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An Evolutionary Perspective on Corporate Governance applying Firm Life Cycle Theory

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Abstract:
This paper investigates whether the corporate governance of Swedish firms evolves along with their corporate life cycle stage. We find both quantitatively and qualitatively that corporate governance can be seen to follow the firm's life cycle stage, in particular when considering firm-specific characteristics that capture certain elements of the firm life cycle. The study is conducted through a mixed methods approach. First, a cross-sectional quantitative study based on small, mid, and large cap companies listed on the NASDAQ OMX Stockholm 2011. The methodologies of Anthony & Ramesh (1992) and Dickinson (2011) were used to classify each company in the sample to the corresponding life cycle stage. Second, a retrospective qualitative case study based on interviews with both representatives from the firm and external professionals was undertaken to examine how the development of the case company from its incorporation until today have affected its corporate governance. For this part, the conceptual framework of Filatotchev et al. (2006) and a multi-theoretic view including principal-agency, resource dependency and institutional theory were used.

Key words:
Corporate governance, firm life cycle theory, board size, frequency of board meetings, board composition, incentive systems

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List of Acronyms

ANOVA	Analysis of Variance
AR	Anthony & Ramesh (1992)
BoD	Board of Directors
CAPEX	Capital Expenditures
CEO	Chief Executive Officer
CFO	Cash Flows from Operating activities
CFI	Cash Flows from Investing activities
CFF	Cash Flows from Financing activities
CSR	Corporate Social Responsibility
DP	Dividend Pay-out
EBIT	Earnings Before Interest and Taxes
EBITDA	Earnings Before Interest, Taxes, Depreciation and Amortization
EV	Enterprise Value
DV	Dependent Variable
IFRS	International Financial Reporting Standards
IPO	Initial Public Offering
IV	Independent Variable
LTIP	Long-Term Incentive Program
NACE	Nomenclature Générale des Activités Économiques dans les Communautés Européennes (European industry classifications)
ROA	Return on Operating Assets
RDT	Resource Dependence Theory
SG	Sales Growth
STI	Short-Term Incentives (variable pay)
VC	Venture Capital

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1. Introduction

"Much attention has been focused on the largest mature companies listed on a stock market, concentrating on the static theorising of the principal-agent perspective."
Filatotchev et al. (2006), p. 257

Corporate governance is an ever-recurring topic in academic literature. Its importance has its roots in corporate scandals that come and go. In recent years, the spotlight has been on the governance of banks and financial institutions, much due to their involvement in the financial crisis.

Over the years, agency theory has been *the* underpinning of corporate governance literature. Large and mature firms have received the lion's share of attention. Consequently, what is considered optimal corporate governance is based on research done on these large and mature firms. With the plethora of different firms, is it likely that they all should abide to the same governance mechanisms? For example, recent studies show how costly monitoring resulting from a high number of independent directors can be by crowding out the strategic dimension of the board, leading to a decline in firm performance (Faleye et al, 2011). Institutional theorists would argue that there is a phenomenon in play that entices firms to converge on the use of corporate governance, i.e. isomorphism, potentially explaining the uniform focus seen in literature (Zajac & Westphal, 1996; Lynall et al., 2003; Hillman et al., 2009).

To mitigate for the static perspectives on corporate governance and to see through the fog that has drifted in due to isomorphism, researchers have turned towards identifying factors that may affect how corporate governance is used within firms and also over time. This dynamic picture incorporates the changes in the type of industry, size of the firm, volatility of the performance, sales growth and other variables, all of which have been used as contingency variables in literature to explain differences in the use of corporate governance.

One stream of research looking at these contingent factors is the corporate governance literature related to *firm-life cycle theory*. Within this line of research, academics investigate how the different needs of firms within each life cycle phase affect their corporate governance structures (Filatotchev et al., 2006). For governance structures, research has previously been focusing on the power of the CEO (Harjoto & Hoje, 2009), the focus of the board's work (Huse & Zattoni, 2008), the independence of the board (Lynall et al., 2003) and the intensity of monitoring undertaken by the board of the management (Vafeas, 1999).

The aim of this study is to build on existing research in the area of corporate governance in relation to firm life cycle theory by assessing both quantitatively and qualitatively the degree to which listed Swedish firms apply corporate governance according to the needs and functions of each life cycle stage. In this study, we will look at publicly listed firms on the small cap, mid cap and large cap indices on the Stockholm Stock Exchange as well as retrospectively follow a company from birth to its current status as a struggling firm from a governance perspective. Further, we will contrast the explanatory power of

firm life cycle theory against other commonly used variables within governance literature[1].

1.1 Overarching research focus

There are convincing arguments as to why firms should apply corporate governance differently across the life cycle of the firm[2]. These arguments can be seen from the perspective of the needs of the firm in the different phases. Notably, firms in its start-up phase are intent upon growth, attracting capital and resources in the shape of competencies. Firms in growth phase are intent upon continuing along the same trajectory, but as the firm is growing, it increases its need for organisation, processes and structure. Mature firms have a more established organisation with structure in place. Monitoring and control are two key words in this context. Mature firms are more likely to pay out dividends, than start-ups and growth firms. Firms in a stage of decline strive to get back to growth, necessitating new resources and capital to achieve the turnaround.

All of these stages of the firm's life cycle exhibit different needs that ought to be reflected in the way the firm applies its corporate governance structures. By corporate governance we mean 1) the way the Board operates and ensures the mandate from the owners is fulfilled and 2) the relation between the Board and the CEO. As such, our overarching hypothesis and research focus is:

The needs and functions of the firm differ between its life cycle stages, leading the firm to apply corporate governance structures accordingly.

After we have accounted for the theoretical framework, we will present a set of more precise hypotheses. To be able to accept or refute the hypothesis, we have undertaken a mixed methods approach with both a qualitative and a quantitative study. Regardless of whether the hypothesis bears truthfulness or not, our study aims at filling the gaps identified in the literature, namely a uniform view of corporate governance underlying mainstream research and a limited stream of research dealing with corporate governance from a life cycle perspective. Our two main contributions are the following: 1) addressing the limited stream of research specifically aimed at looking through the lens of firm life cycle theory to improve understanding of corporate governance and 2) provide practical insight into whether firm life cycles may affect the use of corporate governance in a Swedish setting.

1.2 Research design

We are primarily interested in seeing the degree to which firms apply corporate governance differently depending on the life cycle stage of the firm. Secondary to our main objective, we will ensure the reliability of our results by incorporating earlier research and other factors that may affect corporate governance. With these two objectives in mind, we have opted for a mixed method research design incorporating both a *qualitative* and a *quantitative* part.

The benefits of a mixed method research design outweigh the costs. By undertaking a mixed method research, we receive two sources of interpretation that can complement

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[1] E.g. type of industry, size of the firm, volatility of the performance and growth opportunities.

[2] Definitions of life cycle stages differ. Possibly, these differing definitions capture dissimilar elements of the firm's life cycle. We will not stick to one definition per se; rather, we are concerned with early stage, maturity and late stage firms, generic terms that are applicable to any definition.

each other, enabling us to provide a deeper answer to the hypothesis. Further, combined with *previous literature*, these allow for triangulation of the results, important from a validity point of view. The costs of a mixed method research design are related to the additional time and resources needed to gather and analyse three different sources of information (Verschuren, 2003). As a consequence of the time constraints posed by a master thesis, we have made decisions with respect to what is relevant to our study and what is not considered relevant. During the remainder of the thesis, we aim to be transparent and explain the advantages, disadvantages and possible consequences of the choices we have taken.

The purpose of the *literature review* is to get a deep understanding for what has previously been done in the area or related areas. The review will also identify the gaps that our study aims to fill.

The purpose of the *qualitative* part is to gain insight into the evolution of corporate governance in a firm that has experienced a number of life cycles. Such a study will 1) allow for better understanding on how corporate governance evolves in the Swedish context and 2) provide an indication of whether life cycle as a concept is used in practice.

The purpose of the *quantitative* part is to enable us to draw generalizable conclusions concerning a firm population. The sample in the study includes all publicly listed firms on the NASDAQ OMX Stockholm from small cap to large cap. Although the sample has its limitations with respect to not fully covering all phases of the firm life cycle, we still believe that it is relevant to our study. We have modelled corporate governance based on the information found in annual reports, which, thanks to the Swedish Code for Corporate Governance, provide a Corporate Governance Report. Hence, our corporate governance variables encompass information found in these reports that can be quantified without the need for subjective coding. Examples of variables include board size, board composition, board meeting frequency and CEO compensation.

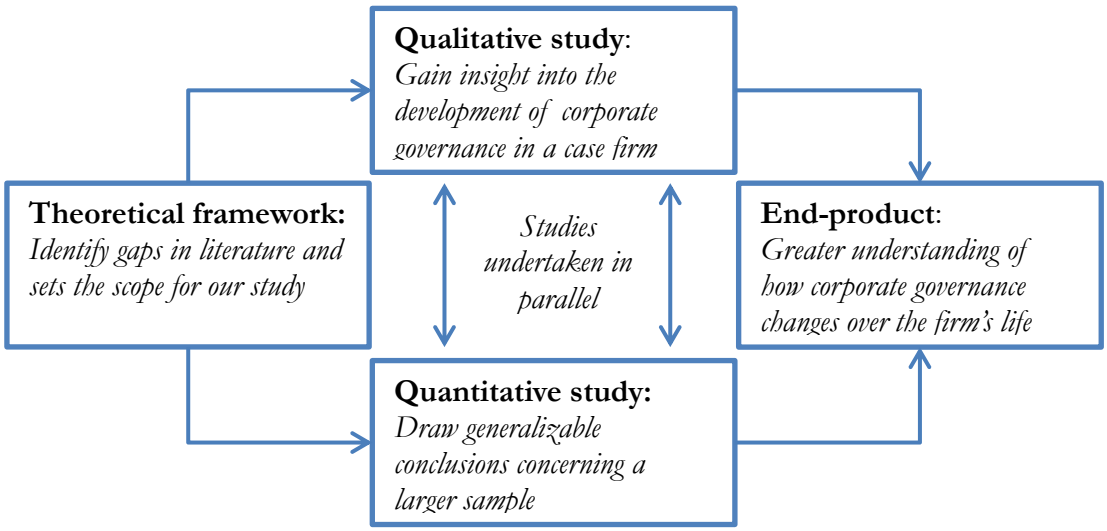

Figure 1: Research design and main objectives of each part

1.3 Scope

Corporate governance concerns how investors ensure that their investments are managed in relation to the given mandate (Shleifer & Vishny, 1997). We are interested in how the firm - through management - and the owners - through the board - interact with

each other in the context of the firm to form governance structures. As we are interested in the driving forces to how corporate governance evolves across the firm's life cycle, we will refrain from taking a normative stance on what is optimal corporate governance. Further, although international research steers our research, our empirical study is limited to the Swedish context.

2. Theoretical framework

2.1 Literature review

The review of past literature is essential to set the frame for our study. It is of interest to establish how the literature views corporate governance in relation to firm life cycle theory and in particular how this has been operationalized. In-depth knowledge of underlying theories of corporate governance is needed to increase understanding of why researchers have been looking into firm life cycle theory and to explain deviations in the use of corporate governance across life cycles. Last, to validate the concept of firm life cycle theory, we briefly summarise some of its uses in other disciplines within academic research.

2.1.1 Introducing the topic – a uniform view of corporate governance

Principal agent theory [3] has been the main theoretical view underlying corporate governance, and even dominant to the degree that researchers are concerned with the breadth of current research on corporate governance up to the point that they claim: "*these studies have given rise to an overly narrow perspective on corporate governance*" (p. 257, Filatotchev et al, 2006). Institutional theory could offer an explanation to the homogeneous view on corporate governance seen in the literature. The specific mechanism in question, institutional isomorphism, relates to the propensity of organizations in a population to resemble other organizations that operate under similar environmental conditions (Lynall et al. 2003). Alternative research streams in corporate governance incorporate resource dependency theory[4]. In this paper, we will apply a broad theoretical base using principal agency, resource dependency and institutional theory.

Questions such as how to ensure that management operates in the interests of the shareholders and which mechanisms drive firm value are important in the more traditional line of corporate governance research. Admitted, there has also been put great emphasis on the type of governance, whether that is the narrow shareholder perspective seen in Anglo-Saxon countries or the broader stakeholder perspective seen in Europe. However, the literature has, through its paradigm on large public companies yielded steadfast statements on how certain governance mechanisms are positively affecting firm performance. For example, the presence of independent board members is said to reinforce the monitoring effectiveness of the board (Weisbach, 1988; Faleye, 2011). Large shareholders, on their hand, have more benefits from monitoring management than the case in a company with dispersed ownership (Shleifer & Vishny, 1997).

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[3] The agency problem derives from the separation of ownership and control and how the various interests are aligned between the agent and the principal (Jensen & Meckling, 1976).

[4] Resource dependency theory - the directors will be chosen on the basis of securing important resources to the firm (Hillman et al., 2000; Boyd, 1990; Pfeffer, 1972)

The hallmark article "*The Iron Cage Revisited: Institutional Isomorphism and Collective Rationality in Organizational Fields*" by DiMaggio & Powell (1983) argues convincingly for institutional isomorphism operating through three processes; coercive, mimetic and normative. The first refers to the external environment and culture forcing the firm to commit to change. Mimetic deals with firms adopting similar organisational attributes due to either fear of being perceived as backward or because they think change are rational. Normative processes stem from professionalization of for example certain services or functions. Literature emphasizes different institutional logics each pulling the organisation towards some form of change. Dacin et al (2002) elaborates on the homogenization of professions as a factor that leads to isomorphism through for example the spread of new trends into profession and how that in turn affects organisations.

