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Use of company intellectual capital information in some Japanese financial firms

Structured abstract:

Purpose - The purpose of this paper is to explore the perceptions of (1) how Japanese Financial Institutions (JFF) acquire and use company intellectual capital (IC) information in their common routine equity investment decisions, (2) how this activity contributes to knowledge creation in the JFFs, and (3) how investee company knowledge creation is affected by the JFF's.

Design/methodology/approach – The research employed a multi-case design, using four JFF cases. The JFFs and their IC use were discussed in terms of Nonaka and Toyama's 'theory of the knowledge creating firm' (2005). The associated concepts of 'Ba', 'SECI' and 'Kata' were conceptually located within the internal and external order emerging in the cases and were used to analyze JFF knowledge creating behavior. Despite the limits to SECI or Kata processes noted in the cases, these concepts were valuable in analyzing the case data.

Findings – Company IC information contributed to earnings estimates and company valuation. Emotional information about intangibles contributed to JFF feelings and confidence in their information use and valuation. JFF knowledge was an important component of the key interacting and informed contexts used by JFFs to make collective sense of these different but complementary types of information in knowledge creation. This generated opportunities to improve disclosure and accountability between JFFs and their investee companies. Common patterns of behaviour across the JFFs were counterbalanced by variety and differences noted in JFF behaviour.

Practical implication – The findings provide important insights in how JFF knowledge creating patterns could limit or progress a common language of communication between companies and markets on the subject of IC. This could impact on the quality of corporate disclosure and accountability processes. The results will be used in the context of a further IC disclosure development in Japan.

Originality – The paper demonstrates that there is a need for further use of qualitative studies of financial market behavior. Especially in the area of understanding the communication of IC between firms and financial market agents, the potential of using sociology of finance approaches appears to be considerable.

Key words – Financial markets, Knowledge, Investment, Intangibles, Disclosure, Accountability

Paper type – Case study

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1. Introduction

In 2002 the Japanese government published an Intellectual Property Policy Outline. The background to the declaration was an ambition to stimulate intellectual creation, to protect the results of this creativity as intellectual property, and to construct an economic and social system for their effective utilization as the source of value added products and services (Strategic Council on Intellectual Property, 2002). These national strategic objectives were followed by two other voluntary guidelines on Intellectual Property Information Disclosure (METI, 2004) and Disclosure of Intellectual Assets Based Management (METI, 2005) respectively. The latter guideline aims to help corporations to prepare an intellectual assets based management report and all three of them are supposed to function as “a common language of communication”, between companies and markets on the subject of intellectual capital. All these guidelines are the result of active discussion involving a great number of Japanese actors. The most recent guideline, which addresses intellectual asset-based management in SME’s was proposed in 2006 by the Organization for Small & Medium Enterprises and Regional Innovation in Japan (SMRJ, 2007).

The economic significance of intellectual capital (IC) has become increasingly important since the 1990s and the disclosure of IC information has also become an important but problematic issue. The Japanese guidelines follow numerous initiatives during the last decades to develop norms and guidelines, concerning the reporting of intellectual capital (Meritum, 2002; DMSTI, 2003). All of these guidelines address the capital market as an important target group. However, even though actors on the financial market seem to want more information on IC, disclosure of such information has, in earlier studies (Johanson, 2003; Henningson, 2009), not shown to be as successful as initially proclaimed concerning improvements in the communication between firms and financial market agents. Furthermore research on how actors on the capital market perceive IC information shows mixed results.

Some studies indicate that actors on the capital market demand IC information and find it useful (Barth et al., 2001; Gelb and Zarowin 2002; Garcia-Meca, 2005; Flöstrand, 2007; Yosano et al, 2011). Others suggest a lack of interest in IC information (Eccles and Mavrinac, 1995; Catusus and Gröjer, 2001; Guimón, 2005).

Holland and Johansson (2003) address the lack of knowledge with respect to how actors on the financial market perceive IC information when they suggest at least three barriers in the communication of human capital. Firstly, capital market actors might lack the necessary understanding of the potential of human capital investment in a specific firm, which give rise to a knowledge problem. Secondly, even if capital market actors do understand the connection between human capital indicators and the vision of the firm they don't know if they could rely on these indicators – the uncertainty problem. Thirdly, they propose there is a management problem as actors on the financial market do not know if the management would take necessary action on data. Furthermore, Holland and Johanson (Ibid) state that one reason for the communication barriers between firms and financial market agents might be that both cultures are locked in to their own mentality and changing mentality is not an easy task. By definition it takes time.

As was suggested above knowledge based barriers to understanding corporate disclosure of IC information may arise in financial institutions. Roberts (2010) has argued that improved disclosure alone cannot solve accountability problems. Roberts (2010) used O'Neil's (2002) concept of 'intelligent accountability' to broaden the concept of accountability and associated processes.

Driven by the Japanese IC movement the present paper and the underlying empirical and explorative study is a continuation of a number of follow up studies addressing the Japanese governments' policy initiatives with respect to IC disclosure and management (Johanson et al, 2006; Yosano and Koga, 2008 ; Johanson et al, 2009; Sakakibara et al., 2010; Yosano et al,

2011). In the paper by Johanson et al (2006) a future research agenda was suggested. With respect to the market communication area they asked; (1) In what way are Intellectual property (IP) statements useful in the communication between firms and the capital market? And (2) Does IP reporting affect assumptions, interpretations and decisions by capital market agents?

