

Relative (peer group) FM advantages in FM 'context and investment process' elements were based on their properties and strengths. Properties included knowledge content, order, and creativity. They also included integration or coherence factors such as imprint of FM philosophy and knowledge, consistency of use, and match to circumstances. Each FM had various relative strengths of the 'properties of elements', within their peer group. The relative strengths of properties were a key source of competitive advantage for each FM within a peer group and of relative information advantage and financial performance. Such properties and strengths in these decision and response systems were intended to be difficult to copy and only exploitable by the FM. These were the means to search for a unique information and understanding advantages (in FM preferred 'niches'), and to develop and exploit superior analytic and judgement skills, all relative to other market participants, especially the peer group. As such they were intended to drive performance consistent with FM aims.

The 'order' dimension to context and investment decision process

Various forms of order in internal and external FM contexts and their knowledge and coherence properties provided a focus and a stable structure for routine investment decision making by FMs. They provided the stable context for active and opportunistic investment decision making at individual FM and team levels. They also formed the base from which to develop creativity.

The **external** contexts for investment decisions consisted of the wider environment, and the more immediate 'investment society and markets' or external places for investment action. Stable FM (specific) external networks and relations within wider order were important FM response means. Established investment information sources, interactions, contracting behaviour, constraints and FM performance contracts arose in this environment.

Common **internal FM order** present in the internal FM context was manifest firstly as FM philosophy and beliefs. Active FMs shared fundamental **beliefs** such as, inter alia, information was imperfect, and the market for information (both demand and supply) was inefficient. They believed that their superior information and skill were the means to improve the chances of winning and succeeding in investment decisions. FMs within a peer group shared many beliefs, philosophy and investment aims. These were focussed on a narrow investment and risk universe for say 'value', 'growth', or 'special situation' FMs. This involved a narrowing down of the information universe or information 'niche' preferred by the FM and by other members of its peer group.

FM philosophy was itself based on relatively stable fundamental assumptions and core beliefs about the complex economic and social system FMs operated in, and about the function of FMs. FM firms could adopt either of these two extremes of a **quantitative 'science'** or a **qualitative 'art'** or adopt a combination as their 'house' philosophy. These differing perspectives reflected similar debates in the social sciences concerning quantitative versus qualitative research methods and 'mixed' research methods (see p82 K Parahoo (2006)). Both debates were based on core beliefs about reality, knowledge, and human nature. FMs made such fundamental assumptions on an implicit and pragmatic basis.

The common internal FM order present in the FMs (across peer groups) was also manifest, inter alia, as FM firm objectives, internal organizational structure, support functions, control and communication systems, and standard risk control technology. FM '**internal behavioural advantages**' also had a strong order dimension. These behavioural advantages included, established structures and decision routines (and adaptive, iterative forms) for stock selection and asset allocation decision processes, heuristics, risk controls, external and internal information sources, skilled individuals and stable teams, formal communication processes and support for more informal 'conversations'. Knowledge of the internal behaviour advantage and how to use it were as important as possession of the advantage. The '**internal behavioural advantage**' constituted the immediate informed context for ongoing FM action. The FM internal 'behavioural advantage' (as a special combination of order, knowledge, coherence and creativity) was an important internal **organisational** means to exploit FM's external behavioural advantage in the form of FM **knowledge and theory** of markets and external behaviour. Both were used to avoid the conventional problems of behavioural finance to exploit perceived behaviour of other investors. Internal order also included 'front office' layout, structured and highly disciplined 'back office' functions. These supported and enhanced the internal behaviour advantage.

Coherence or integration factors in FMs included categories such as the degree of imprint of FM philosophy and knowledge, core beliefs, shared values and aims (purpose) on other elements of order and process. These focussed FM attention on key aims and activities, they created a form of FM organisational 'glue' and gave FMs stable 'shape' when involved in competitive 'games' with other FMs in a volatile market environment. They were core organising means and in Weicks (1977, p279) terms were also an ongoing process to reduce 'the perceived level of equivocality judged to be present in enactments that are taken seriously by the organisation'. Weick's (1999) concept of 'collective mindfulness' or attentional processes in organizations also has clear links to these aspects of 'coherence' noted in the FM firms.

Order created the means to replicate many successful (known) FM actions over time, to avoid recognisable errors, and to do the known things well. Order and routine in context and process were means to absorb change and respond to uncertainty during the investment decision process. They provided a stable platform or robust 'ship' to function in a changing and often 'stormy sea' of 'investment society'. They provided a stable platform to 'look out' in many directions into an uncertain 'investment society' made up of companies, analysts, other FMs and security markets. The ordered context and purposeful process and their knowledge and coherence dimensions constituted core information production and investment decision making means. This routine and structure (and its strengths) was likely to lead to stable but transient flows of information. They were the stable risk and return generation 'machine' or means in FM and were thought to contribute to Beta returns or return commensurate with risk. However, such routine information (Mosaic, nuggets) could be easily copied by other FMs using the same well known 'bureaucratic' approaches. Strict adherence to routine and structure could result in 'bureaucratic' FM. This ease of imitation and conservatism were recognised as threats to active FMs searching for competitive advantage. As a result the FMs **sought more creative ways** of finding new information and making investment decisions.

The common internal and external FM order, their properties of knowledge, coherence and creativity, and their relative strengths were interpreted as evolutionary (Nelson and Winter 1982) responses to uncertainty developed in *a common institutional setting* (Scott and Meyer, 1994, Scott, 2001). Holland (2009) illustrates how these were the result of long term FM learning processes. FM Board and top management made strategic choices to deal with (long term) threats to organisational stability and internal order (Laughlin, 1991). These threats to stability included, inter alia, declining performance and long term market change such as globalisation, changing performance measures, and changing client preferences for investment styles. These constituted threats to traditional (national based and simple) FMs and their organisational form and internal and external order. Evolutionary processes were also at work. As Nelson and Winter (1982) suggested intense competition (in the market for funds and FM performance) was a primary means to sort winners and losers in FM and hence to sort those FMs who made high or low quality choices about areas of internal and external FM order, their properties of knowledge, coherence and creativity, and their relative strengths.

Evolutionary processes, learning and top management strategic choice can thus explain, in part, the emergence of competitive advantage in FMs in their peer group in the form of superior context, process, knowledge, creativity, other properties and their relative strengths.

[FM knowledge as a dimension of context and process](#)

Much knowledge, inter alia, of the environment, investment society, markets, corporate value creation, and of investment process, was employed by FMs during their investment decisions.