Corporate governance research related to institutional theory indicate that societal norms influence board decisions concerning CEO selection and CEO-compensation (Zajac & Westphal, 1996) and the manner in which boards communicate the adaption of incentive programs to shareholders (Zajac & Westphal, 1995). Zajac and Westhphal (1995) argue that congruence with investor norms when it comes to the board's approval of CEO incentives weigh more than justification based on agency theory or alternative theories. This illustrates that the organisation's quest for legitimacy results in uniformity, for example design of incentive systems and board composition. Institutional theory thus infers that board composition is determined to a large extent by the institutional norms in the surrounding context of the firm (Lynall et al. 2003).

We claim that a uniform approach is not the ideal way to consider corporate governance, in line with for example Filatotchev et al (2006) and Filatotchev & Allock (2010). Firms have different needs depending on the stage of their firm life cycle, and this ought to be reflected in the way the company sets up its corporate governance mechanisms. In this paper, we will refer to various definitions[5] of the firm life cycle[6]. Regardless of the definition used, one can still conceptualise the life cycle through early stage, maturity and late stages. Examples of corporate governance mechanisms are ownership dispersion, remuneration system, board independence, etc. It is by no means given that large public firms face the same governance challenges as small public firms. This does not imply that the same recommendations, e.g. independent board members, should not be positive even for smaller firms. It may even be that other factors than the monitoring effectiveness matter relatively more for growth firms than for mature firms. For growth firms, it is likely that the presence of independent board members provides management with the legitimacy it needs to convince investors to provide funds (Lynall et al. 2003).

2.1.2 Corporate governance through the lenses of firm life cycle theory

Although there are several studies looking at how life cycles affect management control in firms (Moores & Yuen 2001; Granlund & Taipaleenmäki 2005), there are a less rich base of articles providing quantitative support for the relationship between corporate governance mechanisms and firm life cycle theory (Harjoto & Hoje 2009). In addition, there have been calls for further research into how board composition and ownership structures evolve over the firm's life cycle post listing (Certo, 2003). There are, however, studies that look both quantitatively and qualitatively on several aspects of corporate

[5] The seemingly most common definition of firm life cycle theory is introduction, growth, maturity, revival and decline.

[6] Firm life cycle must not be confounded with product life cycle.

governance that is of interest to our study. These studies include Lynall et al. (2003), Filatotchev et al. (2006), Huse & Zattoni (2008), and Harjoto & Hoje (2009). Out of those, Filatotchev et al. (2006) is particularly interesting, as it – to our knowledge – is the only framework assessing the development of corporate governance from a firm life cycle perspective. In short, the framework proposes that the firm's need of monitoring, resources and strategy depends on the life cycle stage of the firm. Various combinations of these functions are indicative of differences in the application of corporate governance.

2.1.3 A framework for corporate governance driven by life cycle transitions

The framework proposed by Filatotchev et al. (2006)[7] is built around the idea that firms pass through certain thresholds indicating the transition towards the next phase of the firm's life cycle. The framework (Filatotchev et al. 2006) has two dimensions, the first one being the strategic environment of the firm that can be seen to have high or low "velocity". By velocity Filatotchev et al. (2006) refer to the speed at which changes materialise in the operating environment of the firm. The second dimension deals with corporate governance objectives having two divergent goals, either a) contributing to wealth creation or b) more concerned with wealth protection. The former incorporates resource and knowledge theory by claiming that firms need external agents to provide the firm with new knowledge in the form of skill and experience. Wealth protection mirrors the more classic view of principal-agent theory and the importance of accountability to ensure that external investor's funds are well managed by the firm's management.

		Governance Objectives	
	High "Velocity"	***Wealth creation***	***Wealth protection***
		Quadrant 1 *Founder/IPO threshold*	*Quadrant 2* *IPO/maturity threshold*
		Governance functions: • Monitoring: low • Resource: high • Strategy: high	**Governance functions:** • Monitoring: medium • Resource: medium • Strategy: high
Strategic Environment	***Low "Velocity"***	*Quadrant 4* *"Re-invention" threshold*	*Quadrant 3* *Maturity/decline threshold*
		Governance functions: • Monitoring: low • Resource: medium • Strategy: medium	**Governance functions:** • Monitoring: high • Resource: low • Strategy: low

Figure 2: Filatotchev et al. (2006), p. 261: Corporate governance functions across life cycle stages

When it comes to the different functions inherent in corporate governance, Filatotchev et al. (2006) argue that there are three predominant functions encompassing the governance of the firm. Four combinations of these three functions, monitoring, resource and strategy, are related to one of the four quadrants that exemplify the four stages of the firm. Monitoring equals ensuring accountability of shareholder's wealth. Resources include the supply of input, e.g. financial capital, knowledge, legitimacy, etc. When it comes to strategy, the counselling and advising role of board members (and others) is important as input to management for taking firm-decisions. Bonn & Pettigrew

[7] Filatotchev et al. (2006) adopts a life cycle definition focused on thresholds: 1) founder / IPO threshold, 2) IPO / maturity threshold, 3) maturity / decline threshold and 4) "re-invention" threshold.

(2009) propose a similar typology and emphasise that the roles of the boards depend on the phase of the life cycle, and the intensity level of each function may vary.

Starting with quadrant 1, a newly started firm is dependent on external resources and strong strategic direction to growth. Firms in quadrant 2 have grown larger, and found it appropriate to seek external funding on the stock exchange and subsequently also exposed to external investors interested in seeing their funds being well spent. This necessitates a slightly higher monitoring need. In the third phase, firms have matured, and some are even in a decline phase. Monitoring requirements increase, and both resource and strategy needs decrease as the firm struggles to innovate and / or continues along the same path as before. The last quadrant sees a return to resources and strategy in an attempt to revitalise the firm. The difference to the first quadrant, however, is the speed with which the strategic environment is changing.

2.1.4 Monitoring, resources and strategy from a firm life cycle perspective

Various authors operationalize corporate governance by looking at various mechanisms, e.g. board composition (Lynall et al. 2003), board behaviour (Huse & Zattoni 2008) and CEO duality (Harjoto & Hoje 2009). One commonality is the way they use the notion of firm life cycles to explain differences in the mentioned aspects of corporate governance. For the sake of readability, we have placed the topics into the different functions of corporate governance as prescribed by Filatotchev et al. (2006).

Monitoring

Monitoring is hardly a new concept in the corporate governance literature. Monitoring in Filatotchev's framework is related to agency theory (Filatotchev et al, 2006). Within agency theory, there has been extensive research undertaken. Starting with the separation of ownership and control that has origin from Berle & Means (1932), it has moved to specifically treating the potential conflict between the principal and agent. This conflict results from the two parties entering into a contract where the agent performs services on behalf of the principal in which the principal will delegate residual control rights to the agent (Jensen & Meckling, 1976). The separation of ownership and control allows the agent (management) to take actions that maximize his own wealth on the expense of the principal (shareholder). This is termed the agency problem (Fama & Jensen, 1983; Jensen & Meckling, 1976). As a means of assessing whether the agent is committed to the principal's goals, monitoring has received extensive coverage.

There are several ways in which monitoring plays out. For example, ownership structure might affect the degree to which the owners are committed to actively take the costs of monitoring management. A dispersed ownership structure places a considerable part of the residual control rights at the manager's discretion, but a large shareholder is able to address the agency problem through concentrated holdings that gives them the control required to make their interests respected and enable them to play an active role in corporate governance (Shleifer & Vishny, 1997). Further, it is also believed that the stock market is an important monitoring mechanism of management in the sense that underperforming firms are more likely to be a subject for takeovers, in particular if the takeover succeeds and the management is discarded. Moreover, public trading ensures that equity-incentive programs are attached to the firm's continuous performance through share price development (Grossman & Hart, 1980; Holmström & Tirole, 1993).

From an agency perspective, the role of the board of directors is to monitor that the agent acts in the interest of the shareholders (Eisenhardt, 1989; Jensen & Meckling, 1976). Hence, the board is the key internal control mechanism to align the different

interests of shareholders and management (Walsh & Seward, 1990; Mizruchi, 1983). Agency theorists assert that the monitoring performed by the board on behalf of the shareholders will vary depending on the incentives of the board (Fama & Jensen, 1983; Jensen & Meckling, 1976).

One aspect affecting the monitoring performed by the board is the degree of independence the board has in relation to the management or organization being monitored, often referred to as "board independence" (Baysinger & Butler, 1985; Weisbach, 1988; Daily & Dalton, 1994). Boards that mainly consist of outside independent directors are argued to be most effective in their monitoring (Weisbach, 1988). Conversely, boards mostly made up of inside directors (former or current employees/managers of the organization) or dependent outside directors (directors with a dependent relationship to the organization) are considered to be less efficient agents for monitoring.

Independent board members have been seen as the answer to governance scandals in the UK and elsewhere (Faleye et al, 2011). Media openly argued for increasing the number of independent board members to increase board's ability to monitor. This led to coercive processes similar to those described in DiMaggio & Powell (1983) in the sense that firms took in more independents in their board to respond to external pressure from media. Faleye (2011) warns that although it may result in improved monitoring, it may come at the expense of strategic development in boards.

Additionally, based on the monitoring role of the board of directors, researchers have examined how frequency of board meetings affects firm value (Vafeas, 1999; Brick & Chidambaran, 2010). Vafeas (1999) found that board meeting frequency is inversely linked to firm value, a conclusion that is intuitive in its nature as firms in decline are more likely to be exposed to increased monitoring by the board. Brick & Chidambaran (2010) compare board activity before and after increased regulatory pressure following Sarbanes-Oxley and find that increased board activity may benefit the overall firm population, and not only firms in distress.

Another aspect from which monitoring comes to surface is incentive systems. From a contractual view, agency problems arise due to the impossibility of perfectly contracting the relationship between the principal and agent, when the latter's decisions affects both his own wealth and the principals' wealth (Brennan, 1995). Especially, in a setting where the two parties have different interests and there is an asymmetric information relation to the advantage of the agent (Fama, 1980; Jensen & Meckling, 1976). For example, a CEO with no equity ownership is expected to have different goals in relation to a stakeholder or CEO entrepreneur, which create an incentive to consume more on the job than agreed upon in the contract (Fama, 1980). The value loss related to the divergence of interests and the costs incurred in the process of aligning the agents' interests with that of the principals is termed as agency costs (Fama & Jensen, 1983; Jensen & Meckling, 1976). Jensen & Meckling (1976) define agency cost as the sum of monitoring costs, bonding costs and the residual loss.

Incentive systems can be a way of mitigating the agency problem, but not necessarily the solution (Shleifer & Vishny 1997). It is the responsibility of the board to monitor the CEO's performance and set compensation levels accordingly (Lorsch, 1989). It remains debated which composition of the incentive system is the better one. From an agency perspective it is expected that the agent favour a salary that diverge from the interest of

the shareholders (Hill & Phan, 1991). Boyd (1994) found that CEO salaries were higher in firms with lower levels of board control. This is supported by Core et al. (1999); a weaker governance structure results in increased agency problems, leading to a larger CEO compensation. Based on this, the structure of the incentive contract governing the alignment of the agent's interest could be an indication of the level of board control in a company. Effective control requires that the directors have sufficient incentive and are free from collusion or domination by the CEO according to Fama & Jensen (1983).

Within the frame of monitoring, Harjoto & Hoje (2009) used a life-cycle approach to examine how board leadership, value and firm performance are affected by corporate governance and monitoring mechanisms. Their study investigates the link between CEO power and firm performance. While it is uniformly accepted that it is unfortunate for the business if CEOs have a dual responsibility (also chairman of the board), the authors find that CEO concentration, a proxy of CEO duality, is positively affecting firm value and operating performance for early stage firms. However, they still confirm the uniformly accepted norm that CEO duality negatively affects firm value for more mature firms. Thus, from the perspective of monitoring, boards that are not led by the CEO are better suited to monitor management's actions. Similar argumentation can be led for CEO membership on the board.

To follow on the role of life cycles when it comes to monitoring, Huse & Zattoni (2008) argue that the trust relationship between the board members, internal and external agents contribute to the changing role of the board in the different life cycle phases. Board attendance and number of board meetings is deemed an important variable in their research, as this is a proxy for the intensity of the relationship between management and board. Huse & Zattoni's (2008) findings suggest that the crisis stage requires higher board intensity. Hence, monitoring is a function of the intensity of the interaction between board and management, something that is indicated to be more prevalent for firms in crisis.

Turning to ownership dispersion, large shareholders have been seen as favourable to ensure effective monitoring of the firm, seen as their benefits by doing so is greater than its costs (Shleifer & Vishny, 1997). An important element in the firm's decision to go public is access to finance. One trade-off that firms that ponder upon an entry to the stock exchange has to do with the risk of losing control of the firm and increased liquidity (Pagano & Röell 1998). The trade-off consists of the negative aspect of losing control that is mainly linked to risk of over-monitoring, that results from potential large shareholders that have an incentive to monitor, they continue. On the positive side, firms need to balance the need for equity proceeds and liquidity of the stock in the aftermarket. Zheng & Li (2008) show that firms tend, at IPO, to under-price their stock in order to achieve a dispersed ownership structure that ensures liquidity in the stock. Potentially, that choice could also be linked to the choice of reducing the risk of over-monitoring. One could argue that publicly listed firms in its introduction or growth phase are more likely to have different ownership characteristics than mature firms.