This paper, which is based on an investigation of four Japanese Financial Firms (JFF) addresses not just IP but rather the wider concept of IC. The purpose is to understand how JFF knowledge is a means to improve accountability between JFFs and their investee companies and to create the conditions for 'intelligent accountability'. The research questions are;

(1) how do JFF's acquire and use company IC information in their common routine equity investment decisions,

(2) how do these activities contribute to knowledge creation in the JFFs concerning companies, and

(3) how is investee company knowledge creation affected by the JFF's?

This is an explorative investigation based on perceptions as expressed by the JFF representatives. The aim is not to generalise the results but to increase the understanding of the problems and to generate theory for further investigation.

In the first section the analytical framework is addressed. This is followed by a discussion of the research methods employed. In the four subsequent sections the empirical data is presented and findings are summarized. Research findings, implications and theory building are highlighted in the concluding section.

2. Analytical framework

Because our interest was to investigate knowledge creation routines in a Japanese context using Nonaka's (1991) and Nonaka and Toyama's (2005) 'theory of the knowledge creating firm' as a common analytic framework seemed to be a reasonable approach. This framework had also been used in one of the earlier studies of the IC movement in Japan (Johanson et al, 2009).

Nonaka & Toyama (Ibid) hold that the neo classical theory of the firm does not take subjective elements of management into account. Neither does it look upon the firm as a dynamic entity. Knowledge creation is a social process that needs to be nurtured not managed and that takes place through an iterative process of experimentation and dialogue between people. It is a self-transcending process that needs subjectivity to be shared and it interacts with others' subjectivity. Elements like love, trust, care and commitment are foundations for knowledge creation. Ba is a platform, not necessarily a physical place but a dynamic place that harbours meaning. Knowledge is embedded in Ba. "If knowledge is separated from Ba it turns into information (ibid p.19)". Further Nonaka (1991) and more lately even Nonaka & Toyama's (2005) suggest that knowledge is "a dynamic human process of justifying personal belief toward the 'truth (Ibid p.14)". Ba is a place where knowledge creation can take place. The key to understanding the knowledge creation process is the interaction between tacit and explicit knowledge. This interaction takes place in a knowledge conversion process (SECI) that comprises four modes. These modes are; socialization (from tacit knowledge to tacit knowledge), externalization (from tacit to explicit knowledge), combination (from explicit to explicit knowledge), and internalization (from explicit to tacit knowledge). It is a spiral process starting at the level of individual relations (set in an organisational context) and moving to relations at organizational levels. The SECI spiral continues as explicit and tacit knowledge interacts, and is combined and separated over time (Nonaka & Nishiguchi, 2001).

During the socialization mode originating Ba takes place. This means that individuals meet, sympathize, share emotions and mental models. In the next mode conceptualization based on dialogue between individuals is the central issue. The third mode concerns connecting different kinds of knowledge by means of systematizing. Finally the last mode involves by exercising Ba through action (Nonaka & Toyama's, 2005).

What is maybe even more important for knowledge creation is the development of Kata's. A Kata is a continuous self-renewal process that supports the creation of Ba's and the SECI process. "The three stages of Kata — shu (learn), ha (break) and ri (create) — mean that one learns certain patterns first, then breaks away from them and creates new patterns once after fully mastering the old" (Ibid). Ba, SECI and Kata a closely linked, in that Ba is the place for SECI and Kata knowledge creation processes to take place and influences these processes. Kata builds on and breaks prior conditions for knowledge creation.

The analytic frame indicates that the concepts of Ba, SECI and Kata were relevant to analysing situations where JFF's were acquiring tacit and explicit knowledge from their interactions with investee companies. The suggestions from Nonaka et al form the structure of the analysis of the data below. However, there is one important limitation. Because of the cultural differences and the other limitations mentioned below under research method it was not possible to study the foundations for the SECI process i.e., love, trust, care and commitment. These kinds of emotional issues were brought up by the interviewees but it was not possible to study them in depth. One could argue that it is pointless using Nonaka et al as an analytical framework without the dimension of emotions. Rather using evolutionary or knowledge based theory would be good enough. However, we argue that apart from the Japanese context Nonaka is more precisely addressing the knowledge creation processes as dynamic spiral processes, which clearly highlights interactions between tacit and explicit

knowledge. In addition it fits better with the ideas of established and prior knowledge (Holland, 2010).

During the data collection and especially during the process of analysing data it became obvious that there was a need to consider the Japanese context even more profoundly. The Japanese context was a factor influencing internal and external order in the case JFFs through high emphasis on teamwork and extensive use of external business and finance networks. The latter means that the existing social order in the Japanese FM world could not be neglected. A central element of the social order is established knowledge. Holland (2010) refers to the wide body of this established knowledge in the world of finance and investment as 'prior knowledge'. He notes there are limits to the use of academic knowledge of finance in the world of practice. Lack of understanding in this body of established knowledge, based on ignorance of key findings, and a dogmatic belief in some untested theoretical ideas played a central role in the finance and banking crisis of 2007-09. However, Holland (2011) also discussed how shared knowledge between fund managers, analysts, and trustees, can be a primary basis for accountability.

In our analytical framework established knowledge and prior specific knowledge were taken into account when understanding the importance of Ba, SECI and Kata as knowledge creating processes. In addition the relationship between the JFF's, knowledge and accountability was noted. How people relate to each other in these processes was not focused on.

3. Research methods

This study was performed in Tokyo and Osaka in 2006. Because of limited access, linguistic differences and scarcity of research resources the amount of data to be collected was considered to be limited before data collection began. It was decided to perform an exploratory case study approach based on four JFF's. All of them were involved in similar

corporate equity investment decisions in the same Japanese context. The prior experience of the Japanese members of the research team was the basis to assume the JFF were major users of company sourced information in their investment decisions and to have similar broad aims with respect to the use of corporate IC information.