This knowledge was developed in the case FMs during the investment decision making (routine and creative) process and longer term learning (Holland, 2009). The knowledge of internal and external contexts was in part 'owned' as intangible assets by FMs as individuals, teams and firms. Such knowledge existed as cognitive states in individuals, as a property of FM context and process, and as formal FM knowledge about such knowledge and how to use it. The knowledge existed formally in the case FMs' training manuals and information systems and informally in the experience and cognitive skills of FMs and external parties. It consisted of established and knowledge intensive (learnt) behaviours, structures and processes within and external to the FM with these supported by functions such as research and by other factors such as sophistication of technology. This knowledge was constantly refreshed and tested by new information on investee companies and their industries, by investment decisions, and by active financial market trading. FM knowledge was a source of new information through analysis, as well as providing the context within which to assess the significance and meaning of externally supplied information. The FM as a 'learning organisation' and knowledge creating firm is discussed in more detail in Holland(2009).

Knowledge intensive assets developed within FMs included elements such as theories of company value creation and theories of market behaviour and valuation, knowledge intensive investment decision routines, structures, creative means, and of investment decision heuristics. It included knowledge of brands, reputation and relations in networks and markets etc and of how to manage these. This knowledge contributed to FM capabilities such as particular abilities and skills of individual and teams to exploit these intangibles through FM creativity in investment and in trading and gaming skills in markets etc.

According to the Meritum model (2001, p. 63), these many types of FM knowledge can be formally classified as forms of intellectual capital. The Meritum model and the developing literature on **intellectual capital (IC)** attempts to categorise and develop a holistic view of major types of knowledge as value-creating resources used within the firm and its markets. In this model of FM, human capital was interpreted as decision **process** knowledge, structural capital as internal **context** knowledge, and relational capital as external **context** knowledge. "Human capital includes the knowledge, skills, experiences and ability of people." Meritum model (2001, p. 63). The FM contained much in the way of human capital present and used in investment processes. "Structural capital comprises the organizational routines, procedures, systems, cultures, databases, etc." Meritum model (2001, p. 63). **The FMs incorporated much structural knowledge (SC) in their internal context.** Such SC included the tacit and formal knowledge embodied in FM organization structure, hierarchy, technology, and control regimes. "Relational capital ...comprises that part of Human and Structural Capital involved with the companies relations with investee companies and own clients plus the perceptions that they hold about the company" Meritum model (2001, p. 63): **The FMs 'owned' much Relational and market capital (RC) in their external context.** For example RC consisted of FM reputation for story telling, promise making and delivery of performance, as well as Track Record, and Brand recognition.

[Action, behaviour and process in investment decision making](#)

Investment decision making and action - *general*

The investment decision making process in the FMs is described in two related ways. Firstly as goal seeking, routine investment decision process with a **structured task sequence** (employing fundamental analysis) set in an organisational context (Cyert and March, 1963). Secondly as a process of **sense making** (Weick, 1979) and interpretation. These occurred

together as one process as FMs exploited the properties of FM context and process and their relative strengths. Both reveal different but related insights into the same phenomena of the inductive, iterative, pattern seeking cycle evident in actual FM decision making. The first provides insights into the order dimension of decisions and the second builds on this order to reveal more about interpretation of information and meaning creation within such a set of tasks. The sequential and ordered set of tasks provided the frame for continuous sense making. The structured fundamental analysis at stock or portfolio level, occurred **simultaneously** with sense making. The latter much influenced (enhanced, decision timing altered etc) the structured fundamental analysis and final decisions. Both were **joint** means to cope with and reduce the uncertainty associated with equity investments (Hellman, p236, 2000) and to find new information and investments of value. Routine FM stock selection decision processes had similar structural features to those found by Bouwman, Frishkoff, and Frishkoff, P (1987, 1995) for financial analysts. The **joint** use of structured fundamental analysis and of 'sense making' is further illustrated through the resource based view of the firm (RBV) (Barney, 1991).

Investment decision making and action - *as a structured task sequence*

Routine processes, regular cycles, related tasks, the structure of the day, driven by clear investment goals, formed a core set of **mechanisms for co-ordination and organisation** within the FM firms.

Routine investment decision processes, set in internal and external FM contexts, with clear investment goals, were in the form of structured stock selection (SL) and asset allocation (AL) processes with well defined tasks or phases in sequence. The core investment actions in the FMs (SL and AL) involved decisions taken during the working day and week, as well as periodic (say one month) asset allocations decisions about overall portfolios. These actions were also conducted within various daily, weekly and monthly cycles for company reporting, internal FM research, internal FM meetings, and external FM reporting to clients. The work lives of FMs were structured and ordered around the necessities of investment decision making and the requirement to produce return and liquidity for the agreed level of risk.

Ongoing investment decision action was represented by a structured 'day in the life of FMs' comprising routine and varying tasks, and communications during the day. The FM's day (for individuals and teams) consisted of sequence of daily tasks, events, and activities directed towards stock selection and asset allocation (SL and AL) investment decisions and formal fund objectives. The formal routine and agenda for the day consisted of many well structured investment related tasks and activities conducted at much the same time and sequence every day. The day also included continuous and background activities conducted throughout the day as part of the routine. Ad hoc behaviour and searches for information, outside of the daily routine, were also present. Some weekly, monthly and quarterly events dominated specific days and set the context for actions in the next sequence of days.

Both routine stock selection and asset allocation (equity portfolio) formally existed as 'step' task sequences or processes and operated within this working day

Stock selection decisions (daily) involved tasks such as screening of companies followed, for example, by qualitative information production. This could be followed by quantitative analysis involving earnings adjustment and estimation, choice of valuation model(s) (market relative and absolute), and stock valuation. FMs also assessed whether they had an information and understanding advantage (via their mosaic and 'nuggets') over the market concerning their company valuation. They analysed the information in current market

expectations, and assessed how the market would react to FM specific information. These judgements were collectively used in stock buy, hold, or sell decisions. Practical concepts of individual stock (selection) risk management (and uncertainty reduction and avoidance) such as screening and regular monitoring were also employed in this sequence. The analysis of corporate value creation and of special advantages as a core task is discussed in more detail in the following section on creating a mosaic of company value creation. The analysis of market opinions and expectations is explored in more detail in the section on behavioural finance.

The set of tasks for equity portfolio composition (and broader *asset allocation*) decisions were conducted in cycles of say a month or six weeks periods. They began by assessing investors needs for return, risk and liquidity (relative to agreed benchmarks), and this was followed by macro analysis, prior risk screening of companies and sectors, assessment of sector and portfolio exposures and risk, and judgements about how best to gain the required portfolio risk diversification and return benefits. Practical concepts of portfolio risk diversification (across stocks, sectors, portfolio and economic cycles) and hence value enhancement were employed in these tasks. FMs also assessed whether they had an information and understanding advantage over the market concerning their portfolio decisions and valuation.