Resources

By resources, Filatotchev et al (2006) refer to the firm's resource base and "resource dependency induced structures of accountability" (p. 258). Coff (1999) argues that governance choices have an impact on the value creation in a firm that comes from the access to rare, costly and inimitable resources. This resource view is comparable to the Resource dependence theory (RDT) that originates from Pfeffer & Salancik's (1978)

publication. It has since developed to become an influential organizational and management theory. Hillman et al (2009) argues based on empirical evidence from previous research, that the RDT perspective allow a better understanding for boards compared to other views, such as the agency theory. The RDT theory pictures the corporation as an open system, dependent on contingencies in the external environment (Pfeffer & Salancik, 1978). The role of the board in the RDT perspective is to gain access to critical resources and information for the firm (Pfeffer & Salancik, 1978). According to Pfeffer & Salancik (1978), the board is able to provide the following four resources to the firm; (1) Aid and counsel, (2) legitimacy, (3) channels for communicating information between external organizations and the firm, and (4) assistance in obtaining resources or commitments from important elements outside the firm. From a RDT perspective the board will reflect the environment of the firm and the directors will be chosen on the basis of securing important resources to the firm (Hillman et al., 2000; Boyd, 1990; Pfeffer, 1972). Hence, each director will contribute with different linkages and resources to the firm and the boards' composition and characteristics will be determined by the contingencies in the external environment.

Lynall et al. (2003) argue in their paper "Board composition from adolescence to maturity: A multi-theoretic view" that powerful CEOs and external financiers together with the organisational life cycle drive the board's composition at the company's founding. More importantly, the article contributes to theory in two points. First, it sheds light on application of a broader set of corporate governance theories that play a different role depending on the stage of the life cycle. As an example of resource dependency perspective, Lynall et al. (2003) point to young firms' need to prove legitimacy vis-à-vis external investors when these young firms seek funding. Independent board member offers council, assistance and a wider network and thereby brings legitimacy to the management in their quest for funding. Second, the authors emphasize the importance of path dependency to understand the dynamics of company boards. Organisational life-cycle theory, they claim, is a useful framework to allow for the analysis of path dependency, meaning the natural progression for firms is from introduction, growth to maturity.

Certo (2003) reasons that board prestige, i.e. the human and social capital of the directors in the board, is especially important for IPO firms, the reason being that these firms need to convey a perception of organisational legitimacy to potential investors. Hence, in addition to the strong rational arguments in favour of attracting external expertise whose resources are made available to the firm, it is also in the interest of the company to send a signal to the market that they manage to convince directors with a legitimising property to the board. This self-interest can spur mimetic processes to change as proposed by DiMaggio & Powell (1983).

During the last two decades, variable pay in the form of bonuses, share or option schemes, has gained importance (Filatotchev & Allcock, 2010). This development has often been motivated by agency theory in the sense that the agent would prefer fixed salary and the principal would prefer variable pay in the form of performance related bonus, options or share programs. The goal is that incentives are aligned between shareholders and management. Recent studies (Filatotchev & Allcock, 2010) argue that firms, depending on the stage of their life cycle, have reason to set up their incentive systems differently as the organisational needs differ. Moreover, firms with a narrower resource base, often early stage firms, are temporarily dependent on external resources as it seeks to expand its resource base. Providers of these resources possess the influence to

affect the governance structures of the firm. Thereby, Filatotchev & Allcock (2010) reject the notion of a uniform approach to incentive contracts.

For early stage firms, founders often have a significant ownership stake. Given the narrow resource base of such firms, Filatotchev & Allcock (2010), argue that equity-incentives to management may be ineffective in cases where only the founder's wealth is tied to that of the firm, giving rise to low accountability. As the firm receives risk capital backing, management with equity pay start to be held accountable to external stakeholders, leading to a situation in which equity-incentives can be better matched with the resource needs of the firm without putting the firm at risk for unwanted behaviour (Filatotchev & Allcock, 2010). When it comes to maturity, shareholders demand management to deliver growth, and equity-pay is used as incentives. However, in cases where there are few growth opportunities left, management often sets out on an acquisition spree that leads to complex and diversified organisations. These large organisations lack the transparency that allows the board to monitor management's actions. This eventually results in a situation in which management sits with significant power, a situation in which it can be detrimental with equity-incentives (Filatotchev & Allcock, 2010).

Functions	Mechanisms considered	Variables considered
Monitoring	1. Links between CEO power and firm performance (Harjoto & Hoje 2009)	- CEO as chairman of board, CEO ownership, age and tenure, and board size
	2. Board attendance and life cycle stage (Huse & Zattoni, 2008)	- Frequency of board meetings
	3. Ownership dispersion differs across stages (Zheng & Li, 2008; authors)	- Ownership dispersion
Resources	4. Board composition, powerful CEOs and external financiers, (Lynall et al. 2003)	- Insider / outsider in board composition, CEO ownership as proxy for CEO power and membership in board (qualitative propositions)
	5. Remuneration systems across cycles (Flatotchev & Allcock, 2010)	- Qualitative reasoning; composition of incentive contract
Strategy	6. Behaviour of boards at different stages of the firm (Huse & Zattoni 2008)	- Qualitative interviews for trust and behaviour, but also insider / outsider, board ownership

Table 1: Operationalization of corporate governance in a life cycle perspective

Strategy

Corporate boards that provide firms with advice and counsel that can prove valuable in management's decision-making process fulfils the strategic function in Filatotchev et al.'s framework (2006). The need for the strategic function is higher in the firm's growth phase as this is the point in the firm's development when the strategy is being set. The board can then complement management's expertise with their network, legitimising role and other resources. Similarly, for firms suffering from decline, focus should return to strategy, and thereby perhaps initiating the much-desired turnaround of the company that will set the firm on a new trajectory of growth and value creation.

Huse & Zattoni (2008) investigate the behaviour of boards at different stages of the firm. Their study finds that board behaviour varies from being legitimising during start-up, to take an advisory role in the growth phase, to be more controlling in the crisis[8] stage. As such, boards can play a strategic role if the organisational context requires it.

2.2 Life cycle approach explained

2.2.1 Development of life cycle theory and definitions of life cycle stages

In the 1960s, organisational researchers argued for a link between the firm's life cycle and the firm's strategy and structure, as evidenced by Chandler's book "Strategy and Structure" (1962). As one of the pioneers in the field, he advocated that the firm's strategy depends on the structure of the firm, in other words the life cycle of the firm. Ever since, there has been ambiguity with respect to the number of life cycle stages, ranging from three to six, and the specific definitions to use (Jawahar & McLaughlin 2001). Granlund & Taipaleenmäki (2005) cite Miller & Friesen's studies (1980, 1984) as the most cited model for life cycles. Miller & Friesen (1984) present five stages: birth, growth, maturity, revival and decline. Gort & Klepper (1982) offers a similar definition with the same number of phases, but a slightly different typology: introduction, growth, maturity, shakeout and decline. As earlier mentioned, Filatotchev et al (2006) refers to thresholds separating the phases of the life cycle. Regardless of the definition used, we argue that the notion of early stages, maturity and late stages remain.

2.2.2 Use of life cycle theory in other fields

Numerous researchers have made use of varieties of these life cycle models in a variety of fields, ranging from accounting (Liu 2008), management control (Moores & Yuen 2001, Granlund & Taipaleenmäki 2005), finance (DeAngelo et al. 2006), activity based costing (Kallunki & Silvola 2008) to corporate governance (Filatotchev et al. 2006). Descriptive of all of the mentioned studies is that they have applied firm life cycle theory to their core research area (e.g. management control, activity based costing, etc.).

Moores & Yuen (2001) provide a strong case for the use of firm life cycle theory within management control. Their three arguments are as follows: First, as life cycle theory has been widely used in organisational behaviour, application of life cycle theory to management accounting research could be fruitful as that brings forth the interactions between stages and subsequently how control mechanisms have evolved over time. Second, the adaptability of these mechanisms is demonstrated through the identification of control mechanisms in each life cycle stage. Third, life cycle theory permits the analysis of mechanisms internally for one stage and not uniformly of firms across stages. In sum, Moores & Yuen (2001) find that life cycle theory helps explain the evolution of management control mechanisms within firms, in line with Miller & Friesen (1984). Granlund & Taipaleenmäki (2005) builds on the research by Moores & Yuen (2001) by applying the framework to analyse how management control has developed in new economy firms.

Also within finance has life cycle theories been highlighted. DeAngelo et al. (2006) adds to Fama & French's (2001) study on firm's declining overall propensity to pay out dividends by looking at the relation between firm life cycle theory and propensity to pay dividends. DeAngelo et al. (2006) find support for life cycle theory in the sense that 1)

[8] Huse & Zattoni (2008) use the following definition of the stages in the firm's life cycle: 1) Start-up, 2) Growth and 3) Crisis.

mature firms are more likely to pay out dividends, and 2) that growth firms are likely to have more investment opportunities and thereby should not pay out any dividend.

2.2.3 Classification of life cycle stages

Ever since Chandler's book (1962) that dealt with the organisational development over life cycles connecting strategy with structure, there have been several attempts to elaborate a theory on how to apply life cycle stages to research. Miller & Friesen (1984), Anthony & Ramesh (1992), DeAngelo et al. (2006), Yan & Zhao (2010) and Dickinson (2011) have all developed different models on how to operationalize the concept of life cycle theory. Their methodologies make use of different subsets of both qualitative and quantitative data that ultimately yield the classification of a firm into a certain stage of its life cycle. The variety of methods developed is distinctive of the difficulty to agree on one commonly accepted method to segment firms into the various stages of the life cycle (Yan & Zhao 2010). Yan & Zhao (2010) state that each model has its strengths and weaknesses, and that researchers choose the desired model depending on the aim of their study. In other words, it appears that the different methodologies capture distinct aspects of the firm life cycle. Descriptions of these methods follow over the next few paragraphs.

Authors	Life cycle definitions	Life cycle descriptors
Miller & Friesen (1984)	Five stages: Birth, Growth, Maturity, Revival and Decline	54 variables related to the firm's situation, organisation and structure
Antony & Ramesh (1992)	Five stages: Growth, (Growth/Maturity), Maturity, (Maturity/Stagnant) and Stagnant	Four variables: Sales growth, dividend pay, CAPEX / market value and firm age
Moores & Yuen (2001)	Five stages (Miller & Friesen, 1984): Birth, Growth, Maturity, Revival and Decline	Variables: Four strategic, two leadership, two decision-making and two structural
DeAngelo et al (2006)	Speaks only of early / late in the life cycle of the firm	Retained earnings in relation to total equity
Yan & Zhao (2010)	Four stages: Growth, Maturity, Decline and Revival	Industry adjusted sales growth, dividends and firm age. Smoothed average of all variables.
Dickinson (2011)	Five stages (Gort & Klepper, 1982): Introduction, Growth, Maturity, Shake-out and Decline	Three variables of cash flows (operating, investing and financial)

Table 2: Overview methodologies for classifying companies into firm life cycle stages.

Miller & Friesen (1984) builds on the theories of Chandler (1962) and Quinn & Cameron (1983) by incorporating the link between strategy and structure in the classification of firms into a life cycle. With the aim of providing a clear typology, Miller & Friesen (1984) look at three sets of variables; first *situational* variables related to the firm's environment, second, *organisational* variables linked to structure and thirdly *strategic* variables depictive of the firm's business model. After coming up with a methodology incorporating 54 different variables, Miller & Friesen (1984) conclude first that firms are heterogeneous across life cycles and second that firms in the same cycle tend to share a set of variables that show homogenous characteristics. However, in contrast to earlier theory (Chandler

1962, and Quinn & Cameron 1983), Miller & Friesen (1984) find that firms do not necessarily follow the suggested theoretical sequencing from birth to revival; decline, for example can be reached from all stages.

In one of the first attempts to associate accounting performance measures with stock market prices using life cycle theory, Anthony & Ramesh (1992) summarise previous research on life cycle specific firm characteristics as a first step to provide a framework for future studies. In their study, Anthony & Ramesh (1992) found that "stock market performance to sales growth and capital investment are functions of the firm's life cycle" (p. 204). In order to conduct their study, they provide a framework with four variables, of which three are computed based on accounting data and the fourth one being the firm's age. The three computed variables are 1) dividend pay-out 2) sales growth and 3) capital expenditure as share of the firm's market value. Firms are then ranked within each of the four variables into three different groups ranging from low, medium to high values. The ranking yields a value of 1 if low, 2 if medium and 3 if high. Then a composite score measure is constructed by summing the ranking points together. Next step is to create three and five groups, the latter in line in numbers with Miller & Friesen's life cycle definition (1984) although the denominations are different. The life cycle stages are: 1) growth, 2) growth/mature, 3) mature, 4) mature/stagnant and 5) stagnant. Multivariate analysis is applied. Finally, the life cycle stages are labelled based on quantitative ranking, e.g. high sales growth in comparison to the sample implies growth companies.

Moores & Yuen (2001) used a similar approach to Anthony & Ramesh (1992).Their definition is in contrast built on Miller & Friesen's life cycle definition. Moores & Yuen (2001) start their line of argument in the analysis of classifying firms that companies should exhibit the same characteristics within the phases of the life cycle. As a next step in their analysis, they choose the variables based on Miller & Friesen's (1984) study. To reduce the number of variables down to a manageable level, they undertake a factor analysis and end up with four factors that are strategic in nature, two that relate to leadership, two that are linked to decision-making processes and finally two structural factors. In order to remain true to Miller & Friesen's (1984) typology, Moores & Yuen (2001) choose five groups when they cluster the variables. Last step is to qualitatively assess the five clusters with a priori theory, again Miller & Friesen (1984), to label the life cycle stages.