The cases were chosen because of their distinct and different form of investment behaviour. This was reflected in differences in their degree of 'activity' or investment search and risk taking. The experience of the researchers and prior archival research indicated that these differences could be broadly characterised as 'harvesting', 'hunting' and 'exploring'. This multi-case design created opportunities for identifying common themes and differences across the cases (Yin, 1994).

The four cases chosen were the...

- Very large fund manager (FM) - One of largest Japanese fund managers, part of very large financial conglomerate with much research and other resources. Operating with a mixture of active and bureaucratic, highly structured approaches to equity investment decisions 'harvesting of value on an investment farm'.
- Active FM – medium sized FM active in equity investments 'hunting for value on the changing investment frontier of known firms'
- Very active FM – medium sized FM very active in equity investments 'hunting for value on the changing investment frontier of known firms'
- Venture capital firm (VC) - large Japanese wide high profile and a major equity risk venture capital company 'exploring for value in an unknown investment world'.

The research questions were investigated through the use of qualitative research methods as suggested by Easterby-Smith et al (1991). This involved various iterative data processing

phases such as familiarisation and reflection on the case data, followed by conceptualisation, cataloguing of concepts, recoding, linking and re-evaluation. Case data and the emergent empirical patterns interacted in iterative relationships. This was mediated by priors from the literature review and analytic framework. The analytic framework adopted in the paper, reflected a medium prior level of theoretisation (Laughlin, 1995) about the phenomena. It was used to guide the iterative relationship between case data and the emergent empirical patterns. As a consequence the analytical framework was further developed when data was collected and interpreted.

Data collection was via interviews and archival sources. The interviews were with JFF teams involved in investing (see appendix 1).

In the interviews the research questions were addressed through semi-structured questions. The specific interview questions were kept simple and focussed on JFI investment decisions and the role of knowledge in these decisions. They included the following questions. What are the key tasks in stock selection and asset allocation? What information sources are used? What sources of qualitative information or information on company intangibles are used, if at all? How do you create knowledge for investment decisions? How do you use company IC information in your investment decisions? How do you use your knowledge in investment decisions? In the interviews the conceptual IC framework employed in the Japanese IC-guidelines as well as in the Meritum-guideline (2002) were used i.e., a division of IC into human, structure and relational capital. The interviewees made clear that IC referred to knowledge based assets and intangibles in the corporate value creation process. The interviewees demonstrated considerable understanding of these issues when expressed in more familiar terms.

For each case, three separate sets of notes were written up in English by research team members. One of the researchers used the three sets of notes to construct a combined case

narrative of how each JFF dealt with the above issues. Other public (web) domain case data concerning JFF background, purpose, philosophy and operations was added to each case. The other members of the research team checked each combined case for consistency. The quotations used in the text below originate from the notes.

The researchers recognised beforehand that it was difficult to draw implications about knowledge creation and actual use of IC information by using interview and archival data. However various factors enhanced this research approach. It was presumed that experienced JFF staff could discuss how tacit and explicit knowledge interacted over time, and how knowledge was developed and used. Interviews were the available means to create some insight into the phenomena. The use of the semi-structured interviews allowed vigorous discussion to break out in the investment teams interviewed. The use of an international research team skilled in the research methods and including Japanese members well informed about the Japanese research situation, meant that it was possible to probe the research issues in considerable depth. The high prestige of the Japanese professors involved and their prior research relationships with the JFFs created conditions of trust and openness. This allowed access to a rich data set about JFF knowledge creation, investment decisions and influence over company disclosure and knowledge issues

4. Order and practices for creating knowledge (Ba)

In this section we discuss how internal and external order, as well as prior knowledge, could be regarded as Ba's or 'harbours' for creating meaning, knowledge and knowledge creation about corporate IC, emotions, and market behavior. These were physical and mental 'Bas' as outlined by Nonaka and Konno (1998)

4.1 The internal order for creating knowledge

All of the four case JFFs acted as financial intermediaries and invested savers or investors' capital in portfolios of company shares or equity stakes. The JFFs shared simple JFF concepts of their company investment decision task. The qualitative data processing revealed that this included five major phases:

Screen/search → appraisal/valuation → buy/hold → monitor/influence → sell/exit

As a result of acquired knowledge decisions were made in the different phases. These decisions could concern exploitation of prior knowledge with respect to e.g., buy/hold or sell/exit. But the decisions could also concern acquisition of new knowledge. The knowledge creation process was an iterative process over time, as the case JFFs learnt more about their investee companies and eventually changed their decisions. The steps were not necessarily in sequence as each phase became dominant at different points in time and in different circumstances. They provided the conceptual basis to discuss and to explore how the JFFs were knowledge creating and knowledge using firms operating within an internal order. These processes are interpreted in the paper as Ba's. Variation in investment philosophy and activity created variety in internal order and Ba.

All of these individual investment decisions were placed in the context of the wider JFF portfolio decisions. The latter could constrain various sell/buy/hold, monitor, and exit steps of the company investment decisions depending on their impact on wider JFF portfolio exposure, risk, return and liquidity characteristics. These portfolio constraints were most effective in the FM's (strong in the Very large FM, less so in the two Active FMs) and formed much less of a constraint in the VC. The JFFs made extensive use of perceived value relevant information in each key phase of their investment decisions. These internal processes provided a stable internal context for JFF creating knowledge about IC use and valuation in investee companies. They also provided the means to use prior knowledge.