The regular cycle of periodic equity portfolio decisions set the value and risk / return context for subsequent (daily) stock selection decisions. Both SL and AL decisions were conducted by FMs in a co-ordinated and linked manner to produce the return, risk, and liquidity relative to benchmark performance desired by their investors. In practice, the overall approach of adopting high order and routine was expected to produce persistence in terms of FM performance close to expected Beta returns.

Theoretical analysis

Cyert and March (1963 behavioural theory of the firm focused on the more routine and ordered aspects (dimensions, properties) of firm decision processes and context. This theory is relevant to explaining goal seeking behaviour of the case FMs. The FMs, individuals and teams, during their routine SL and AL, acted in accordance with a fixed set of operating procedures and programs. They made their choices in terms of FM investment goals (concerning risk, return, and liquidity of funds invested) and on the basis of expectations of value created by companies and value recognised by stock markets. They conducted routine investment decisions within FM order manifest as stable internal and external organisational contexts. This 'routine in order' was also reflected, inter alia, in the regular and predictable use of external networks, FM-Company interactions, use of company IC information in these routines, and regular internal FM interactions.

FM stock selection decision processes had similar structural features to those found by Bouwman, Frishkoff, and Frishkoff, P (1987, 1995) for financial analysts. These common features included information search phases such as familiarizing, exploring, (directed search) and scanning. They reasoning phase including analytical, integrating and summarising behaviour and decisions. FMs differed from financial analysts in that their outcome was investment decision action rather than forecasts or advice. In both their analyst study and the current FM study the role of prior knowledge was significant in all phases.

Investment decision making and action - *and sense making*

Processes of **sense making** and interpretation (Weick, 1979, 1995) and the role of knowledge and order in **organising** sense making and meaning (Silverman, (1970) Taylor-Gooby et al (2006)) were present throughout all phases of investment decisions from search, external

stimuli, analysis, valuation, and choice, both at stock selection and at asset allocation levels. FMs made sense of and developed meaning to; information; investment decisions; perceived risk, return and value; outcomes; and to their working day. This inductive, iterative, pattern seeking and sense making cycle was also evident during actions at various levels of individuals, FM teams and hierarchy, and in external networks and markets.

Thus sense making in investment decision processes arose within many levels of FM context and process, by purposefully exploiting their properties (of knowledge, order, coherence, creativity), and their relative strengths.

More specifically, knowledge, order, coherence and creative dimensions of FM context and process (and their relative strengths), were central, *inter alia*, to sense making and interpretation in FMs during routine *and* creative investment decision making, to exploiting tendencies, errors and mistakes in other investors, and to the control their own behaviour and impulses leading to ill considered actions. For example, prior knowledge of companies and markets and FM order (internally and in a larger external social setting) were central to sense making and the formation of ‘mosaics’ and isolating new information.

Prior FM knowledge of company value creation helped FMs organise sense making during their search for *novel* information concerning investee companies. Prior FM knowledge; of how other investors behaved, how markets behaved, and how the FM behaved; helped organise sense making by FMs during the assessment of whether the novel information was of *significant value* in markets. A small number of insights from such processes were expected to give FMs an information and valuation advantage over markets. This meaningful information was the basis for investment **decision action** (Silverman, 1970).

Sense making and meaning construction.

Sense making and interpretation was present through all aspects of FM investment decisions beginning with screening of companies and information, followed by information production, FM estimation processes, valuation, assessment of whether an FM advantage existed, and in actions or eventual decisions. The sequential and ordered set of tasks provided the frame for continuous sense making.

Weick (1979, 1995) has written extensively on sense making in organisations. According to Weick (1995), ‘Sense making is the search for contexts within (which) small details fit together and make sense... It is a continuous alteration between particulars and explanations, with each cycle giving added form and substance to the other. It is about building confidence as the particulars begin to cohere and as the explanation allows increasingly accurate deductions. (Weick, 1995, p. 133)

Weick’s (2005, p268) ‘search for ideas, tactics, determinants of sense making at a micro level of analysis’ provides a relevant explanatory framework for FM ‘mosaic’ formation and decision making. Sense making in investment decision processes arose within many levels of FM context and process, by purposefully exploiting their properties (of knowledge, order, coherence, creativity), and their relative strengths. These collectively functioned together to generate new information, meaning, and confidence in the above investment decision processes. This led to the building of a new picture or ‘mosaic’ about company value creation and the isolation of ‘nuggets’ of information thought to be value relevant in security markets.

In Weick’s terms (1979, 1995) FM organizing (internal and external) was a system of both individual and organizational behaviours. The FM organizations existed in complex and uncertain real business and financial market environments. They faced a vast world of

changing events, and news in their universe of information, risk, investee companies and economies. Equivocality, was ubiquitous in the information environment of the FMs and this was a primary source of opportunity as well as problems. The objective of FM organizing was to make sense of equivocal messages, or messages (internal analysis, external stimuli, events, news) with a multitude of possible meanings, in this information environment (Weick, 1979).

Weick's (1979) model of organizing and thus of reducing the equivocal nature of messages consists of three distinct activities: enactment, selection, and retention. These iterative cycles of induction in routine and creative investment decision processes can be interpreted in the FMs as follows.

Enactment in the FMs started with active engagement with their world of change. They began with the active framing of a message (internal analysis, external stimuli, events, news) in the environment by FM individuals and team members. Prior FMs knowledge and experience aided this social construction process, as did their psychological priors at individual and team levels. If an enacted message was highly equivocal, FMs individual and teams used internal meeting cycles to discuss questions such as 'what is going on here'. FMs also initiated and became involved in similar external communication cycles of 1:1 meetings and other interactions with investee companies, analysts, clients, and others to further reduce equivocality.

Selection involved the framing the enacted data within various plausible relations derived from reliable historic sources. The FMs used their own ways of 'seeing and thinking', in the form of own theories and heuristics of company value creation and of markets to find and screen such data and information concerning new investee firms. FMs used all of these priors and contexts to choose what events, news, and messages, were significant and should be dealt with and what should be ignored. Thus as events, news, and messages arising in 'investment society' and the wider environment were sensed in the FMs, they also sought to reduce these to a small amount of value relevant information usable in investment decisions. They used past history and their own theory to choose possible explanations. They discussed and argued their views within teams to arrive at a common interpretation.

Thus external stimuli in the form of events, news, and messages arising in 'investment society' and the wider environment were sensed and made sense of by FMs (Weick, 1979, 1995). Their meaning was cognitively and socially constructed by individual FMs operating in FM teams, FM firms, and in external networks and social environments (Silverman 1970).