As mentioned, DeAngelo et al (2006) find that the propensity to pay dividends increases for mature firms. As a result of the findings, they argue that the ratio of retained earnings as a proportion of total equity and its relation to dividend pay-out can be seen as a life cycle descriptor for the firm.

Another recent study on how to elaborate a new methodology to measure firm life cycle stages is Yan & Zhao (2010). They postulate the use of the firm's relative position with respect to the environment (read industry average) and the firm's history. Yan & Zhao (2010) use only one accounting variable, namely sales growth, to measure firm life cycles.

Dickinson (2011) provides another quantitative method as a proxy to the firm's life cycle. She looks to Gort & Klepper's (1982) definitions of the life cycle stage: introduction, growth, maturity, shakeout and decline. Her methodology involves the use of combinations of the sign of the cash flows as descriptors of the firm's life cycle. Dickinson (2011) claims that the main advantage of looking at the cash flows as proxy is

that it is consistent with theory prescribing that the relationship between economic variables and life cycle stages is nonlinear. Age, along with size, is often used to classify firms into life cycle stages. Dickinson (2011) cites, among others, recent articles from Bhattacharya et al. (2004) and Bradshaw et al. (2011) that both makes use of age and size. Dickinson (2011) further argues that since a firm's life cycle can be seen as a portfolio of several product life cycles, there is a nonlinear relationship between firm life cycle and age as firms tend to move inconsequently across life cycles, an observation that is in line with Miller and Friesen's (1984) conclusions.

2.3 The Swedish corporate governance context

The corporate governance of Swedish companies is regulated by a combination of statutory rules, self-regulation and unwritten practice and traditions. The most important elements of the framework are the Swedish Companies Act, the Annual Accounts Act and the Swedish Corporate Governance Code. Other key elements are the, the listing requirements and agreements applicable on the respective stock market as well as statements issued by the Swedish Securities Council regarding accepted practice on Swedish stock markets.

The Swedish Corporate Governance model is based on the Swedish Company Act, which stipulates that a company must have three decision making bodies in a hierarchical relationship: The Shareholders' meeting, the Board of directors and the CEO. There must also be a controlling body, the auditor, which is appointed by the Shareholders' meeting. See figure 3 below that illustrate this relationship. The owners have far-reaching decision power and are able to express their opinions on the Shareholders' meeting, which the board of directors are sub-ordinate to. The board of directors' role is to monitor that the CEO acts in the owners' best interest. The Auditor on the other hand, acts as an independent monitoring body reporting to the Shareholders' meeting.

The Swedish Corporate Governance code is a result of self-regulation and was implemented in July 2005 and targeted towards listed companies with a market value of more than 3 billion SEK. A revised version of the code was issued in July 2008 obliging all listed companies on the NASDAQ OMX Stockholm and the NGM equity to follow the Code according to the principle "comply or explain". This principle means that a company may choose to deviate from an individual rule of the Code as long as it motivates the deviation from the Code. A new revised version of the code was issued in February 2010, henceforth referred to as the "Code".

2.3.1 Characteristics of Swedish corporate governance

The ownership structure in Sweden is often concentrated to a single or small numbers of majority owner(s) as is the case for many European countries. In comparison, the ownership structure of Anglo-Saxon countries is characterized by a dispersed ownership structure. According to the Code, the Swedish society has a positive view regarding majority shareholders taking responsibility through participating in companies' boards of directors to influence governance. Lekvall (2009) describes that the far-reaching decision power of owners, cemented through the strict hierarchical relationship between the governing bodies as depicted in the previous section, is accentuated through the system of shares with multiple voting rights. This is reflected by the dual shares system of A and B shares, where for example A-shares have voting rights of up to 10 times higher than B-shares.

Another important element in Sweden is that the shareholders appoint the nomination committee. In other countries, the nomination committee is a sub-committee of the board of directors. According to Lekvall (2009), Swedish nomination committees consist primarily of majority owners or their representatives. Further, the independence requirements in the Code require that only two members of the board are independent in relation to majority owners (defined as owning 10 per cent or more of the shares or votes of the company), while a majority of the directors need to be independent to the company.

The board composition in Sweden also differs to Anglo-Saxon countries in the sense that only one executive member is permitted in the board of directors for listed companies, usually the CEO. This has the effect that boards of Swedish listed companies are composed mainly of non-executive directors. Additionally, the Swedish Company Act does not permit the CEO in listed companies to serve as chairman.

Another characteristic of Swedish corporate governance is the presence of employee representatives on the board. This is regulated by the law on employee board representation in the private sector[9], which stipulates that a company with 25 employees or more has to offer two board and two deputy seats to the unions, and a company with at least 1,000 employees has to offer three board and three deputy seats on their board to unions. It is the unions that in turn decide whether they want to exercise this right and if so, elect their representatives.

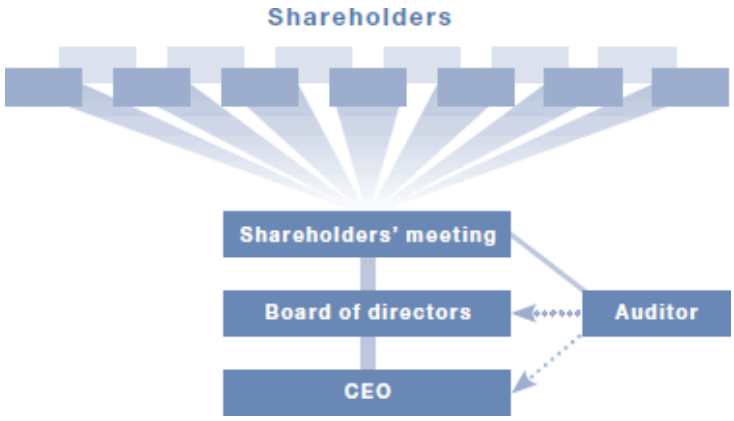

Figure 3: The Swedish corporate governance model[10]

2.3.2 Relevance of the Code to our study

Based on the description above one of the most relevant observations for our study is the principle of "comply or explain" in the Code. This permits companies to deviate from the Code, hence there ought to be dissimilarities with respect to companies' corporate governance practices in our sample. Consequently, this enables us to test our hypothesis that the corporate governance of a firm is adapted to the phase of the firm's life cycle. Further, we can exclude CEO duality as a variable in our study since this is not permitted in listed companies according to the Swedish Company Act. However, it is of interest to see if there are differences in the independence of directors over the life cycles given the fact that governance objectives are likely to change from a wealth creation

[9] *Lag (1987:1245), om styrelserepresentation för de privatanställda.*
[10] Source: The Swedish governance code (2010), page 8

objective in the beginning to a wealth protective governance objective (Filatotchev et al., 2006). This change in governance objective ought to affect the board composition since the main driver of the wealth protection objective is monitoring, something that independent board members are more effective at (Weisbach, 1988). Since the Code only requires that a majority of the directors are independent of the company and that two directors are independent in relation to the majority shareholder, discrepancies with respect to board composition between companies can occur. Concerning the board size of listed companies, the Swedish Company Act stipulates a minimum requirement of three board members, making variations in board size possible.

2.4 Gaps in literature – our contributions

Based on the literature review, we have identified the following gaps:

1) The mainstay of the corporate governance literature has evolved around large, publicly listed companies (Filatotchev et al., 2006). Further, principal-agent theory has been the dominant theory underlying the research. Thus, both the focus of the research and the theoretical framework can be perceived as uniform.
2) A limited set of studies follow the evolution of corporate governance in firms across their life cycle. The existing articles lack full empirical support, e.g. Filatotchev et al (2006) and Huse & Zattoni (2008).
3) Discrepancy with respect to the definitions and methodologies used for describing the firm's life cycle. Admittedly, the inconsistency can be attributed to the methods capturing different elements of the life cycle. Regardless of the definition, one can argue that the notion of what is uniformly seen as early stage firms across the definitions is fairly similar.

The aim of this study is to examine how differing needs and functions within each life cycle stage affect corporate governance. Thereby, we are responding primarily to the first two gaps identified, and secondarily to the third gap. In the next section we will present our refined research focus.

2.5 Specification of research focus – refined hypotheses

With the overarching research focus in mind, i.e. if corporate governance is applied to fit the needs and functions of different life cycle stages, we will extend our core hypothesis with an additional set of hypotheses. These are designed to be tangible in relation to the core governance mechanisms we are investigating while being connected to Filatotchev et al.'s framework (2006).

Hypotheses	Formulation: Predicted sign & related governance function[11]
I. Size and frequency	- Size of board is related to *monitoring* effectiveness. However, as early stage firms often come from a concentrated ownership structure prior to IPO, we expect to see a larger board size for firms in maturity up to the point in which large boards are ineffective. - Huse & Zattoni (2008) postulate that the intensity of board interaction with management, proxy for *monitoring*, is strongest in a crisis stage, here referred to as decline and stagnancy phases. As such, we expect a higher frequency for these stages.
II. Board composition	- Related to *monitoring*, *resources* and *strategy*, independent directors can contribute in many ways. Therefore, we expect a fairly even board composition across the stages[12]. - Although the composition is thought to remain constant, we expect that the drivers underlying the composition is different, resource and strategy in early phase, monitoring in later phases, in accordance with Filatothev et al.'s framework (2006).
III. Composition of incentives	- The velocity of the firm environment and the firm's existing financial resources are main drivers for the components of incentives (Filatotchev & Allcock, 2010). - Consequently, firms in early stages are likely to use a high portion of equity-incentive in relation to total pay. [13] Conversely, mature firms have a higher proportion of fixed salary and pension costs in relation to the total compensation.

Table 3: Overview set of refined hypotheses.

3. Methodology

3.1 Introduction to methods used

This section will provide an in-depth explanation of the methodology used in both the qualitative and the quantitative part and how they are tied to the research question. Further, this section elaborates on the scope and the limitations of the study as well as concerns from the perspective of the reliability and validity of our findings.

[11] By function we refer to Filatotchev et al.'s (2006) monitoring, resource and strategy functions.
[12] Given the sample of publicly listed firms. Please refer to the methodology section for a motivation for the choice of sample.
[13] Incentive system consists of four components; fixed (base) salary, variable pay, pensions and LTIP (long-term incentive programs, equity incentives).

3.1.1 Research question and design

The method we have chosen to answer our research question is twofold since our thesis includes both a single qualitative case study and a quantitative study. This research approach have been chosen due to that quantitative studies are considered to be more generalizable than purely qualitative studies, which are primarily based on one or two case studies (Yin 1989; Creswell, 1994; Verschuren, 2003). Hence, our quantitative study allows us to test our hypothesis on a general level. However, since the topic we study is complex and dynamic, we argue that a qualitative single case study allow for an in-depth understanding of how corporate governance is related to a company's progression across different life cycles. Given the nature of the subject we study there is a risk that the results of the quantitative study generate a too simplistic picture. On the basis of this, our qualitative study is a way to contrast the reliability of the results of our quantitative study. Thus, the combination of a qualitative and quantitative study enables us to contrast and complement the findings of our qualitative case study to that of our quantitative study and vice versa. Further, the decision to study a single case study compared to studying multiple cases has been taken to enable a deeper understanding of the case at hand. This is in line with Dyer & Wilkin's (1991) reasoning, since we have decided to try to achieve deep insights of one case instead of looking at multiple cases on a surface level given the time constraint of a Master thesis.

The qualitative analysis is conducted through interpreting and finding patterns in our interview material and supplementing resources such as annual reports, press archives etc., taking a starting point in the methodology outlined above. The method of relating previous research with empirics resembles a deductive approach. We shaped our hypothesis based on research and aim to investigate the degree to which the hypothesis holds with the help of both quantitatively and qualitatively methods, thereby allowing us to examine corporate governance through the lens of firm life cycle theory.

3.1.2 Limitations

The nature of our research question is positive, i.e. we are interested in explaining and predicting how firms apply corporate governance depending on the life cycle of the firm. Conversely, we are not taking a normative stance on what is good corporate governance. Consequently, we are not incorporating effects of value creation as for example share price development or other profitability measures. Further, for compensation, as we are focusing on the composition of incentive packages, we are not interested in the level of compensation per se. Due to the intricacies that are related to options, for instance taxes, valuation models, type of options, etc., we have deemed them to be out of scope of this study. As such, we will only examine whether there is a relationship between CEO compensation and firm life cycles. Hence, we will not discuss whether CEO compensation is optimal in a certain stage or not.

3.2 Methodology – quantitative

3.2.1 Introducing the quantitative approach

Objective of quantitative study

Our research question deals with whether firms apply corporate governance differently depending on the life cycle of the firm or not. In the qualitative study, focus is on gaining in-depth understanding of how corporate governance evolves over the life cycle of the case company. One of the limitations of a case study is the predictive power of the

findings to a larger sample. To remedy this, we incorporate a quantitative study to investigate the research question on a large sample, namely all publicly listed[14] companies on NASDAQ OMX Stockholm from small cap up to large cap. Further, it allows for triangulation of results. In this chapter, we seek to quantitatively establish whether there is a relation between how firms apply their corporate governance mechanisms and the stage of the life cycle the firm is currently in.