4.2 The external order for creating knowledge

The JFFs experienced common external processes by means of interactions with investee companies, analysts and others. At these Ba's knowledge was created, shared and exploited. All JFFs interacted in some way with their investee companies, normally through 1:1 meetings and telephone discussions, and in the VC additionally via formal contracting. Such interactions occurred at all phases of the common internal order.

Much information arose for JFFs during these interactions, but often disclosure of IC information was the central focus. Prior JFF knowledge about company value creation processes was key to directing this search for IC information. Other information such as physical processes and assets and financial resources were also important as the JFFs sought to understand how tangibles and intangibles (IC) combined in a unique company competitive advantage. Company IC information was normally disclosed via company narrative and direct 1:1 interactions rather than through public disclosure. In the case of the FM JFFs it also arose from specialist analysts and in the case of the VC interactions with the VC's own shareholders was important.

4.3 Variation in investment philosophy and activity

Variation in investment philosophy, landscape and activity created variety in the use of internal and external order and knowledge creation as we move from the Very large FM (farmer, hunter), through the two active FMs (hunter), to the VC (hunter, explorer). It also created variety in the intensity of and formality of required disclosures and accountability means.

More broadly, an increase was observed in JFFs degree of flexibility of internal decision phases and of intensity of company interactions; adaptability in exploiting relevant parts of external network, adaptability/shape of internal teams; scale of informal versus formal

communications; formal versus informal contracting; the degree of active search for, attention and focus on information about IC change and value creation change; openness and flexibility in understanding IC change and complexity in the investee firms; and extent of transfer of this knowledge to other companies. This variety in the openness for change and complexity affected how meaning was developed in the knowledge sharing or 'Ba' as an internal as well as external order (i.e., between the JFFs and investee companies).

Variation in JFF investment activity also led to changes in the degree of JFF influence sought over corporate disclosure of IC information. The change from harvesting, hunting, and exploring was associated with more proactive JFF use of Ba. It was associated with a more focused and active search IC information from the investee companies and the networks. This variation was also a factor in the intensification of accountability processes between JFFs and their investee companies. The more formal the control JFFs had over external order, the more control the JFFs had over company disclosure and over accountability processes.

The Very large FM was involved in the passive large scale 'harvesting' as well as the active 'hunt' for information. It relied on the use of a large internal research organisation with many in-house analysts. It had tried and tested environmental interaction routines with networks of external analysts and others. It also had a 'stable investment farm' of over 4500 company contacts in Japan, including over 2000 Investor Relations meetings conducted at the FM offices. The Very large FM had the power to demand information from many companies and for them to improve their disclosure content and decision behaviour. All major companies came to see them. They had increased investment in staff to deal with this and valued access to the qualitative information available about IC in these meetings.

The very large FM sought a knowledge advantage over active FMs through its joint 'harvest' and 'hunt' modes. The types of IC information collected by the Very large FM was explained as,

‘... management skills, research and development skills, brand management and many others... We are particularly interested in management quality at board and executive levels as well as middle management. We normally look for information on R&D skills, production management, technical strength, brand effectiveness and other intangibles...’

The Active FM as a ‘hunter’ at the ‘frontier’ was not backed up by a huge internal research organisation. All portfolio managers conducted and shared their own research, and made extensive use of analysts in the external ‘market for information’ to provide this wider contextual information. Knowledge creation about company IC was therefore focussed on the changing ‘frontier’ of company value creation and was restricted to those listed companies in unique or changing circumstance likely to create new value. The types of company information collected included many IC elements.

‘... like company culture or management quality and assess their impact on earnings and then on value.’

For the Very active FM the 1:1 meetings were vital for collecting many types of IC elements.

‘The ability and honesty of Management is not on the balance sheet or P&L.’

The VC was far more active in both demanding IC information and providing IC information to companies. The VC sought to ‘explore’ for, and tried to build, new companies with highly risky but valuable returns in a world of non listed companies. This was relatively unknown virgin territory where new uses of IC contributed to new value creation modes. VC individual and team commitment to companies was important. The active search for risky and uncertain situations existed because this was where new opportunities and value were perceived to arise.

The VC differed from the FMs in that the VC interacted with companies even during the search and screening process. VC knowledge creation was more intense about each company before investing and during investing and monitoring. The VC interactions were also more formal, based on legal contracts, and other more regular meetings such as board meetings.

These contracts specified rules for ‘non disclosure’, for full and open exchange of information between the VC and company, for agreed actions and expected performance, and for the formal transfer of information and knowledge from the VC to the investee company. IC information was a central component of all this contracting about disclosure, information exchange, and the transfer of IC, funds and technology.

‘If we think we have identified a new investment idea, then both we and the company expect to create information barriers to others to protect the new idea. Firstly we sign a non disclosure contract with the target company.... ..We also need to introduce the company to the idea of patenting the idea as soon as possible so that we can protect the intellectual property for both of us. We will never go public on a new investment idea until we have legal control with the company over the new idea.’

After the investment decision was made, the VC signed a full VC contract with the investee company concerning information flows and the use of formal accountability mechanisms.

‘The content of the contract includes the requirement for full and open information disclosure by the object company. This includes information about the progress in the investment, current position and changes in the liabilities of the VC target company. It also includes an agreement to attend board meetings and for our VC champion to become a member of the board, as well as agreements on the number of board meetings in year and ability to call a meeting if desired, and agreements on performance targets for the company’

The contracts may also contain other agreements for transfers of VC know how (IC)

‘We also agree to help the company solve problems, to provide advice on how to make specific decisions. We may agree to provide services to the company such human resource management and advice in finding staff with key skills. ‘

4.4 Prior knowledge guiding the use of IC

The JFF knowledge creating behaviour suggested that they either sought completely new knowledge or they developed variations of established knowledge. As a result, ‘prior knowledge’ was a key context influencing knowledge creation in JFFs. This was a part of internal and external Ba.