In Weick's (1995) terms, both FM historic knowledge and existing internal and external order were used by FMs to reduce equivocality. The FMs both delved into the past (knowledge) and used current order and knowledge as prior meaning systems to extract a reasonable form of interpretation. These were part of the means by which the FMs evoked a response internally and externally in companies, analysts and other market participants, which was then responded to by these players (the double interact sequence). The more equivocal a message, the more communication cycles (internal and external interactions in the FM cases) were required to reduce equivocality. FMs individuals and teams used communication in these interactions to make sense of new messages and to take actions meaningful to the FMs. Success in this communicative behaviour in reducing message equivocality, meant such behaviour was **retained** as memory (individual, FM team or firm), as a routine or as part of internal and external order for future use.

The FMs saw retained memory, routines and order as both intellectual assets and liabilities. They provided stability and some degree of predictability in an uncertain world. As Weick recommended, the active FM's continuously challenged, argued, and questioned what they retained and what they thought they knew to reduce 'groupthink' and encourage critical thinking. This creative dimension to the iterative induction cycle is discussed in the next section.

Thus similar processes of **sense making** and the use of knowledge and order to **organise** sense making were present throughout **subsequent phases of analysis, valuation, and choice** in investment decision making. These ways of 'doing and acting' existed as the formal investment decision process as a series of phases or tasks in sequence. These ways of 'doing and acting' were used *in combination with* FM own ways of 'seeing and thinking' to create new information and to further process the stimuli and data and to create new information and additional meaning (further sense making) in the form of new mosaic and new 'nuggets'. This was the basis for investment action.

Creating a mosaic of company value creation and 'sense making – using the RBV view.

The **joint** use of structured fundamental analysis and of 'sense making' can be further illustrated through the resource based view of the firm (RBV) (Barney, 1991). The RBV is used in this section as a theoretical means to illustrate how fundamental analysis of corporate value creation during (the structured task sequence for) stock selection can be used by FMs to construct a 'mosaic' and isolate 'nuggets' of value relevant information. This example also illustrates how prior FM knowledge about companies (similar to the RBV) can be used to organise 'sense making' about value relevant information during investment decisions.

In fundamental analysis, the active case FMs used much information about a firm's business model and about the role of intangibles in company value creation models. They developed qualitative and quantitative intangibles information and used both in mosaic construction and in valuation of a company (Holland & Doran, 1998, and Holland, 2005, 2006). From the FM perspective, competitive advantage in value creation in investee companies was likely to be based on unique optimal **combinations** of human, structural, and relationship capital and their impact on tangibles which led to the desired innovation, growth, value, and resilience in the firm. For an investee company to have a sustainable competitive advantage, these internal capabilities, resources and skills, had to be turned into unique firm specific advantages for value creation that were rare, non-substitutable and difficult to imitate (Barney, 1991, Fahy, 2000). It was difficult for company management (or FMs) to identify this best combination, and to allocate resources to each element 'correctly'. It was difficult to know how much was **just enough** to add to R&D (or brand management) expenditure to get technological change (or consumer behaviour change) and the desired number of patents (or new brands, or new uses for brands). It was difficult to know what was the right amount to invest in product design and marketing. If company management were talented enough to make these judgements and to create key firm resources (with characteristics such as value, inimitability, appropriability, and barriers to duplication, Barney, 1991, Fahy, 2000), then they could construct a special firm **sustainable competitive advantages (SCA)** in their industry or sector. In this RBV view, knowledge was regarded as a critical, if not the critical component in competitive advantage. Effective management of knowledge was seen as the main source of competitive advantage (Prahalad and Hamel, 1990). Companies that protected their unique knowledge from imitation or expropriation, that expanded, disseminated and exploited it internally, could both create and exploit a unique competitive advantage and resource.

Concepts similar to those identified in the RBV view were a focus of **FM theories of company value creation** and were used in FM research on companies. FMs had to make judgments about such optimal corporate combinations of intangibles and tangibles and their impact on value. They also had to assess if management had made the appropriate strategic judgements. Such extra information was generated by interpreting these sources within prior FM knowledge in the form of FM theory of company value creation. This was part of a FM advantage when FMs constructed their '**mosaic**' of company value creation, and assessed management and the competition. This analysis and their '**mosaic**' were the means to organise FM sense making and to identify the two or three pieces of novel information not widely recognised in the market. The FM hope was these would **also** be significant value relevant pieces information or '**nuggets**' *when eventually known* by markets. Prior FM knowledge, of how other investors behaved, how markets behaved, and how the FM behaved, helped organise sense making by FMs during the assessment of whether the novel information was likely to be of significant value in markets. These two or three key points were expected to give FMs an information and valuation advantage over the information market and stock markets. This was the basis for their unique 'fair value' or 'intrinsic value' of company. This meaningful information was the basis for FM investment **decision action** (Silverman, 1970).

In the following sections on behavioural finance, similar ways of creating additional information are illustrated on the information market and stock market side through use of FM knowledge in the form of own FM 'market theory'. FM used these to assess if the market had the same information as the FM. FMs also sought to **identify tendencies, errors and mistakes in other investors** leading to subsequent mispricing. They sought to **control their own behaviour and impulses** leading to ill considered actions. The FM 'internal behavioural advantage' was also a supporting FM organisational means to avoid these market based behavioural problems.

Creativity in FM routines and in use of context

Cyert and March's (1963) behavioural theory of the firm is relevant to explaining routine in the case FM's decision making. This routine and order observed at the heart of FM investment decision making could act as a barrier for the FM information creation process. It could discourage individuals to move to another more creative mode in the investment decision process because such evolutionary developed patterns are often hard to change. According to Nonaka & Toyama, (2005) there is a need to develop *kata*'s. A *kata* is different from a routine (Nelson & Winter, 1982) in the way that it contains a continuous self-renewal and creative process in decision making. By necessity, active FMs also had to have a strong **creative** dimension to their decision processes and contexts. Creativity and creative processes were built upon, and represented variation in existing FM investment routines and knowledge built into routines. Creative dimensions to context were based on existing context order, coherence and knowledge. Creativity and creative processes did not exist independently of order, coherence and knowledge in process and context.

Creative investment decision processes, like the routines they were based on, were much enhanced and stimulated by the larger FM organizational context and its properties of order, structure and knowledge. As Heuer (p75, 1999) noted 'new but appropriate ideas are most likely to arise in an organisational climate that nurtures their development and communication'. Andrews (1975) found that scientists possessing more creative ability produced more innovative work only when they had control, they felt secure, superiors did not interfere, the project was small, and when other activities created time away from the task. The influence of any one of these factors was small, but their impact was cumulative. The

presence of all or most of the conditions strongly influenced the creative process.

Ford C M and Gioia D A (2000) found both context and decision process were sources of factors that influenced the creativity of managers' decisions and especially the novelty and value dimensions of creativity,

'the novelty of the decision outcomes was related to negative feedback, an evolutionary process reflecting the influence of context. Novelty was also enhanced when managers worked with other decision makers holding a common perspective, were unfamiliar with potential solutions, and used flexible decision processes, all of which are teleological processes reflecting the influence of managers' decision processes. On the other hand, the value of decision outcomes was positively influenced by issue importance and the absence of disruptive external forces (both evolutionary, contextual processes) and by trust among decision makers (a teleological process).'