Quantitative research approach explained

The research question necessitates a segmentation of firms into the respective life cycle of the firm. Such segmentation will, for example, allow the comparison of how corporate governance is applied in a growth phase with how it is applied for firms in their mature phase. As such, the empirical research has two steps that need to be done in chronological order:

A) Classification of firms into life cycle phases using methodologies provided by 1) Anthony & Ramesh (1992) and 2) Dickinson (2011).
B) Investigate the degree to which firms apply corporate governance mechanisms differently across the firm life cycle phases as identified in A)

Part A of the quantitative study is merely to enable the study of how corporate governance differs depending on the life cycle of the firm by providing the necessary classification. In Part A we will explain the methods chosen in our study, namely AR (1992) and Dickinson (2011).

Part B of the study has two goals. Taking a cross-sectional approach, we are interested in testing 1) means of the various groups and 2) whether life cycles are better predictors for the application for corporate governance than other control variables that figures in corporate governance literature. In this section we will motivate the choice of variables. For a closer description of how they are defined, please refer to Appendix D. In the latter step, multivariate analysis is used. Others have taken a similar approach when it comes to using life cycle theory to shed light on their research question (Liu 2008; Moores & Yuen 2001; Granlund & Taipaleenmäki 2005; Kallunki & Silvola 2008).

Choice of sample

The sample considered for this study comprises all stock listed companies on the Stockholm Stock Exchange on the Small cap, Mid cap and Large cap listings of the NASDAQ OMX Nordic. In total, there were 251 companies listed on the exchange at the time of the study in October 2012[15]. The breakdown of the companies at index level yields 118 companies on the small cap, 75 companies on the mid cap and 58 companies on the large cap. Also companies that have dual listings, i.e. firms whose shares are listed on other exchanges, are included. The reason for the inclusion is that the affected companies still have to disclose a corporate governance report.

Index	No. companies
Large cap	58
Mid cap	75
Small cap	118

Table 4: Composition of sample

[14] Firms listed on Nordic Growth Market (NGM) have not been considered due to the time constraints of the thesis and poor data quality in relation to firms listed on NASDAQ OMX Nordic.
[15] Based on extracted list of quoted companies on the Small, Mid and Large cap indices on the Stockholm Stock Exchange from the Nasdaq OMX Nordic website (http://www.nasdaqomxnordic.com), accessed October 10th, 2012.

Admittedly, the choice of the sample is based on a trade-off. On the one hand, the research question implies it would be ideal to have a full sample of all phases in firm life cycle theory. Stock-listed companies, even on the small cap index, are hardly to be seen as introduction-companies in their initial start-up phase. On the other hand, the chosen sample of publicly listed firms must all adhere to the Swedish Corporate Governance Code and thereby issue a corporate governance report in which information on corporate governance mechanisms are found. Furthermore, the sample offers solid data availability on both financial and non-financial data, something that an even broader data sample cannot provide. Based on the reasons mentioned in this paragraph, we conclude that despite their deficiencies, the chosen sample is relevant for our research question.

3.2.2 A) Life cycle segmentation

Choice of methodology

Several studies have made use of firm life cycle theory to investigate a specific research question (Liu 2008; Moores & Yuen 2001; Granlund & Taipaleenmäki 2005; Kallunki & Silvola 2008). One commonality found in these articles is how they apply the concept of life cycle theory to explain their research question. However, the choice of life cycle methodology differs. It is likely that authors choose the methodology based on the requirements of the research question, the time at hand as well as the data available. We have based the choice of methods based on two criteria. First, it would be ideal to make use of a methodology that has been used in corporate governance research, management control or accounting research. This would increase the likelihood that our chosen method is fit for purpose. Second, given the time constraints of a master thesis, a more parsimonious methodology is desired. Based on these two criteria, we have chosen to proceed with both AR (1992) and Dickinson (2011).

First, the methodology developed by Anthony & Ramesh (1992) incorporates three financial variables and one non-financial variable to segment firms into their life cycle. It then uses a composite score of the four variables to identify the life cycle of the firm.

Second, Dickinson (2011) has in recent years argued for the use of the signs of cash flows as a proxy for life cycle phases. Depending on the combination of the signs, the firm is classified into the life cycle phase. Her methodology is fairly simple in the sense that it requires limited calculations, a simple algorithm is all that is needed.

Due to the lack of a strong consensus around one methodology of classifying companies, we have decided to use the two approaches by Anthony & Ramesh (1992) and Dickinson (2011) to triangulate the results. Although both of the methodologies show similar trends for what is considered early stage and late stage respectively, there are differences in firm characteristics (see Appendix F). Given that the methodologies yield dissimilar results, it has the advantage that it offers different perspectives on how firms use corporate governance mechanisms differently across two definitions of firm life cycles.

Choice of time period

To ensure that the segmentation into life cycles is not biased by the business cycles, we have included data since 2005 and forward, thus due to 1) data availability and 2) avoid any effect that may arise from the introduction of IFRS in 2005[16]. However, as Anthony

[16] Although we do not expect any substantial impact on the life cycle segmentation from the implementation of IFRS, we have chosen to leave out the possibility of such effects on the sample.

& Ramesh (1992) require a certain number of years of observations as input for each year, we have only segmentation into life cycles since 2008.

Data collection

For financial data regarding life cycle classification and control variables for further analysis, Orbis is the main source of information. In cases where there are lacking observations, we consulted both annual reports as well as DataStream. Please refer to next section for which variables are included in which methodology.

Anthony & Ramesh (1992) - variables and rationale for methodology

Spence (1977, 1979 and 1981) forms the basis for AR's life cycle methodology. According to Spence, firms exhibit different characteristics across the life cycle of the firm. These differences are in particular highlighted through the dividends the firm pays out, the growth in the sales of the firm; the capital expenditures that firm are investing and lastly the age of the firm. Dividends are something that more mature firms with stable revenue is paying out. High growth in sales ought to be more prevalent for growth firms. High capital expenditure can be seen as investing in future growth opportunities, leading to a growth-focus. Together, these variables provide intuitive logic as to what distinguishes a growth firm from a mature firm.

Anthony & Ramesh (1992) apply a different definition using growth, maturity and stagnant. Firms tend to invest heavily in capacity in early stages, mainly driven by positive net investment opportunities attracting many players. In the next phase, there are fewer positive investment cases available, leading to a stage of maturity in which zero net present value projects is the norm. In the stagnant phase, there is a low growth in sales, capital expenditures and high dividend pay-outs. This can be seen as a market characterised by decline also in terms of reduced firm population, i.e. firms are exiting the market.

1) DP_t = $Dividends_t$ / $Profit_t$ x 100
2) SG_t = ($Sales_t$ - $Sales_{t-1}$) / $Sales_{t-1}$ x 100
3) CEV_t = ($CAPEX_t$ / EV_t) x 100
4) Age = (t – Date of incorporation)

Dividends = Ordinary dividends in year t
Profit = Profit (Net income) before extraordinary items in year t
Sales = Net sales in year t
CAPEX = Additions to fixed assets in cash flow statement in year t
EV = Enterprise value as a sum of market value of equity at year-end plus book value of long-term interest debt in year t

Rather than relying on one variable, Anthony & Ramesh (1992) argue that a composite score based on four variables is a more stable measure, thereby allowing for individual differences in one variable. The multivariate measure permits possible differences deriving from industry characteristics. For example, mining is a much more capital intense sector than the services sector. As the three financial variables can all be related to risk, firm age is included. Anthony & Ramesh (1992) did not find CEV_t significant. This variable was later disregarded in their analysis. We have chosen to include CEV_t as Swedish data might show different results than data based on US firms.

To allow for comparability with Dickinson's (2011) methodology, financial companies have been excluded. Since median measure of the three[17] last years is needed to smoothen out volatility, at least four years of data is needed to compute firm life cycle classification for one firm. Data have been gathered from Orbis for the majority of the variables. DataStream has also been used to reduce the number of observations with missing values.

The financial variables are calculated for each year. Then, the median of the three previous years is calculated. In other words, for 2011, we use the median of the three precluding years from 2008 to 2010. The next step is to rank all the firms within each year with the purpose of being able to group them into three categories ranging from *growth*, *mature* and *stagnant* (Table 5). Based on a sum of the individual scores, a composite score measure is formed. Firms are then divided into either a three-stage life cycle or a five-stage life cycle depending on the choice of definition. Ideally, the cut-off values for separating one phase from another are set by balancing the population within the different groups as far as what is deemed reasonable.

Life cycle stages (coding in parenthesis)	Life cycle descriptors			
	DP	SG	CEV	Age
Growth (1)	Low	High	High	Young
Mature (2)	Medium	Medium	Medium	Adult
Stagnant (3)	High	Low	Low	Old

Table 5: Life cycle descriptors of AR (1992) three categories of life cycle stages[18][19].

In our study, we found a minimum composite score of 5 and a maximum score of 12. Anthony & Ramesh (1992) used two varieties of their methodology, one with three stages, and one with five stages. Both are represented in table 9.

Stage	AR, life cycle stages
Growth	5,6
Growth / Mature	7
Maturity	8
Mature / Stagnant	9
Stagnant	10,11,12

Table 6: Ex-ante distribution of composite scores yielding life cycle stages[20].

Dickinson (2011) - variables and rationale for methodology

Gort & Klepper (1982), the basis for Dickinson (2011), constructed a theoretical framework for industry life cycle stages based on product history. The definitions according to Gort & Klepper (1982) are closely linked to the number of producers. By producer, Gort & Klepper (1982) mean firms manufacturing or offering a service.

[17] Anthony & Ramesh (1992) originally makes use of five years of data. Due to lacking data in particular for small cap firms, we have decided to suffice with median based on the three previous years before the year of classification.
[18] Source: Anthony & Ramesh (1992), p. 207: Expectations for firm-specific descriptors of life cycle stages.
[19] Numbers in parenthesis indicates the allocated score resulting from the ranking within each descriptor.
[20] Composite score is the sum of the scores given in the ranking in the table 9.

1) Introduction = Commercialisation of new product
2) Growth = Number of producers of product increase dramatically
3) Mature = Number of producers fairly constant, i.e. no net new entry
4) Shake-out = Number of producers starts to diminish
5) Decline = Net exit of producers from market, including reduced market size

The argument that cash flow patterns are rooted in economic theory was validated by Dickinson (2011). Cash flow patterns capture life cycle stages as described in theory by Gort & Klepper (1982) in the sense that they represent the operational and strategic choices that the firm faces. In other words, during the introduction phase, firms are unlikely to see positive cash flows from operations, seen as the firm is trying to establish itself on the market. Capital expenditures are also negative, as the firm is investing in e.g. fixed assets that will expand capacity for production. Financing must then be provided in full by external investors. Dickinson (2011) provides similar arguments for each of the five phases of the life cycle. For some stages, several patterns can be observed (Shake-out).

1) CFO = Cash flows from operating activities
2) CFI = Cash flows from investing activities
3) CFF = Cash flows from financing activities

When it comes to methodology, Dickinson (2011) constructs an algorithm based on the cash flow patterns as described in table 10. In terms of data, all variables have been derived from the statement of cash flows. Only for cash flows from investing activities has one alteration been made. CFI cannot be used as such since we use Orbis, which does not list CFI info. Instead we use the variable "additions to fixed assets" as a proxy.

Life cycle stage	Introduction	Growth	Mature	Shake-out			Decline	
CFO	-	+	+	-	+	+	-	-
CFI	-	-	-	-	+	+	+	+
CFF	+	+	-	-	+	-	+	-

Table 7: Combination of predicted cash flows signs yielding life cycle stages[21]

To reduce the influence of volatile cash flows, we have based further analysis on smoothed measure using the median of the last three years on each cash flow measure before placing the firm in the respective life cycle phases using the combination of signs. The choice of three years is founded in the desire to mirror the same assumption taken for AR, both with respect to number of years and with the use of median.

Comparison of Anthony & Ramesh (1992) and Dickinson (2011)[22]

Apart from the differences in methodology, Anthony & Ramesh (1992) and Dickinson (2011) also uses differing definitions of life cycle phases. Regardless of this difference, it is possible to note certain commonalities in the way the life cycle phases are defined. If we leave the introduction stage aside for a moment, the growth phase exhibits similar characteristics in both Anthony & Ramesh (1992) and Gort & Klepper (1982), in particular when it comes to the positive prospects that surround growth firms. Indeed, if there were no positive net present value projects there would not be a net influx of

[21] Source: Dickinson (2011), p. 1974.
[22] Please refer to Appendix F for an overview of firm characteristics for the firms allocated to the respective life cycles using both methodologies.

producers. Similarly for maturity, mature markets with zero net inflow of new firms fits well with the presence of zero net present value opportunities.

Anthony & Ramesh (1992) has been widely cited (Black, 1998; Liu, 2008 and Jafaar, 2011). As such, it is an acknowledged methodology. The variables chosen in the methodology captures several aspects of the firm. On the negative aspect, it requires an ex-ante decision on how to divide the composite score measure into life cycle stages.

As Dickinson (2011) bases her life cycle descriptors on cash flows, one immediate concern is the potential volatility of cash flows. On the positive side, her measure is far more simplistic, letting researcher spend more time on how life cycles may affect some other variable (in our case corporate governance). In her paper, she also remarks that Anthony & Ramesh (1992) executed their study at a time when the statement of cash flows was not yet mandatory. Another positive aspect is the fact that no ex-ante decision is required with respect to the distribution of firms into life cycles as one would have to do consider for the composite scores measure in Anthony & Ramesh (1992).