Prior knowledge also served in an external presentational or legitimizing role. In the latter case, prior knowledge contributed to the 'repertoire of legitimate stories' (Czarniawska, 1997 p. 16) whereby JFFs exploited wider system based stories (of company valuation, of analysis, of market pricing and efficiency etc) in their explanations of their actions.

The FMs made extensive use of prior knowledge in the form of quantitative screening models but the amount of subjective judgement increased with increased FM activity. For example in the Active FM;

'Our first quantitative screen is a liquidity and financial health check. Our second quantitative screen is for value.'

In contrast, in the VC there was a more pro-active search for potential investments in emerging and developing companies. This was a highly subjective process and it did involve many network and informal sources of information about the proposed company.

'...We get ideas and introductions from our own private network. This is made up of our main investors, broker analysts, security companies, and from a wider information network. Some of our main investors are financial institutions and security houses, and many others are large Japanese industrial companies...'

JFFs used their own in house and external information sources to generate earnings estimates, to assess risk and to develop their sense of confidence relative to these. Prior knowledge about company value creation and market valuation, and 'judgement' skills were central to valuation methods, models, and actions. The JFFs used their prior knowledge, with the new information to break up their patterns of understanding concerning corporate IC, and of value creation and value. Valuation models varied from market relative models (P:E ratios etc) to more fundamental NPV (net present value) models. Information used in these models varied from objective to subjective sources.

In this phase, the two more active FMs were at a resource disadvantage against the Very large FM. As a result they relied more on external analysts for information. They were aware that

there was not much extra information in the public domain. This stimulated a pro-active search for more relevant valuation information direct from companies.

The VC's appraisal and valuation decision phase appeared to be very different. This was a wholly private analysis, outside of immediate market pricing and valuation pressures. It involved a longer term analysis, more in depth, very specific to a company, and less likely to be placed in the wider context of a portfolio decision or of a master list of potential investee companies. In contrast, the network context of investors, owners and others could well play a role in influencing this decision phase.

In the VC;

'...There are three basic steps in the initial decision process ...First, our VC person in charge will personally try to understand the target company and the investment proposal in some detail. ... Second, the case is then discussed in a small group meeting made up the VC 'champion', and 2 or 3 of other VC staff. ...These group meetings are initiated by the individual manager when they feel or think that a group discussion is proper... The objectives of our small group meeting are to help our individual staff member to solve problems with the VC idea, to get different opinions and advice from others, and to investigate newly found problems...'

The individual investment decision was conducted by individuals and teams and was viewed in wider portfolio context and much influenced by prior knowledge.

In the Very large FM;

'Based on the fair valuation from our fundamental analysis, our stock selection committee discuss the proposals and the Chairman then decides final stock ratings.'

In the VC;

'The most important factor in the final decision is our individual VC's inspiration, and whether he has had one or two years to establish a relationship with the company management before investing. The individual VC's prior knowledge of the investment area, a complex understanding of the business is required....Even if the larger group meeting rejects the investment idea, the individual promoting the idea can ask the top management or chairman of VC to override this decision'

5. Moving between tacit and explicit knowledge (SECI)

Interactions between tacit and explicit knowledge arose within the JFFs and between the JFFs and investee companies. These SECI processes were instrumental in routinely exploiting prior knowledge and creating new knowledge. This knowledge was used in investment decisions and to influence subsequent corporate disclosure and JFF accountability processes. The SECI processes enhanced JFF power to broaden its information agenda with investee companies and to observe and to demand corporate disclosure. These processes also reduced corporate power to deceive JFFs. The exchange of knowledge between JFFs and investee companies were further means to create shared understanding and conditions for trust to grow between the parties. Thus informed JFFs could go beyond demands for more information, and make their investee companies more accountable for their execution of decisions, for performance, and for their disclosure behavior and quality.

The JFF's, tacit and explicit knowledge creation interacted in complex simultaneous processes within internal and external order and within prior knowledge. Within the JFFs, the movement from tacit knowledge (about company intangibles, value creation and value), through explicit knowledge, and back to tacit knowledge, appeared to be a key ingredient, as they sought to synthesise their subjective and objective views about investee companies, their own JFF IC and value creation, and their JFF value implications, over time.

The knowledge creation processes identified in the JFF cases were not full SECI as envisaged by Nonaka and Toyama. The precise sequential 'spiral' was not identified in the cases by interviewees. Despite these limits, the Nonaka and Toyama concept was valuable in analyzing JFF attempts at knowledge creation across many JFF conditions.

5.1 Acquiring knowledge of company IC through socialisation

The close interactions with investee companies and within the JFF were key socialisation processes whereby the JFF team members acquired tacit knowledge of company IC, of emotional information, and of the value creation processes of investee companies.

In the Active FM many forms of knowledge creation about company value creation took place through the company interactions. Individual knowledge derived from company interactions was agreed and justified within team processes and was used to value companies over time. It also led to sensing and empathizing experiences, and to changes in individual team member feelings and emotions about investee companies. This appeared to be a key factor in JFF confidence and conviction in their valuation and investment decision.

The Very Active FM was aware that the collection of IC information in company 1:1s and its use in buy/hold/sell was subjective but argued it played a role in knowledge creation and decision making.

‘This is all subjective and effects whether we think the company will prosper in the future ...Only if we meet a manager we can feel the atmosphere. We get a feeling if they are wasting money. We get a feeling about the product manufacturing and employees. Then we make a comparison of the feelings we get for companies within a sector. How are humans behaving? We get a feel for a company when visiting them. We look at people. How they behave. We look at the environment overall and see what kind of feeling it brings with it.’