Similar contextual and decision process factors and combinations of these factors were at work in enhancing FM creativity. These were manifest as creative dimensions to FM context and process, which had been learnt, chosen and evolved over time. Thus FM knowledge was a key creative dimension to context and process. FM Creative process and creative outcomes were the result of using and knowing how to use the creative dimensions to context and process in investment decisions. However, in contrast to the Ford and Gioia firms(2000), in order to survive as successful FMs, active FMs had to explicitly build in creativity dimensions into their supporting context and their investment decision processes. Such creative factors were at the core of their functioning and survival. In this sense they were more like active research teams in universities and in knowledge intensive companies. They were also continuously making decisions where much wealth was at stake both as gains and losses. This high value significance of FMs decisions also created a high need for creativity, but also created a need for creativity to be quickly exploited and matched to perceived value gains in a high speed, pressurised decision process in volatile markets. Creativity was not an occasional 'extra' to active FM investment decisions, but lay at their heart. These features reveal important differences of emphasis between FM creativity and that observed in commercial or industrial firms such as in Ford and Gioia (2000).

The creative dimensions to **internal context** (additional to those for order dimension) involved shared beliefs and conceptual elements such as FM philosophy and knowledge that had a strong creativity ethos and purpose. They included considerable knowledge about these contexts and how to exploit them for creative purpose. They involved the shared belief and intention to tailor prior knowledge to each new situation. They involved flexible internal organisation design which could be adapted to new circumstances. They included FM discretionary controls over investment decision constraints imposed by clients and by short term quarterly performance pressures. They involved encouragement of a high level of discretion and control at FM team level.

Creative dimensions to context included ideas of how to promote a 'challenge culture' and 'positive' behaviour designed to encourage a culture of creativity. Thus FM individuals and teams were encouraged to generate plausible new investment alternatives, thesis and counter thesis, and to avoid selecting familiar solutions. Finally, they involved operational and research support with a strong creative focus.

The creative dimensions to **external context** involved FMs **adopting a very active** role 'in the middle' between companies and markets, and the active exploitation of external behavioural and knowledge advantages in investee companies and markets, In addition, external creative means such as flexible access to adaptive information sources, and sceptical views of prior FM knowledge about the behaviour of others, added other creative dimensions to FM investment decisions.

Creative dimensions to ongoing or operational investment **decision processes** (additional to order and routine etc) involved, inter alia, use of, and knowledge of how to use; flexible routines, active conversations and of ‘positive’ behaviour, ‘brainstorming’, intense probing of investee companies, pressurizing problem companies and noting response, probing external research capability, and when the FMs were receiving urgent and often stock value significant feedback from stock markets.

Stock selection or asset allocation routines could be adapted from a linear sequence of tasks in stable circumstances to a contingent performance of tasks to match decision urgency and information supply conditions. Thus stock selection routines could start with the (normally later) valuation task, then move back to analysis before taking buy, hold or sell decisions. Within the investment decision routine, increased use of sensitivity analysis, testing of alternative investment hypotheses, the use of alternative models of corporate value creation and of valuation, as well as informal conversations and team debate, and many other means, added extra creative dimensions to the routine. This flexible use of routines has been described by Feldman (2000) as a key source of change and innovation in organisations.

Other important creative dimensions to investment decision processes arose in the cases when the FMs sought to manage their objective and subjective rationality as defined by Simon (1957). *Objective rationality* was used in FM when they employed fundamental analysis (of company value creation) relative to assumptions of a near efficient market. This analysis could include technical analysis of company accounts and market structures as well as of the intangibles and IC used in company value creation. It included the generation of plausible new investment alternatives, such as in thesis and counter thesis form (Bolton, 2008), as the focus of such analysis.

Subjective rationality arose when they sought to use such fundamental information to interpret the likely behaviour of individual investors, key groups of investors (lead, follower, naïve etc), the behaviour of the wider market, investee companies, and their own emotions and behaviour. Argument, debate, and conflict in FM teams concerning their objective and subjective rationality and their own feelings and emotions and those of others (company management, investors, markets) about the investment alternatives were important means to generate creative tension and new ideas. The existence of alternative investment choices and of prior FM knowledge or theory of behaviour (in markets and in the FM) in the balancing of objective and subjective rationality were primary foci for and means for creative thinking.

Important ‘kata like’ creative processes (Nonaka and Toyama, 2005) arose when FMs received high quality feedback from the stock market and from analysts and others. This timely, often urgent and significant feedback helped them to continuously check the differences between their predicted company valuation outcomes and the stock price reality, and to check differences between their information set and that of the market. Novel insights associated with significant losses for the FM were avoided. This reflected the differential importance of novelty and value dimensions of creativity as noted by Ford and Gioia D A (2000).

Such market feedback was an important ‘pattern breaker’ in investment decision making and could alter prior knowledge. The FMs employed prior knowledge in the form of their own models of market pricing behaviour and of valuation. For example, this could lead to changes in the structure and use of specific valuation models. FMs chose (combinations of) valuation models for their ability to use, share, complement and reveal scarce and fragmentary information rather than for their logical elegance and internal consistency. This behaviour reflected aspects of bounded rationality and ‘satisficing’ as described by Simon (1957). Thus

differences from market information sets and from market based valuation models were used opportunistically to find differences from the market and hence to discover novel opportunities. These sharp and strong feedback mechanisms were both a stimulus and discipline to a kata self renewal process, and a strong incentive for the FMs to adapt quickly and break out of routines of thinking and taking actions. All FMs showed this adaptability arising from 'reality checks'.

Kata like forms or creative dimensions were more dynamic and intense in the most active FMs in both strategic context and in their operational decision processes.

Creativity was perceived to arise out of individual and team experiences of problems and conflicts in ongoing investment decision making, all of which stimulated intense thinking, new ways of viewing the situations, new concepts about how companies created or lost value, active debate (thesis, counter thesis), and novel ideas.

Creativity was perceived to arise in investment decisions when the above creative means in context and process were collectively used in the investment process to break up old ideas and form new associations in a way that was more radical, novel and arose with higher frequency than in the world of order and routine. Original ideas and new concepts and associations by themselves were not enough, they had to work and be relevant to say company business models (or value creation processes), and/or to stock market value creation processes,. This had to give FMs information about significant company stock price or value changes not available to others. Significant value implications were means to screen merely novel ideas from actionable ideas. This breaking up and reforming of ideas occurred at all points in the investment process from stimuli, through information production, to decisions, to outcomes.