Using Spearman's rank correlation that permits computing correlation between variables of ordinal nature[23], the various life cycle methodologies have a significant and positive correlation of 0.22. That the correlation is significant is a sign that the two methodologies are *not* independent, i.e. they are somehow related to each other. This indicates that the segmentation of firms resulting from AR (1992) and Dickinson (2011) partly overlaps, but not entirely. As AR and Dickinson (2011) make use of different definitions of life cycles, one potential explanation could be that they capture different aspects of the firm life cycle.

The distribution of firms along the life cycle shows several similarities. At first glance, the population largely differs. Where AR yields a fairly balanced population, Dickinson yields an uneven population. This was expected given the way in which the methods were designed. AR's methodology is based on ranking measures, and strives for a more balanced population through the choice of threshold value for the composite score. Dickinson, in comparison, is an objective measure that does not require choice of cut-off values. Second, there is a strong tendency on the maturity phase. Third, there seems to be more growth firms than firms in stagnation or shake-out / decline. Fourth, given the chosen time period (from 2008 onwards), the composition has remained relatively stable, despite potential effects from the economic downturn in 2008 and 2009 and the subsequent recovery seen in 2010 and 2011.

Phase \ year	2011	2010	2009	2008
Growth	26	27	20	29
Growth/Mature	37	31	47	27
Mature	61	53	37	55
Mature/Stagnant	51	58	63	52
Stagnant	46	45	44	46
Total	*221*	*214*	*211*	*209*

Table 8: Overview firm population according to AR (1992) methodology.

[23] *Ordinal* variables contain the property of ranking, but not of distance. For example, one can rank firms on life cycles from introduction to decline, but one cannot measure the difference in between.

Phase \ year	Smoothed*, last three yrs	2011	2010	2009	2008
Introduction	24	25	27	21	25
Growth	38	52	51	28	60
Mature	138	117	114	140	103
Shake-out	17	16	16	19	12
Decline	4	7	7	5	5
Total	*221*	*217*	*215*	*213*	*205*

Table 9: Overview firm population according to Dickinson (2011) methodology[24].

3.2.3 B) Conceptualisation of corporate governance: methodology and definitions

Choice of time period

The time period that we have considered is 2011. Given that the most recent version of the Swedish Corporate Governance Code came into force in 2008, with a revised version in 2010, we are, when considering the one-year implementation window, realistically looking at the year 2011, the reason being the sake of comparison. Both from corporate governance and a life cycle perspective, one year is sufficient. First, corporate scandals and mistrust towards the corporate sector has previously been a substantial driver for changes in corporate governance. The Cadbury Report in the UK in 1992, and the implementation of a corporate governance code in Sweden in 2005 are two such examples. These scandals do not happen every year. Hence, it is not probable that corporate governance changes drastically on a year to year basis. Second, Miller & Friesen (1984) find that firms tend to spend 10 years in each phase. Given recent examples such as Google, LinkedIn and Facebook progressing quickly form initial start-up phase to growth, it can be debated whether 10 years in each phase is still valid. Nonetheless, literature offers a strong case for adhesiveness even for life cycle phases. As a result, we argue that one-year is enough to consider corporate governance mechanisms. For life cycle phases, we incorporate a four-year period to see how stable the classifications are.

Data collection

Firms disclose a corporate governance report along with their annual report. The corporate governance report constitutes the source of our corporate governance data. In total, 222 companies are included in the sample. For a description of the way we define the various corporate governance mechanisms, please refer to following section. For other financial variables, Orbis and DataStream have been used. Please refer to the next section for motivation of the variables, and to Appendix D for a description of how they are defined.

Presentation of data – operationalization and definition of variables

In the following section, we motivate the choice of variables. Further, we present the raw data at hand, split into what is considered dependent variables (corporate governance measures) and independent variables (other control variables). Life cycle variables are not included in this section, as they are accounted for in Part A of the methodology.

Operationalization of corporate governance variables

There are two equally important reasons for the choice of corporate governance variables. The first reason for the choice of the variables stems from how they figure in

[24] *Three-year median on respective company's cash flows, in symmetry with AR (1992).

the literature. The second reason is related to which information is disclosed in the Corporate Governance Report found in the Annual report for the financial year 2011 for the 222 companies included in the sample. Those firms with fiscal years different from the calendar year are included with the last available financial report. Over the next paragraphs, we motivate the corporate governance variables grouped in three categories, first, board size and frequency, second board composition and third composition of incentive systems, in line with our hypotheses stated in section 2.5. Please refer to Appendix D for a more detailed description of how we have defined each variable.

Board size and board meeting frequency

Lipton & Lorsch (1992) state that too large and too small boards may prove to be ineffective at fulfilling their duties. They postulate that a board size of eight is optimal. Subsequent research has examined the link between the firm's contextual environment and board size (Coles et al, 2008; Linck et al, 2008), and found that there are different drivers for board structure depending on the size of the firm. Thus, it is of interest to investigate how life cycle segmentations affect board size. Based on our hypothesis regarding size of the board, we predict that mature firms will have a relatively larger board size than early stage firms. As mature firms, which are often larger and more complex, have a higher need for monitoring that requires more board members.

Board meeting frequency can be seen as a proxy for the intensity of the interaction undertaken by the board (Vafeas, 1999; Huse & Zattoni, 2008). Hence, it would be interesting from a governance perspective whether this differs across the life cycle of the firm. We predict in our hypothesis for frequency that firms in later stages have a higher need for monitoring, resulting in a higher frequency of board meetings for these firms.

Board composition

There are various definitions of independence. In Sweden, the Code (2010) distinguishes between independence of owners and independence of management. We treat independence of board members as ratio of total board size to reduce the effect from board size. Researchers seem to acknowledge that independent board members are more effective in monitoring than dependent board members (Boone et al, 2007; Faleye, 2011). From a resource perspective it is also interesting to investigate composition, in particular in light of Lynall et al.'s findings (2003) that state that independent board members are providing young firms with legitimacy vis-à-vis external financiers. From this standpoint, we have included board composition in our study.

Harjoto & Hoje (2009) considered the power of CEO through duality, i.e. the CEO also holding the position as chairman. In Sweden, CEO duality in listed companies is not permitted and according to the Swedish corporate governance code. Therefore, CEO membership of the board has been included as that is also telling about the CEO's possible power.

With respect to our hypothesis regarding composition of board, we do not expect any substantial differences across the life cycles. Rather, firms in each stage choose to include independent board members to fulfil distinct needs; resource and strategy for early stages, monitoring for late stages.

Composition of incentive system and CEO ownership stake

Fixed salary, variable pay (STI), long-term incentive plans (LTIP) and pensions together constitute the incentive system. Filatotchev & Allcock (2010) extends the framework developed in 2006 by Filatotchev et al. to incorporate differences in the compensation

system across the various thresholds. Further, Filatotchev & Allcock (2010) deals with the structure of the compensation package, not the absolute level per se. This is an observation we adhere to in our study, the reason being that it seems obvious that the larger the firm, the higher is the salary. Therefore, the variables are defined as proportions of the total incentive system, denoted *x_tot*.

With regards to LTI, there have been several difficulties with both obtaining the data and comparing the data across firms. Type of options, tax rules, vesting rules and other aspects all render the comparison of LTI difficult. Still, with the implementation of IFRS 2, firms must disclose the cost of LTIP handed to management. As not all firms have seen such costs occur in 2011, we have had to consider the ownership stake instead. Options have been disregarded due to the difficulty of comparing across firms. CEO ownership stake is taken as the percentage of total shares. In cases where the firm has a dual share system, B-shares held by the CEO has been used. The presence of CEO ownership can also be seen as reducing the cost of monitoring (Boone et al, 2007). We admit that although our definition of CEO ownership in light of dual class shares is not perfect, yet we argue that it offers a proxy of the CEO power and cost of monitoring.

We anticipate that firms in earlier stages have a relatively higher portion of equity pay to the CEO than mature firms. Equity pay is in this setting LTIP and CEO ownership, not variable pay (STI), which are more short-term and cash-based. Conversely, we expect to see a higher portion of fixed pay to mature firms.

Descriptive statistics

The governance variables are summarized in table 5. The presence of outliers may affect the results from the statistical analysis. Still, outliers carry important information that should not be neglected, in particular if it cannot be explained by errors in the data (Draper & Smith, as cited in Gujarati, 2003, p. 541). Our approach has first been to check for erroneous data points. Second, in cases were correct data points deviate substantially from the rest of the sample, we have sought to understand theoretical causes of the outlier. In all cases, outliers have not been omitted.

Particularly interesting to point out is the wide distribution in frequency. As there are several other observations in the high 20s, we have chosen to include the max value of 34. The same reasoning applies to CEO ownership. It is also worthwhile to note that the mean board size is comparable to Lorsch et al.'s (1992) findings of optimal board size.

Corporate governance (DV)	Obs	Mean *	Median	Std. Dev.	Min	Max
Size of board	212	7.39	7.00	2.14	4	15
Frequency of meetings	209	10.87	10.00	4.47	4	34
Proportion independent members	206	0.62	0.63	0.19	0.18	1.00
Proportion independent of owners	205	0.75	0.75	0.18	0.00	1.00
Proportion independent of mgmt	205	0.79	0.80	0.17	0.00	1.00
CEO member of board	211	0.43	n.a.	0.50	0.00	1.00
Fixed pay in relation to total pay	204	0.66	0.68	0.15	0.19	1.00
STI in relation to total pay	204	0.14	0.10	0.15	0.00	0.57
Pensions in relation to total pay	204	0.19	0.19	0.10	0.00	0.81
LTIP in relation to total pay	204	0.01	0.00	0.04	0.00	0.33
CEO ownership stake	221	0.03	0.00	0.09	0.00	0.72

Table 10: Descriptive statistics dependent variables.

Operationalization of control variables

The inclusion of control variables tests the degree to which it is appropriate to look at corporate governance through firm life cycle theory by benchmarking its validity to other factors that may contribute to changes in corporate governance. For a detailed description of the control variables in terms of the definition and abbreviation as well as a correlation matrix, please refer to Appendices D (variables) and G (correlation matrices). The choice of control variables have been taken based on their use in literature, in particular in studies investigating corporate governance. In the following paragraphs, we will account for the motivation of the control variables included in the analysis.

Firm size

Several studies include size of the company when examining reasons to why firms exhibit different board sizes (Boone et al, 2007; Linck et al, 2008). It is likely that firm could capture some aspects of the firm's life cycle. Therefore, it serves well as a control variable. There are several ways to indicate the size of the company. We have chosen to include various size measures commonly used: 1) net sales, 2) market capitalization, 3) book value of assets and 4) number of employees. We expect that firm size is correlated to firms classified as mature.

Growth opportunities

Literature has included growth as a control variable for explaining determinants of e.g. board size (Linck et al. 2008; Lehn et al, 2009). Firms that are experiencing growth are thought to require a swifter decision-making process due to being in a more volatile environment (Lehn et al. 2009). Further, Lehn et al. (2009) postulates that firms with high growth opportunities will have a higher degree of information asymmetry arising from outside directors' difficulty of obtaining relevant information for their decision-making. Based on these arguments, we have chosen to include growth opportunities as control variables. We have incorporated growth through 1) Tobin's Q and 2) EV / EBITDA-multiple. We anticipate that growth opportunities correlate with firms segmented into the growth stage.

Share price volatility

Boone et al. (2007) incorporates share price volatility as a control variable to measure cost of monitoring. Shares with large variances in price are thought to be tougher to monitor than others, partly because the firms tend to be operating in a more volatile environment. We have included share price volatility over the last 360 working days, in line with the 12 months return variance used by Boone et al. (2007). As growth firms are likely to operate in a volatile environment (Filatotchev et al., 2006), we reckon that share price volatility correlates with growth firms.

Age of firm and years since listing

While it is quite intuitive that the older the firm, the more likely it is that the firm is perceived to be mature, the same does not necessarily hold for years since listing. Hence, both years since founding and IPO carry different messages that could have an effect on the choice of corporate governance. Another advantage of assessing age is that they are non-financial data. This could help reduce potential bias by e.g. accounting rules that could influence the financial variables. It is intuitive, but not necessarily correct (at least not for growth firms and later), that the later the firm is in its life cycle, the older it is.

Measure of ownership concentration

To account for possible differences in ownership structure, we have included three variables as a measure for ownership concentration. The three variables measure the

holding of the largest, three largest and six largest shareholders respectively. We have relied on the use of B-shares for firms with a dual share system. Admitted, this is a simplification of reality. Still, large shareholders are likely to hold both A and B-shares, giving our measure of ownership concentration relevance. We expect that early stage firms exhibit a higher prevalence of cases with more concentrated ownership.

Industry classifications

To test whether it rather makes sense to look at corporate governance through industries, we have incorporated type of industry as control variable. The industry classification NACE Rev 2 constitutes the basis for our industry classification. Since the number of firms within some industries is small, we have merged certain industries. To ensure that related industries grouped, we have based the merging on the high level grouping used for national accounts (Appendix D3). It is likely that some industries are growing more than others, something that could influence the number of growth firms. Thus, depending on the possible correlation between industry life cycle and firm life cycle, we expect corresponding effects on corporate governance.

Descriptive statistics

Table 6 shows a description of various summary statistics for the control variables. The correlation matrix showing correlations between the dependent variables are found in Appendix G. Table 7 shows the correlation between the corporate governance variables and the control variables. We have handled outliers in line with the approach for the corporate governance variables except for one difference. As we have transformed the control variables using log to meet the assumptions of linearity in multiple regressions, this has the bi-effect that it decreases the influence of potential outliers.