These impressions and feelings were crucial to the subsequent analysis and estimation of earning, cash flows and valuation of the company.

In the JFFs many forms of tacit and explicit knowledge were created concerning price behaviour and market valuation processes. This knowledge supported a set of current beliefs about stock price behaviour and value. The continuous testing and retesting of these forms of knowledge against each other and against actual price behaviour can be interpreted as special subset of the SECI process in JFFs.

5.2 Knowledge conversion in dynamic SECI processes

Progression through the internal JFF knowledge creation phases was the means to externalise, make explicit, and combine this corporate IC information, and thus to support company valuations. The aim was to improve 'judgement' and investment decisions.

For example, the VC learnt much from their mistakes and successes.

'...We review these experiences continuously and in our regular monthly meetings. This helps us develop our own skills and helps us transfer ideas amongst individual specialist venture capital staff.

....All of us are experienced. We don't employ those newly-graduated. We have working experience in big companies, and would like to take challenges. All of our staff are trained on the job by more experienced VC managers.'

Through observable and repeatable behaviours the internal SECI process continued over time within each JFF as they progressed through the phases.

For example, in the Active FM much tacit knowledge was transferred during internal decision activities

'We train our FMs – mainly by learning from more experienced colleagues...'

Shared philosophy, formal knowledge, formal training and tacit transfer within teams were central to the Very active FM.

'To beat the market and to compete as FMs we need an effective team made up of individuals with same FM philosophy, with common investment background and experience, with common training but with variety in personality. This is also important in order to have a constructive discussion..... Otherwise the 'discussion' does not progress in the team. We need common glue and structures, as well as variety and autonomy.'

SECI like processes were also present in the interactions between JFFs and their investee companies.

In the VC;

‘For example, if the company accepts our advice but fails for other reasons and if we understand the failure ... we might decide to invest again. If the company accepts our advice and succeeds – we try to develop best practice from this. If the company does not accept our advice ... but still succeeds, this makes us think about where we have special skills and where the company has special skills. If the company does not accept our advice but fails for other reasons, then there is less chance of us investing again, but we do try to understand why we made a mistake...

... Their learning in difficult times helps us understand more about the human skills and attitudes we are investing in. ...As the problems are overcome, we are interested in how the company adapts, and how they are prepared to learn from us, and how effective they are at doing this. If they do not learn from circumstances or from our experience then we think they are likely to fail. If their commitment to the venture capital idea, to us, ... then we become more confident of success.’

The JFFs were all information intermediaries but the cases revealed they were also knowledge transfer intermediaries operating in a dynamic SECI process.

6. Breaking the pattern (Kata)

Both corporate IC and emotions were central to the JFF knowledge creation and to subsequent appraisal of companies. However, the routine dimension to this knowledge creation was a threat to JFF competitive advantage. The JFFs sought novel ways to break out of the routine to create new knowledge.

‘Kata’ like processes were designed to break out these ordered routines. The processes were identified via ‘brainstorming’, during intense probing of investee companies, when pressurizing problem companies and noting responses, and when the JFFs were receiving urgent and often significant feedback from stock markets. They also arose when informal communications within the JFF was encouraged, when different investment teams pooled knowledge from different areas (regions, industries etc), and when new ad hoc committees with novel combined skilled membership were set up to deal with new issues. The latter

means were not full Kata as envisaged by Nonaka and Toyama (2005). They contained routine elements as well as a constructive break up of such routines.

Kata like processes arose internally through a combined challenge and supportive culture within the JFFs. In the Active FM;

‘There is a group approval and support of each investment idea. The person with a specific idea will follow up on the investment. But within the group there is a brainstorming without hierarchies. We exchange ideas without pressures. When formality is excluded, good ideas are created and there is a good environment where knowledge and power is analyzed. ...Proximity in the same room is important so that we can freely ask questions in team ...this helps makes judgements ...We also like a team to have the ability to reach a consensus ... We therefore work together to deal with issues, problems, opportunities, we have a supportive ‘atmosphere’ in our team and recognise the need to help each other

Kata processes also arose in the Active FMs from their well informed and intense probing questioning of companies based on prior knowledge creation. It also arose in the VC in a penetrative interactive process in which the VC overtly transferred their unique knowledge of technology, of product markets, and demanded desirable qualities in management and their agreed actions.

Within all of the three FMs Kata processes arose when they 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. It helped them to check differences between their information set and that of the market. Such feedback was an important ‘pattern breaker’ in knowledge creation process and could alter prior knowledge. For example, the FMs employed prior knowledge in the form of models of pricing behaviour and of valuation. This knowledge combined with current information supported a set of current beliefs about expected price behaviour. These formed an informed context in which new price information was interpreted.

The VC did not have this external feedback mechanism unless they were dealing with initial public offerings (IPOs). However, the VC continuously tested their prior knowledge of company value creation and valuation against their many unique and ongoing inside sources of 'live' company information to see if the changes and value were as expected at that point in the VC investment cycle.

These sharp and strong feedback mechanisms were a stimulus to a Kata like self renewal process, and a strong incentive for the JFFs to adapt quickly and break out of routines of thinking and learning. All JFFs showed this adaptability arising from 'reality checks'. However, the variation in JFF investment focus and philosophy meant that this adaptability became increasingly important as we moved from the Very large FM ('farmer'), through the two Active FMs ('hunters'), to the VC ('explorer').

7. Summary of the findings

The JFF representatives' constructions of their firm as a knowledge creating organisation can be summarised in the following manner.