The creative means in context and process together formed a 'collective creative system' designed to increase the production of a continuous stream of good and (new) ideas. This was expected to lead to novel, value relevant information that was less transient, and to information that was unique, proprietary and difficult to imitate. Some of these ideas would produce big winners and losers. Overall the aim of creativity was to marginally improve the odds on each investment decision. Such information was expected, in aggregate over time, to produce extra value in FM performance in the form of Alpha returns as an excess over Beta returns.

Interpreting individual and team behaviour – within Herbert Simon's ideas

Behaviour was a major factor in the FM cases and the GT of FM. The FM cases revealed much insight into a variety of FM *behaviour* in investment decision making. Simon's (1957) ideas of bounded rationality, subjective rationality, and 'satisficing', are relevant to explaining some aspects of FM investment decision behaviour within the FM firm at stock selection and asset allocation levels (both routine and creative forms). Simon (1957, p 241) argues that individuals do not seek the best possible solutions to problems, but operate within *bounded rationality*. Individuals (and teams) are limited by their unconscious skills, habits, values, sense of purpose, and by the extent of their knowledge and information. They can act rationally within these boundaries. FMs face such problems when screening out companies for further detailed investment analysis and when screening huge amounts of information supply into usable and comprehensible amounts of information.

Simon, also argued that individuals (and teams) with bounded rationality will 'satisfice'. They seek solutions or accept choices or judgments that are 'good enough' for their purposes. He argued that it is often *rational* to seek to satisfice because the search for better solutions and results expends resources that have to be justified. In the short term, in a context of

intense decision pressures and information limits, FMs sought 'just enough' information to act on in their immediate investment decision. They chose the first hypothesis that appeared 'good enough' rather than exploring all potential hypotheses. When time pressures and information limits were reduced, a limited number (often just two) of hypotheses and counter hypotheses were generated and assessed against 'just enough' information. In the longer term, the case FMs learnt 'just enough' in the form of their own theory, heuristics, categories or themes etc to guide the selection of thesis-counter thesis. They learnt just enough to guide the conduct of an effective daily 'hunt' for information, to assess the alternatives, and to take investment action. The more active the FM the higher the need for creativity and the stronger the demand to build flexibility into the use of knowledge.

Such ideas of bounded rationality and satisficing can be extended by Weick's (1995) view of sense making. For example, satisficing also had to make sense to FMs and have meaning within their order and knowledge before they took action. Bounded rationality and satisficing at the level of FM individual and teams were also ameliorated by the informed FM organisational structures, routines, heuristics and algorithms built into such screening processes. This guided the screening for companies and information and the assessment of alternatives in a more informed way and released *part of* the knowledge and information constraint component to FM bounded rationality and to satisficing.

Simon also introduces the idea of '*Subjective rationality*' or behaviour that is rational, given the perceptual and evaluation premises of the subject. Subjective rationality depends on an individual's personal values. Subjective rationality involves satisficing by the use of heuristics or rules of thumb that meet a subjective minimum standard concerning the things being sought. Clarkson (1963) applied Cyert and March's (1963) theory of the behavioural firm and its decision making to the trust (or FM) investment process by trust officers in a bank. He showed how fund management was an investment decision process based on 'heuristics' and 'satisficing' behaviour. He demonstrated how FMs used heuristic 'rules of thumb' and made 'satisficing' first choices in their stock selection and portfolio choices.

In this field research, FMs were 'close to' *objective rationality* when they employed fundamental analysis (of company value creation during stock selection) relative to assumptions of a near efficient market. They were closer to *subjective rationality* when they sought to use such fundamental information to interpret the likely behaviour of individual investors, key groups of investors (lead, follower, naïve etc), the behaviour of the wider market, investee companies, and their own behaviour. The use of FM own theory in interpretation of market behaviour, the use of heuristics in company screening criteria, and in other aspects of investment decision making reflected such subjective rationality. Argument, debate, and conflict in FM teams concerning their objective and subjective rationality and emotions was an important means to generate creative tension and new ideas.

The fact that FMs could be both objectively rational and subjectively rational reflected their prior learning and their informed FM organisational structures, routines, and theories. This '*super rationality*' allowed them to make choices about the *degree of* objective and subjective rationality they could employ in the search for a unique information advantage. Using Olsen (2009) the **subjective rationality** observed in the cases can be interpreted as the experiential process and, '...encodes information in the form of concrete exemplars, images and narratives. Most importantly, the experiential process is emotionally driven and motivated by anticipated "affect" or feeling. Feeling is a key element in any decision because it is necessary to trigger action.' Using Olsen (2009) the **objective rationality** observed in the cases can be interpreted as the "rational" or "rule based" process which 'uses symbolically represented knowledge processing, where information is evaluated and integrated using formal logic as

opposed to informal associations. The rational process is more effortful and time-consuming, but can yield more precise solutions when the decision situation is not complex.’ And ‘The experiential system is much faster and generally can yield satisfactory solutions when a situation is more complex and riddled with incomplete, ambiguous or contradictory information. The use of heuristics, or rules of thumb, is a hallmark of the experiential system’.

Satisficing, bounded rationality, and subjective, objective, and ‘super’ rationality in active FMs arose within prior FM knowledge or theory of company value creation and market process. They arose within highly structured and informed decision processes and rules and hence **within prior order** and knowledge chosen by FM top management. This was all designed to reduce the perceived FM error and bias, and emotional response to risk and uncertainty in individuals and teams. This could reduce the behavioural costs (psychological and bounded rationality) of poor decision making under uncertainty. This is explored in more detail in the next section on behavioural finance.

Thus satisficing, bounded rationality, and subjective, objective, and ‘super’ rationality at the level of FM individual and teams were deliberately ameliorated and manipulated by the informed FM, in the interests of seeking advantage in investment decisions. Satisficing, bounded rationality, and subjective rationality etc did not restrict the search for advantage within a FM. These were managed via *objective rationality* and ‘*super rationality*’ to constitute a resource efficient means to achieve this advantage. There was an explicit trade-off in the cases between subjective and objective rationality to achieve these aims. There was also an explicit trade-off in the cases in terms of investment in learning to acquire knowledge including heuristics (reflecting bounded rationality and the need to satisfice) versus the cost of doing this and the need to act quickly to exploit opportunities. The above reveals examples of Simon’s (1976) idea of the FM organisation influencing its member’s behaviour by controlling the decision premises upon which decisions are made rather than controlling the specific decisions.

Interpreting individual and team behaviour – within ‘Behavioural finance’

Other aspects of FM investment decision behaviour can be explained, in part, by ‘**behavioural finance**’ theory. Behavioural finance theory has developed extensively in the past thirty years and has many implications for investors (Shefrin and Statman, 1985; Tversky and Kahneman, 1992).