Control variables (IV)	Obs	Mean *	Median	Std. Dev.	Min	Max
Raw materials and manufacturing	222	0.49	n.a.	0.50	0	1
Construction, real estate	222	0.08	n.a.	0.27	0	1
Wholesale, transportation	222	0.12	n.a.	0.32	0	1
Information, communication	222	0.19	n.a.	0.39	0	1
Other service sector	222	0.13	n.a.	0.33	0	1
Tobin's Q (2011)	218	1.97	1.40	1.76	0.29	12.52
EV / EBITDA (2011)	189	10.24	7.21	13.13	0.92	118.01
Market capitalisation (2011)	222	14,000,000	1,138,593	46,600,000	15,329	409,000,000
Total assets (2011)	222	17,400,000	1,633,298	49,200,000	24,269	364,000,000
Net sales (2011)	222	14,100,000	1,499,825	39,700,000	0	310,000,000
Number of employees (2011)	209	7,531	598	25,056	5	272,425
Equity price volatility last 360 days	212	0.44	0.39	0.20	0.21	1.74
Holding largest shareholder	221	0.24	0.20	0.17	0.00	0.75
Holding three largest shareholders	221	0.42	0.39	0.21	0.04	0.88
Holding six largest shareholders	221	0.55	0.55	0.24	0.05	0.98
Age	222	42.14	24.00	43.96	2	323
Years since IPO	221	16.79	13.00	17.23	1	111

*Table 11: Descriptive statistics independent variables. Numbers for marketcap, assets and netsales in TSEK. * For industry dummies, mean corresponds to percentage of sample falling in that category.*

DV* \ IV**	a) tobin	b) evebitda	c) marketcap	d) assets	e) netsales	f) employees	g) eq_vol	h) top_1	i) top_3	j) top_6	k) age	l) yrs_ipo
1) size_bod	-0.08	**-0.21**	**0.30**	**0.40**	**0.46**	**0.35**	-0.19	0.13	0.13	0.11	**0.35**	**0.34**
2) frequency	0.02	-0.08	-0.06	0.00	-0.06	-0.04	0.06	**-0.21**	-0.18	-0.16	-0.10	-0.11
3) pr_ind_ind	0.15	0.00	0.08	0.02	-0.03	-0.12	0.11	**-0.23**	**-0.29**	**-0.30**	**-0.26**	**-0.23**
4) pr_ind_own	0.04	-0.16	0.17	0.17	0.16	0.05	0.04	**-0.22**	**-0.25**	**-0.24**	-0.02	-0.06
5) pr_ind_mgmt	0.17	0.13	-0.01	-0.07	-0.10	-0.12	0.11	-0.11	-0.10	-0.11	**-0.28**	-0.17
6) ceo_member~s	-0.15	-0.11	0.02	0.11	0.10	0.13	-0.17	0.10	0.09	0.10	0.13	0.17
7) fix_tot	**-0.28**	-0.01	**-0.28**	**-0.33**	**-0.29**	-0.09	0.06	0.07	0.03	0.01	-0.03	-0.08
8) var_tot	**0.32**	-0.17	**0.26**	**0.27**	**0.28**	0.09	-0.06	-0.07	-0.09	-0.08	-0.09	-0.05
9) pens_tot	-0.08	**0.28**	0.03	0.11	0.04	0.01	-0.01	0.02	0.12	0.13	0.16	0.18
10) ltip_tot	0.07	-0.07	-0.01	-0.03	-0.02	-0.02	0.01	-0.08	-0.10	-0.07	0.04	0.04
11) ceo_own	-0.09	0.02	-0.09	-0.10	-0.12	-0.09	0.00	**0.28**	**0.24**	**0.23**	-0.11	-0.08

Table 12: Correlation matrix dependent variable and independent variable[25]. Bold indicate correlation in absolute values of 0.20 or higher.

Choice of statistical approach

In order to examine the effect of life cycles on corporate governance, we have undertaken an analysis at two levels based on cross-sectional data. Common for the two levels is that we are testing the effect of life cycle and other control variables on one corporate governance measure at the time. Few studies have, to our knowledge, analysed corporate governance from a similar perspective to ours. As such, there are few quantified guidelines as to which relations can be established between life cycle variables and corporate governance mechanisms. A broader approach to identify eventual differences is thus called for. In the following paragraphs, we will account for the statistical methods used in this study.

ANOVA and testing for equality of means

The first level is a simple test of means comparing the means of a specific corporate governance variable divided into different subpopulations (life cycle phases). This level is intended to compare and contrast the means of each life cycle stage for one corporate governance measure at the time to establish whether there are any significant differences in means. If differences materialise it could imply that life cycle phases matter for the respective corporate governance variable. Given the data types involved – categorical data for the regressor (IV) and continuous data for the regressand (DV) – an analysis of variance model (ANOVA) is used. ANOVA is useful when the dependent variable is continuous and the IV is categorical or continuous. The main advantage of ANOVA is its' ability to compare the means of two or more groups (Gujarati, 2003).

An important assumption underlying ANOVA models is the assumption of equal variance of the population. In cases where this assumption is violated, it may lead to incorrect results. In particular, when the sample sizes are unbalanced, unequal variance may lead to increased chance of reporting a significant difference of means. To detect unequal variance, Bartlett's test is commonly used. However, this test can be vulnerable, especially if the population is non-normal Therefore, we have chosen to report Levene's

[25] *Variable definitions DV: 1) Size of Board, 2) Frequency of board meetings, 3) Proportion independent members, 4) Proportion independent of owners, 5) Proportion independent of mgmt, 6) CEO member of board, 7) Fixed pay in relation to total pay, 8) STI in relation to total pay, 9) Pensions in relation to total pay, 10) LTIP in relation to total pay and 11) CEO ownership stake. **Variable definitions IV: a) Tobin's Q (2011), b) EV / EBITDA (2011), c) Market Capitalisation (2011), d) Total assets (2011), e) Net Sales (2011), f) Number o employees, g) Equity price volatility last 360 days, h) Holdings largest shareholder, i) Holdings three largest shareholders, j) Holdings six largest shareholders, k) Age and l) Years since IPO

test in addition. Levene is a more robust test of variance than Bartlett. It accepts a non-normal distribution[26].

As one dependent variable is a dummy variable, it is less suited to be used in ANOVA models. Instead, we run a chi-square test of independence. Chi-squared tests the null hypothesis that there is no difference in proportions in life cycles on the outcome of the dependent variable. The null hypothesis can be rejected if the converted p-value is low[27]. Consequently, we are able to conclude whether the proportions differ across the life cycle stages.

However, this approach does not include other variables that could have a greater explanatory power than the life cycle phases. In other words, the life cycle variables can partly explain the variation while others may explain even more. This leads us to the next level, multiple regression analysis.

Multiple regressions

The second level involves multivariate analysis to verify the incremental value of life cycle descriptors vis-à-vis other commonly used control variables in corporate governance research. The corporate governance measure is regressed one at each time, and is also the dependent variable. The multiple regression analysis will allow for the establishment of the importance of life cycle stages vis-à-vis other variables that could have a higher explanatory power. It is above all the interpretation of the coefficients that is interesting for our study. Interpreting the coefficients allow for drawing conclusions regarding how life cycles or other control variables affect a corporate governance variable (DV). The type of regression depends on the type of data of the dependent variable.

A multiple regression uses the least squares method aims at minimizing the distance between a fitted line that is based on the independent variables included. The coefficients of each independent variable can be seen as the partial slope coefficient of this fitted line. In other words, the sign and magnitude of the coefficients contains information for how it will affect the dependent variable (Gujarati, 2003). For our study, we are mainly interested in the interpretation of the coefficients, and not in making an estimation based on the regression results. The reason is that we are merely interested in assessing how different life cycle stages affect corporate governance mechanisms in a positive fashion. Normative questions are out of scope of this study.

We have formed one dummy variable less than there are categories. Both life cycle variables and industry variables are coded into dummies. Dickinson (2011) uses a similar approach. As a result, when interpreting the coefficients for the dummy variables present in the regression, we need to read the coefficients in relation to the omitted category. In our study, we have at most two categorical variables refitted to dummy variables. That implies that we have two sets of categorical data.

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[26] Prophet statguide, North Western University, Illinois. Do your data violate one-way ANOVA assumptions? www.basic.northwestern.edu/statguidefiles/oneway_anova_ass_viol.html, retrieved Nov 29, 2012

[27] Institute for Digital Research and Education, UCLA, What statistical analysis should I use? Statistical analyses using Stata. *www.ats.ucla.edu/stat/stata/whatstat/whatstat.htm,* retrieved Dec 3, 2012.

The formula below exemplifies the regression model. D_i stands for the respective dummy variables. The below formula is not representative for all the variables included in the regression.

$$DV = \alpha + \beta_1 * D_1 + \beta_2 * D_2 + \cdots + \beta_4 * Growth + \beta_5 * Yrs\_ipo + \cdots + \varepsilon$$

Following each regression, a full regression diagnostics is run, testing all the assumptions behind linear regressions. Linearity between DV and the IV is tested by crosschecking against a scatter plot. Log transformations of the IV have been used to ensure that the distribution is useful for linear regression analysis. Homoscedasticity has been checked through plot of residuals versus fitted values. Normality has been checked using a comparison of density curve with the normal distribution. The assumption of independence is met when there is no distinct pattern between the various error terms, in other words no serial correlation. However, as we are not interested in drawing inference, the fulfilment of the assumptions is not strictly required in order to reasonably interpret the coefficients. There is one exception to that however, and that is the assumption of linearity between the individual IV and the DV. Although inference is not the purpose of the regressions, it is important that the IV and the DV show a relationship, which does not take a different functional form than random or linear (assumption of linearity). As a remedy, we have log transformed all the independent variables. This implies that the interpretation of the coefficients is slightly different. A one-percentage increase in e.g. age will yield change in the dependent variable corresponding to a magnitude of the coefficient

One dependent variable is a dummy. In this case, the ordinary least squares method is suitable, as it cannot tolerate a range in values that is binary. Instead we opt for a multiple logistic regression for this dependent variable. Within logistical regressions, there are two varieties. The first one is Logit, and the second one is Probit. The main difference lies in the interpretation of the computed coefficients. We have opted for Logit models, implying that the coefficients can be seen as odds ratios. By taking the antilog of the coefficient one will arrive at a term easier to interpret (Gujarati, 2003). This way, a one-unit increase yields a percentage change in the dependent variable.

Finally, when it comes to variable selection, we have opted for a two-step approach. First, we include all the control variables along with one life cycle methodology in the same regression, henceforth called the full regression model. Second, we strip away one variable at the time in a step-wise fashion down to a true model, henceforth called the reduced model[28]. It should be noted that the choice of all of the independent variables is rooted in literature. We still have reason to think that some of the variables may correlate to one another, implying a linear relationship. This can also be seen as collinearity, which means that there is a linear relationship between two or more IV's (Gujarati, 2003). Care has been taken with regards to which variable to omit when undertaking the stepwise elimination. As such, we have sought to reduce the risks that usually entail stepwise backward regressions. Those risks include, among others, biased R^2 values, too small standard errors of the coefficients, too low p-values and coefficients may be stronger in

[28] Similar to backward stepwise regressions, we start out with a model containing all variables and omit the variable based on it significance (p-values calculated from the t-statistic). We wish to emphasise that we are not undertaking an automated stepwise regression; variables are omitted manually, and life cycle stages are always kept in the reduced model.

absolute value than they ought to be (Flom & Cassell, 2007). We have attributed more weight to the reduced model due to the principle of parsimony.

3.3 Methodology - qualitative

3.3.1 Case selection

Based on the segmentation we undertook in the quantitative study, we were able to identify firms that had experienced all of the life cycle stages. Fast-forward was one of the prime examples of firms going from growth to maturity[29]. Fast-forward as a company that had progressed through different life cycle stages in a short period of time. As we investigated the development of the company since its start in more detail, we argue that the company have advanced through three of four quadrants in Filatotchev's framework (2006) in a short period of time. Based on this, Fast-forward allows us to study how the corporate governance has adapted to a firm that has evolved rapidly through several life cycles. This development is otherwise difficult to study as previous research (Miller & Friesen, 1981) argue that firms tend to spend several years in each life cycle stage before moving to the next. Hence, the advantage of Fast-forward is that the interviewees have the details of the events relatively fresh in memory.

The fact that Fast-forward has had a rapid development is also its weakness as a case study since it is quite unique for a firm to have this swift progression across its life cycles. Further, the case company was venture-backed from its start allowing Fast-forward to extract financial resources and expertise to fuel its growth in an early stage. These two factors could be argued to limit the generalisation of the findings of the case study. However, it is our belief that the benefits outweigh the costs based on the motivation for choosing Fast-forward.

3.3.2 Data collection

For the qualitative case study of our thesis, we chose to collect data through a combination of interviews and documentation in the form of annual reports. From the data collection in the quantitative study, we extracted specific financial data deemed relevant. Through a more detailed investigation of Fast-forward's development by documentation in the form of annual reports and press coverage we were able to get an objective picture of Fast-forwards development from its founding till today. Interviews with chairman, two CEO's, three board members served as primary sources. This allowed us to understand the reasoning behind shifts in board composition, focus of the board during different lifecycle stages, shifts in compensation to the CEO, CEO-turnover and other aspects of corporate governance as the firm crossed what can be identified as the thresholds described in Filatotchev et al (2006).