Internal as well as external order (i.e., the process of screen/search, appraisal/valuation, buy/hold, monitor/influence, and sell/exit), as well as prior knowledge, could be regarded as Ba's or 'harbours' for creating meaning, knowledge and knowledge creation about corporate IC, emotions, and market behaviour. The purposeful interaction between tacit and explicit knowledge, within stable processes could be interpreted as a SECI like knowledge creation processes building on prior knowledge. Kata's or creative knowledge generation processes were designed to break out these ordered routines and prior knowledge. Kata like processes were identified via 'brainstorming' within the JFFs, during intense probing of investee companies, when pressurizing problems companies and noting response, and when the JFFs were receiving urgent and often significant feedback from stock markets. They also arose

when the JFF encouraged informal communications within the JFF, when different investment teams pooled knowledge from different areas (regions, industries etc), and when new ad hoc committees with varied skilled membership were set up.

The different forms and domains of knowledge were used to understand how IC information plus information on emotions interacted with fundamentals information such as accounting numbers. This iterative and interactive knowledge process arose when the JFF was developing estimates (of earnings, valuation etc), when providing explanations for these, and when building confidence in information and decisions. For example the JFF view of the company could contain a broader narrative with explicit causal links that connected the company business model and company IC information. Top management quality and their track record could be related to the degree of coherence of a strategy matched to the competitive environment. These factors in turn could be perceived as driving earnings levels and their risk. New earnings estimates numbers were understood within such a context.

New information from company 1:1s was interpreted within prior JFF knowledge of the existing corporate business model or narrative. This could be used with the causal links in the company value creation narrative to support the earnings prediction process. The 1:1s also helped the JFFs to think about their feelings about the company investment situation. For example, the JFFs responded to the 'atmosphere' of 1:1 interactions, and this generated impressions, feelings (of confidence and conviction) concerning the companies. Prior knowledge about behaviour and emotions was used to interpret this information. It was also used to interpret perceived emotional behaviour in stock markets. Prior JFF theory of stock market behaviour, use of information and pricing were used to interpret current market conditions, whether the market had the same information as the JFF, how the JFF information would change stock prices, and when the market was likely to find this information.

Variations in the use of Ba, and in SECI and Kata processes arose as JFF investment philosophy, aims and function became more active, and as investment 'landscape' varied from stable 'farms' to hunting 'frontiers, to 'exploration in new lands'. The JFF variation created differences in internal and external order and in the nature of the JFF-company interactions. This all led to more active, and narrowly focussed company interactions, information search, IC information use, and JFF knowledge creation.

Variation in JFF investment activity also led to changes in the degree of JFF influence sought over corporate disclosure and other information suppliers concerning IC information. This variation was also a factor in the intensification of accountability processes between JFFs and their investee companies. The more formal the control JFFs had over external order and interactions, the more control the JFFs had over company disclosure and over accountability mechanisms.

8. Conclusion

This exploratory study has sought to increase understanding of how four Japanese Financial firms acquired, created and exploited knowledge about intellectual capital information for the purpose of investment decisions. The basic idea was to investigate the firm representatives' perceptions of their own organisation as a knowledge creating firm

Based on the findings of this study we argue that;

- knowledge acquired and used by financial firms such as JFFs is an important means to improve accountability between JFFs and their investee companies
- active knowledge creation by financial firms such as JFFs and the sharing of this with investee companies is the key to improved and intelligent accountability between equity investing financial institutions and their investee companies

It is essential that investing financial firms have an active process of knowledge creation about company business models, associated corporate narratives and their subjective disclosure content. In terms of accountability between financial firm and investee companies, this can be undermined, inter alia, by knowledge weaknesses in, or by deliberate behavioural problems in both accountee and accountant.

Corporate (accountee) disclosure of intangibles IC related information and of subjective information based on emotions, through narrative, is vulnerable to bias and manipulation by company management (Holland, 2005, 2009). For example there have been many examples of this during the 'dot.com' problems of 2000. Many problems have existed with the high subjective content of corporate value creation stories and the subjective nature of qualitative benchmarks used as key performance measures. US examples also reveal the opportunities for corporate hubris and for the exercise of extreme opportunism, bias and deceit, via such subjectively based disclosure vehicles. JFF (accountor) interpretation of company information is vulnerable to problems of prior knowledge by JFF management. For example, during the banking crisis of 2007-2009 fund managers and other investors failed to understand the nature of bank business models and their IC components. They did not understand the new models, the nature of strategy, the role of quality of top management and of their risk management, and the role of greed and self delusion (Holland, 2010).

Thus major failures can occur in the supply and demand of information leading to demands for greater transparency and more stringent reality checks for such stories and their IC components. Roberts (2010) has argued that improved disclosure alone cannot solve accountability problems by themselves, and it can also encourage further dysfunctional behaviour in the organisations disclosing the information. Roberts (2010) used O'Neil's (2002) concept of 'intelligent accountability' to broaden the concept of accountability and associated processes. 'Intelligent Accountability' involves encouraging mutual behaviour that

goes beyond mechanical disclosure and receipt of information and which focuses on developing trust and two way talking, listening and seeing (Onora O'Neil, BBC Reith Lectures, 2002). As Onora O'Neill (2002) argued; *'Well-placed trust grows out of active inquiry rather than blind acceptance. In traditional relations of trust, active inquiry was usually extended over time by talking and asking questions, by listening and seeing how well claims to know and undertakings to act held up.'*