Behavioural finance relaxes the traditional finance assumption that investors are fully rational, and makes the assumption that the market ‘behaviour’ is the aggregate of behaviour all individual investors. It is built upon two building blocks: cognitive psychology and limits to arbitrage. Cognitive psychology behaviour includes, inter alia, overconfidence, heuristics, mental accounting, decision framing and conservatism. Behavioural finance recognises that irrational investor behaviour can severely under or over value the stock market. Limits to arbitrage are concerned with predicting when arbitrage forces will be effective and when they won’t be.

This body of thought was developed to explain investor and market behaviour. It can be used to explain how FMs thought about the behaviour of other investors and how this FM analysis then drove new kinds of FMs actions. It can be used to provide further explanation of FM behaviour as individuals and teams especially how FMs organised to avoid the conventional problems of behavioural finance and exploited perceived behaviour of other investors. This analysis is relevant to both routine and creative forms of FM investment decision making.

It can also be used to extend Simon's behavioural analysis **within** the FM firm. Sophisticated 'lead' FMs exhibited bounded rationality, and subjective and objective rationality. They went beyond these ideas by seeking a 'super rational' balance between them. They were also more pro-active in managing their behaviour against that of other investors. At times this bordered on manipulation of other investors.

As noted above, the case FMs had their own theories of behaviour in markets and used these to explain aggregate market behaviour and price behaviour. Such theories were based on ideas similar to behavioural finance. They were used by FMs as a tools to think about and debate how some groups of investors (eg sophisticated 'lead', follower, naïve, indexer, specialised FMs etc) were behaving differently to each other, but in ways common within their own market segment. This helped FMs think how such systematically predictable behaviour could drive prices. This involved thinking about the circumstances in which different behaviour in distinct segments (eg sophisticated 'lead' FM, follower FMs, indexer FMs, naïve investors) merged into common 'herd behaviour. It could also help analyse other circumstances when they diverged radically. Both created opportunities for 1st and 2nd guessing behaviour by FMs against other investors, and for 'playing games' in markets. This could lead to actions to exploit other investors through policies such as 'contrarian' investing.

FMs own theories of behaviour in markets were used to interpret current market observations during the investment decision task sequence. This fundamental analysis of markets occurred simultaneously with FM sense making (Weick, 1979) in the market context. These jointly influenced (enhanced, decision timing altered etc) hold, buy, sell decisions in markets. Thus observations of current market circumstances and, inter alia, of changes in share prices, stock market indices, trading volumes, and other investor actions, were important information to be interpreted and made sense of relative to the FM fundamental valuation of a company. Current market circumstances, such a bull or bear market, or current market fashions or consensus opinions, were interpreted through FM prior theory, knowledge and experience of these conditions. The point was not to accept these fashions or opinions but for FMs to use their own internal research and knowledge to think about how to exploit them.

FM contextual factors interacted with FM knowledge of market context factors. Current FM financial circumstances, such as an abundance or deficit of investable funds was a factor in influencing the scale of stock and portfolio investment. At the margin this could effect the nature of stock selection (Hellman, 2000) and composition of portfolios depending on the current behaviour of individual stocks and sectors. Constraints from the funds supply side (on asset allocation and in some cases on stock selection) and variation in FM philosophy as well as own theory could mean that the same market observations were viewed very differently across different FM peer groups (contrarian, growth, value etc) leading to different investment actions.

FMs used their own ideas of behavioural errors by other investors, and their own **organisation behaviour** to gain special behavioural advantages. They sought to **identify tendencies, errors and mistakes in other investors** (such as naïve investors who they believed were, on occasion, dominant in markets, or indexers who were constrained in their choices) leading to subsequent mispricing. They sought to **control their own behaviour and impulses** leading to ill considered actions.

For example,

- Sophisticated 'lead' FMs knew about investor behavioural problems such as overconfidence, bias, and memory issues. They tried to exploit this via their knowledge of company economic fundamentals and of markets and other investor

behaviour. This was done within investing teams (stock selection) and committees (asset allocation).

- Thus they tried to ‘correct’ any bias or overconfidence in their probabilities of events using these means and they used this, in turn, to avoid errors such as over-reaction
- Sophisticated FMs knew about the emotional responses of naïve investors to certain events and market conditions. They sought to control and exploit such a response within the FM.
- eg The FM team conducting stock selection and the investment committee making asset allocations decisions, could recognise and control their emotions through explicit discussion. These groups wrote down options, canvassed opinions and feelings, and explored (and in some cases rated) their own emotional responses.
- Sophisticated FMs knew about the asymmetric behaviour problems of other investors. They tried to reduce their own asymmetric behaviour errors here and exploit that of others via their ‘framing’ (in teams) using knowledge of company fundamentals and of markets. Framing also arose via the imprint of FM philosophy, and via the framing of stock selection within asset allocation limits, and within risk control limits.
- Sophisticated FMs also used computers to overcome memory and cognitive processing limits, and gain a wider view of history etc. They also used teams and structured investment processes (SL and AL) to compensate for individual memory limits and the constraining effects of the use of narrow heuristics.

Thus FM firms sought to control or exercise some influence over personal cognitive characteristics (C), psychological characteristics (P) and emotional characteristics (E) of their own individuals and teams, This was done through recruitment, through training on the job, through the use of heuristics, and by the imposition of organisational norms for behaviour. Sophisticated ‘lead’ active FM thus sought control over their own personal cognitive characteristics (C), psychological characteristics (P) and emotional characteristics (E) of their own individuals and teams, *and* also sought change their own behaviour to exploit the expected behaviour of ‘naïve’ investors and ‘follower’ FMs.

FM Competitive advantage.

The resource based view (RBV) is used in this section as a theoretical means to explore the nature of the FM sustainable competitive advantage as a unique combination of FM tangibles, intangibles and capabilities. It is also used to clarify the conditions for FM failure and success.

Fahy (2000) used the RBV theory to build an operational framework for empirical research into the nature of resources required to create a SCA. Fahy (2000) proposed that resources are comprised of three groups, namely tangible assets, intangible assets and capabilities. These groups have “differing characteristics of value, barriers to duplication and appropriability for the firm” (Clulow *et al.*, 2003, p.222). Fahy’s (2000) framework was used by Clulow *et al.* (2003) in their analysis of an Australian funds management firm.

From the resource based view of the firm, the role of well established tangibles and tangible processes in FM such as offices, data bases, etc would be considered as well understood and easily duplicated. In addition, FM financial and informational intermediation processes, as the core tangibles or risk and return generation ‘machines’ available to all FMs, would not normally be considered sources of competitive advantage. Intellectual property, brand, databases and networks are examples of intangible assets which are held by many firms (Fahy, 2000; Clulow *et al.*, 2003). In the case of FMs, the resource based view would expect

that intangibles and their impact on tangibles (especially intermediation) would be the primary source of sustainable competitive advantage and hence success in FM investing.