Our implicit arguing for using a sociological perspective when analysing financial market empirics leads us finally to explicitly address Sociology of finance. Preda (2007, p 522) who has investigated the relation between theoretical models and transaction decisions notes *'Within social studies of finance, the examination of the relationship between theoretical models and market transactions has taken shape in the performativity argument... In a nutshell, the performativity argument claims that formal economic models do not simply represent economic phenomena (such as market transactions), but can create them too.'*

Performativity has many aspects and includes situations where theoretical models become tools used by market actors, where this can modify economic processes, and whereby these processes become more like the theoretical models (MacKenzie, 2006). For example, in a JFF context, especially the fund managers, this would involve the use of theory such as modern portfolio theory as the dominant investment tool, with all searches for investment being located on the 'efficient frontier' and portfolios becoming increasingly driven by this logic. Mackenzie, (2006) also discusses counter-performativity whereby market practitioners copy each other such the theoretical model does not constitute a cognitive advantage anymore, but is turned into a disadvantage. In the case of JFFs this would involve the use of the same kind of information in the same valuation model leading to the same valuation and investment decision. (Compare the collective stories as suggested by Henningson, 2009.) The latter behaviour would not achieve the required JFF advantage in investment decision behaviour.

Preda also notes (p524) ‘...*performativity studies and field studies of financial cognition share the insight that information is not reducible to signals and that cognitive processes such as observation, memorization, classification and calculation play an important role in endowing data with specific properties.* These cognitive processes together with emotional processes were recognised by JFF interviewees as a strong feature of their JFF case behaviour.

All of the prior knowledge base provided the collective means for each JFF to construct its own story about how all of these prior knowledge domains interacted with new integrated knowledge as the JFF iterated towards a ‘solution’ in terms of an internal consensus about the earnings numbers and valuation of company shares, and a degree of confidence in these. Together, they interacted within an informed JFF context in the search for a larger meaning and for a larger shared picture of corporate IC, value creation, value and action. Thus regular and ad hoc corporate disclosures of IC information were linked to other more formal corporate disclosures and were all placed within a larger explanatory framework. Higher capabilities here enhanced JFF’s ability to influence subsequent corporate disclosure and to strengthen JFF accountability processes.

In a fashion similar to Mouritsen et al (2001) we can argue that there was much more to this interaction within the JFF than just juxtaposing sets of private corporate intellectual capital information and emotional information, against numbers (concerning estimated balance sheet figures, earnings and value of the company’s shares). As Mouritsen et al (2001) noted "[i]f we want to understand a society, or some part of a society, we have to discover its repertoire of legitimate stories and find out how this evolved" (Czarniawska, 1997 p. 16). Using Mouritsen et al (2001) we can also argue that corporate narrative about intellectual capital information revealed to JFFs how their investee companies responded to change, and how they managed and exploited IC in their business model in the pursuit of value. The financial numbers were

‘made relevant not because they are logical in a strict mathematical sense (as is the case with financial key ratio analysis) but because they were made to support and not in conflict with a broad story about the capabilities and identity of the firm’ (Mouritsen et al., 2001).

The latter reasoning is closely related to what Henningsson (2009) suggests in his study of fund managers. He proposes that fund managers create their own collective stories of different firms as well as of the functioning of the financial market. These stories evolve as a result of experience but are also strongly affected by social forces (Fuchs, 2001, Luhman, 1995). Henningsson (2009) shows how fund managers are influenced by the rationale of social forces when they reduce the complexity of corporate information. Such collective rationales established over time guide actors on the financial markets when they interpret corporate information. In this way fund managers become limited by their own social blindness and knowledge creation may be blocked which makes it hard to understand new emerging phenomena like IC. As a result, differential knowledge creation and states can occur across equity investing institutions and across companies due to such barriers. One way of avoiding blindness and thereby the acquisition and integration of new knowledge could be to encourage the development of Ba’s, SECI’s and Kata’s.

In terms of the disclosure literature, conventional theory argues that important theoretical explanations of corporate voluntary disclosure lie in the concepts of information asymmetry and principal-agency contracting (Healy and Palepu. 2001). Companies voluntarily disclose information to shareholders and others to reduce the information asymmetry and to minimise the agency costs of equity subject to (information) proprietary and production costs. This approach ignores the complexities of the company supply side and of the financial firm demand side. In particular, it ignores how financial firm knowledge creation processes, can play a role in reducing information asymmetry and the costs of principal-agency contracting, hence mediating the supply of and demand for information between these parties. This paper,

in contrast seeks to go beyond such conventional finance theory and to recognise that the supply and demand for corporate IC information, depends on such processes and states.

Finally, in the editorial of the special issue of *Accounting, Organization and Society* (Hopwood, 2009) Hopwood argues for more critical studies of financial markets. In the same issue Vollmer et al (2009) suggest that a closer engagement with sociology would benefit not only studies of behaviour at the financial market but also studies in accounting. We hold that the present explorative study supports a proposal that further studies of the IC movement addressing disclosure practise as well as financial market behaviour in Japan or elsewhere would certainly gain from exploiting recent developments in the sociology of finance.

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Appendix 1

Firm	Number of interviews	Number of firm representatives	Language spoken	Number of researchers present	Type of archival data
Very large FM Tokyo	One	3 main interviewees. 2 senior fund managers, 1 investor relations. Many other team members present.	English	Four	Public (web) JFF case data on background, purpose, philosophy, operations
Active FM Tokyo	One	2 main interviewees, a senior portfolio manager and a head of analysts. Other team members present	English	Four	Ditto
Very Active FM Tokyo	One	4 main interviewees, the senior manager, 3 fund manager/analysts. Other team members present	English	Four	Ditto
VC Osaka	Two	5, then 6 venture capital staff active in investment decisions	Japanese	Four	Ditto