All FMs could generate new information generated within routine and creation process set within a wider informed context. However what made one FM more successful in its peer groups lay in its relative competitive advantage. Advantages in FM 'context and investment process' elements were based on their properties and strengths. Such properties and strengths were intended to be difficult to copy and only exploitable by the FM. Properties included knowledge content, order, creativity, and integration factors (imprint of philosophy, consistency use, match to circumstances). Each FM had various relative strengths of the 'properties of elements', within their peer group. These relative strengths of properties were a key source of competitive advantage for each FM within a peer group.

From the perspective of the Resource Based view (RBV) of the firm, the higher the strengths of properties (of knowledge, order, coherence, and creativity of context and process), chosen by the FM, then the greater the likelihood that top management of the FM had also chosen, key resources with characteristics of value, barriers to duplication, and appropriability. Top FM management choice, during active learning, and within competitive and evolutionary processes, can thus explain, in part, the emergence of competitive advantage in FMs in their peer group

Top FM management identification and FM possession of these key resources were the strategic means to construct special FM **sustainable competitive advantages (SCA)** in their peer group. These key resources were the context and process elements of FM decision making, their properties and their strengths or qualities. **Unique and incremental differences** of these over other FMs were the basis for an SCA.

FM Intangible assets included knowledge intensive assets such internal and external order, process and structure, their properties and strengths. Intangibles included established investment decision and trading routines. They included creative means and other properties, and investment decision heuristics. Intangibles included knowledge intensive assets such as theories of company value creation and theories of market valuation. External order as reputation, brand names and relations in networks and markets were key intangibles for FMs. These were important for financial firms such as FMs in that they could promote loyalty and help firms to attract customers from competitors (Clulow *et al.*, 2003). Capabilities included knowledge and creative properties of these intangibles and the relative strengths or particular abilities of FM to exploit these intangibles through FM creativity, and gaming skills in markets etc.

Grounded theory and RBV- a predictive model

All of these FM intangibles were knowledge intensive. The important point for this paper is that the RBV highlights knowledge as the core resource upon which FM investment success and failure and relative vulnerability to crisis depend. Such knowledge based intangibles can create barriers to duplication as they are imitable, immobile and have no substitute (Clulow *et al.*, 2003).

The RBV theory also predicts failure. The FM that did not have key resources such as tangible assets, intangible assets and had weaknesses in their capabilities and in their strengths, faced major competitive disadvantages and was vulnerable to failure. Such FMs were unlikely be able to develop key resources with characteristics such as value,

inimitability, appropriability, and barriers to duplication. Such FMs were also vulnerable to financial crises.

Thus the RBV and the GT of FM could be used to specify the conditions for success and failure and relative vulnerability to crisis in FM. The RBV and the GT of FM could be the combined basis for a predictive model for FM performance based on a coherent explanation of the nature of FM. Bureaucratic or 'passive' FMs (high level of order, low creativity) with all of the required forms of internal and external order and knowledge, with high quality of their properties such as knowledge content, and with high strengths of these properties, were likely to achieve beta returns for their level of portfolio risk. Active FMs (high levels of order and creativity) with all of the required forms of internal and external order and knowledge, with high quality of their properties of creativity, knowledge, and with high strengths of these properties, were likely to achieve alpha excess returns over beta returns for their level of risk.

Thus three simple hypotheses can be generated from the analysis in this paper.

Hypothesis 1

The higher the strengths of the order, knowledge and coherence as properties (or dimensions) of context and process, then the more stable and less transient the expected production of information and the higher the expected chances of Beta performance.

Hypothesis 2:

If the conditions for high strengths of order, knowledge, and coherence properties of context and process hold, then creative means and creativity can build on this foundation to generate alpha.

The higher the strengths of the creative properties (or dimensions) of context and process, then the higher the expected production of novel and valuable ideas, and higher the expected chances of alpha outperformance.

Hypothesis 3:

As FMs increase in size, they can achieve the EOS for reducing the costs of Beta and Alpha production, as a % of gross return.

Hence, if they satisfy H1 and H2, they can generate highest Beta and Alpha than smaller FMs with the same characteristics.

Given by definition, the expected low likelihood of consistently finding both novel and valuable information (in the peer group preferred information niche and investment universe), the achievement of alpha would also be expected to be unusual for active FMs. Similar arguments can be put forward to hypothesise differences between the performance of various active FM style or peer groups such as 'value' and 'growth' FMs. Difference in the context and process elements and their properties and strengths could be hypothesised for each active style group and for FMs within each style group. Hedge FMs as 'super active' FMs could be characterised as high risk takers with extreme dimensions of creativity to their context and process elements operating at new or transient frontiers of risk and return (no stable or specific information niche or investment universe).

FM firms operating with a variety of FM style portfolios (as savings products) are likely to have the same core beliefs and philosophy and the same internal and external order operating as a 'House Style' context for individual fund styles. The latter may vary by their chosen information, risk, investment universe and by expected risk, return and liquidity features of expected fund performance. The RBV and GT can be used to predict how the common FM

factors play a role in the performance of the different individual funds and how individual funds with this common FM context differ from their peer group of similar style managers.

This theory based approach to generating hypotheses contrasts sharply with current ad hoc approaches to analysing and researching FM performance.

Summary and Conclusions

This paper has described a coherent grounded theory model of FM and discussed this within relevant theory. The field research and analysis in this paper has revealed the significance of context and process and their interactions in FM investment decisions. This confirms prior research by Holland and Doran (1998), Hellman (2001), Arnswald (2001), Holland (2001, 2003, 2004, 2006), and Holland and Johanson (2003). This work extends the previous research by revealing the nature of the knowledge, order, coherence and creativity properties of context and process (and their relative strengths) in FM investment decisions.

These empirical findings and integrated theoretical concepts provide a novel conceptual frame for thinking about the behaviour of FMs. This can help FMs (and others such as regulators, FM rating agencies, and academic researchers) to think about how to create robust forms of FM organisation, decision processes, and behaviour and thus how to improve FM performance, and how to reduce FM vulnerability to ongoing uncertainty and the occasional financial crisis. These concepts can also form the combined basis for a predictive model for FM performance based on a coherent explanation of the nature of FM.

The financial crisis of 2007-09 has raised questions concerning orthodox ideas of how financial markets operate and how financial institutions behave in such market settings. Much effort is being expended on how to improve behavioural concepts of markets, transactions and decision rules. This paper takes an alternative view and provides an example of new ways to develop a conceptual framework to think about the behaviour of financial institutions in an active market setting. Fund managers (FMs) are used here as an example of how this new thinking, based on grounded theory and relevant theoretical analysis, can be developed. A similar approach is possible for many other types of financial institution such as banks, insurance companies, pension funds, venture capital and many others.

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