Further, to be able to contrast the development of corporate governance in the case company, we have collected data through conducting interviews with external persons with an extensive knowledge in their respective field. This was done in order to complement the data collected from the case company with expert practitioners' views on how corporate governance is applied in different phases of a firm's life cycle and contextual factors influencing corporate governance in Sweden.

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[29] We retrieved financial data on life cycle segmentation starting in 2005, enabling us to see how firms moved through the phases over time.

3.3.3 Selection of Interview objects

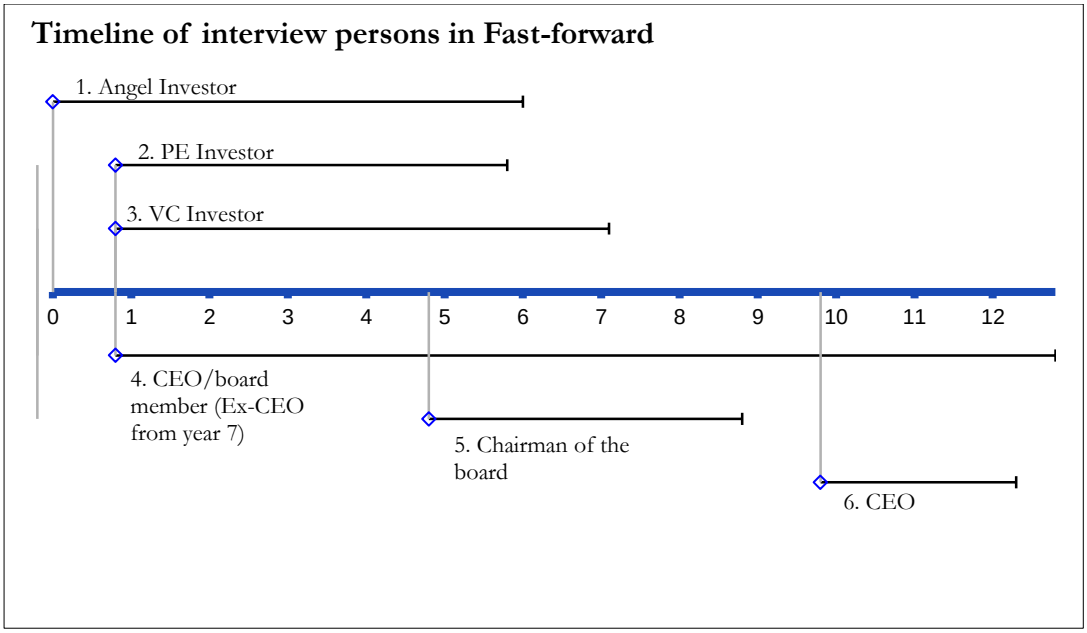

Figure 4: Timeline of interview persons in Fast-forward

In order to gain a complete picture of the development of Fast-forward's corporate governance across all its life cycle stages until today. Interview objects were selected based on their influence on, and activity in corporate governance issues. Based on this we interviewed persons either active or previously active in the board or as CEO in Fast-forward. A difficulty with conducting the case study was to gain access to the appropriate people resulting in that our case study consists of six persons. Still, we succeeded in having a minimum of two persons active in the company during most of the timespan, enabling us to contrast the data provided by each person against the other, as illustrated by figure 4. The concentration of interview persons until year eight is due to an unwillingness of current board members we have been able to contact to participate in this study. This could be due to the fact that the company is in considerable difficulties at the time of this study based on the development of the share price and press coverage.

Further, to be able and contrast Fast-forward's development with the knowledge of experienced professionals. We have conducted interviews with 6 persons in order to gain insights about specific factors in the context that need to be considered when interpreting the development of Fast-forward, as well to gain a deeper insight into their perception of corporate governance and its relation to a firm's life cycle. In the table below the function of each external interview object and the purpose of the interview is described.

Interviewee	Purpose and relevance
Björn Kristiansson, executive member in the Swedish Corporate Governance Board	Insight into how the board of Swedish corporate governance thinks about lifecycles and the rationale behind the Swedish corporate governance code.
Helena Levander, Managing Director of a company assisting institutional owners and boards of directors in corporate governance issues. Experience from several board positions.	Insight into how a company specialised in corporate governance related issues thinks about lifecycles and the Swedish corporate governance code
Åke Flintull, Managing Consultant at Towers Watson. Expert on executive compensation.	Perspective about compensation and its link to the company's lifecycle and function as a corporate governance mechanism.
Principal at a Nordic VC-fund with over 200 MEUR under management	Perspective of a VC's thoughts about corporate governance and lifecycle theory unrelated to the case company, in particular targeted at understanding the early stages of the life cycle not covered in our quantitative sample.
IPO-advisor, Corporate Finance at large Swedish Bank	Expert perspective on the IPO process to give better perspective on how this process affects the corporate governance of companies.
Founding CEO and majority owner of listed midcap company	CEO of a listed company to gain knowledge of his reasoning concerning corporate governance and its connection to life cycles. A different perspective on corporate governance on a listed firm.

Table 13: Description of external interview persons

3.3.4 Interview structure

The interviews were conducted in November 2012 and ranged from 30 minutes to 80 minutes with an average interview time of 48 minutes. Concerning the interview objects of the case company, separate interview questions were prepared for each interview object due to that the role and time period each person were active in Fast-forward differed. However, all questionnaires included a main template of questions related to the development of corporate governance to be able and identify patterns in the data collected from the interview objects. The interview format outlined is best described as semi-structured (Merriam, 1994, p. 88) due to that our questionnaires set the main frame for the interview, but we urged the interview objects to disclose their perception of Fast-forwards development before going into more detail. This interview format was deemed adequate for the purpose of our study. Our aim with each interview was to understand the interview object's perception and reasoning behind the development of the corporate governance in the case company, while ascertaining that the data collected was relevant for our study.

With regard to the external interview objects separate interview questions were prepared for each interview to accommodate their role and expertise, as well as to the purpose of the interviews. However, all questionnaires connected to the external interview objects also included a main template of questions related to the developments of corporate

governance across a firm's life cycle stage. A semi-structured approach as described in the previous paragraph was adapted as an interview format for our external interviews. However, rather than focusing on the development of corporate governance on Fast-forward, we were curious in the relation between firm life cycles and firms in general.

3.4 Validity and reliability

In this section, we seek to transparently show the trade-offs we have taken with respect to reliability and validity and which consequences those trade-offs have led to. With validity, we mean the degree to which the concepts, definitions and methods we utilise in our study measure what they are purported to measure. With reliability, we refer to consistency and the degree to which one can replicate our study and arrive at the same conclusions.

One note on the research design used, when adopting a methodology that combines both qualitative and quantitative approaches, it is of importance to acknowledge that there may be a disjuncture between the two approaches and especially when the two approaches are adapted in tandem the potential for unanticipated findings are multiplied (Bryman, 2006).

Our study relies heavily on the use of a notion of firm life cycle theory that although prevalent in many uses in literature, lacks a well-defined definition as well as a methodology. Thus, there could be other methods that would have stronger predictive power than those we have chosen (AR, 1992; Dickinson, 2011).

3.4.1 Qualitative study

Validity

Design of questionnaire, did we ask the right questions that could help us answer the hypothesis? Potentially, this could have led us to incorrect inferences. Nonetheless, we based our questionnaires on the theoretical framework and adapted them from interview to interview to include improvements and other perspectives that came up during the previous interviews.

Reliability

The chosen case company may not be representative for the development of corporate governance in firms. Fast-forward is a new economy firm that has progressed far quicker through the life cycle stages than literature prescribes. This may cause us to draw the wrong conclusions; however the quick progression across its life cycle also makes it an interesting study object. Further, a comparative qualitative case study would have been able to contrast differences and identify patterns, but unfortunately the time perspective for this study has been a limiting factor in this aspect.

3.4.2 Quantitative study

Validity:

Choice of sample, time period, variables, and statistical methods may all affect the end-results. The driver in our decision process around these issues has been relevance – e.g. which factors are we interested in? In short, as we are not conducting this study to conclude with estimations based on a model, rather, we are concerned with how variables affect corporate governance. This is indeed a rougher approach.

Choice of *sample* consisting of listed firms may not cover all of the life cycle stages. Start-ups are rarely listed immediately. However, we consider the chosen sample to be sufficiently diverse to capture important transitions in the firm's life cycle. Choice of *time* period could put our findings at a risk from two perspectives. First, it could be that trends in corporate governance relate differently to life cycle stages over time. Second, the life cycle segmentation is subject to business cycles. To mitigate this effect, we have smoothed out the life cycle results over three years using the median while ensuring that the sample is not reduced due to data availability.

When collecting data based on both the theoretical framework and data availability, we have taken a stance with respect to which *corporate governance* and *control variables* to include. Further, we have, in several cases, taken the variables as proxy for e.g. monitoring. This leads us to a situation where we stand at risk for conclusions biased by wrongly defined variables and / or proxies. Regarding our choice to omit options from the compensation package, it is possible that the inclusion of options would alter the results. Since we are mainly concerned with how incentive systems differ across life cycles, we argue that LTIP and CEO ownership capture some of the same effects that options would have had if they were included.

The choice of statistical method, in particular regarding a strategy strongly resembling *backward stepwise regressions*, can distort the results through the final selection of variables in the reduced model. Despite potential issues with interpretation, we emphasise that the choice of independent variables was made based on their use in previous research. As such, we do not believe that we are starting out with a flawed model. In this light, backward stepwise regressions can contribute to the refinement of a model with variables that have stronger predictive power[30].

In the case of *outliers*, we opted to include rather unusual observations that were not due to erroneous data on the premise that even outliers contain valuable information. Consequently, this may blur the magnitude of the coefficients in the regressions, but not likely the sign of the coefficients.

Reliability

With respect to data quality, seen as we have been going through 222 annual reports from the financial year 2011 on corporate governance mechanisms and relied heavily on Orbis database, there might be manual mistakes in typing and extracting the data. To the extent it has been feasible; we have taken random tests and checked for accuracy. Yet, inaccuracies may still occur.

Ideally, we should have checked for trends in the data, both when it comes to the development of corporate governance and when it comes to the segmentation of firms. It is likely that economic downturns affect the results of the segmentation, in particular as the Swedish economy has went through some highly volatile years. This is a general weakness with cross-sectional studies. Nonetheless, we argue that given the diversity of the sample firms, we would still capture valuable aspects of the life cycle of the firm. Thereby, we should be able to draw conclusions regarding the hypothesis.

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[30] Course: Decision forecasting (411), class on "Stepwise and all-possible-regressions", Duke University, http://people.duke.edu/~rnau/regstep.htm, retrieved Dec 3, 2012.

There could also be an impact of different accounting standards with respect to the life cycle methodologies used. For instance, AR (1992) is built on US data from the 1980s with less emphasis on mark-to-market accounting. Potentially, it could be other accounting variables that would be more relevant than those included in AR's (1992) study.

4. Empirical research and analysis

4.1 Quantitative analysis

4.1.1 Means of corporate governance measures across life cycle stages

The purpose of the test of means across the life cycle groups is to see whether there are any substantial differences. This could be taken as an indication that the use of corporate governance differs across the life cycle phases. Test of means using ANOVA will not allow for the interpretation of the means, only that they are statistically different. Interpretation of how the life cycle variables affect corporate governance, e.g. in which direction, is a discussion that is taken in the analysis of the results from the regressions.

IV \ DV	1) size_bod	2) freq.	3) pr_ind	4) pr_ind_own	5) pr_ind:mgmt	6) * ceo_membe	7) fix_tot	8) var_tot	9) pens_tot	10) ltip_tot	11) ceo_own
Growth	6.64	12.09	0.64	0.70	0.80	0.55	0.68	0.16	0.15	0.01	0.05
Growth/Mature	7.08	11.06	0.61	0.70	0.81	0.36	0.67	0.17	0.14	0.02	0.05
Mature	7.25	10.63	0.64	0.77	0.81	0.44	0.67	0.12	0.20	0.01	0.03
Mature/Stagnant	7.22	11.48	0.61	0.74	0.76	0.38	0.67	0.10	0.20	0.02	0.03
Stagnant	8.40	9.60	0.59	0.78	0.75	0.49	0.61	0.15	0.22	0.03	0.01
Significance	**0.01**	0.17	0.67	0.18	0.37	0.55	0.21	0.23	**0.01**	0.88	0.57
Bartlett	0.40	0.01	0.62	0.03	0.01	n.a.	0.40	0.08	0.11	0.00	0.04
Levene	0.28	0.04	0.63	0.09	0.26	n.a.	0.40	0.00	0.93	0.33	0.16

*Table 14: ANOVA results using AR's methodology as IV[31]. * indicates Chi-square test.*

IV \ DV	1) size_bod	2) freq.	3) pr_ind	4) pr_ind_own	5) pr_ind:mgmt	6) * ceo_membe	7) fix_tot	8) var_tot	9) pens_tot	10) ltip_tot	11) ceo_own
Introduction	6.39	13.41	0.66	0.73	0.83	0.30	0.76	0.06	0.16	0.03	0.06
Growth	7.14	11.19	0.64	0.75	0.75	0.50	0.70	0.13	0.17	0.00	0.06
Mature	7.81	10.19	0.60	0.74	0.78	0.47	0.64	0.15	0.20	0.01	0.02
Shake-out / Decline	6.10	11.90	0.69	0.80	0.87	0.20	0.67	0.12	0.21	0.00	0.01
Significance	**0.00**	**0.01**	**0.08**	0.52	**0.06**	**0.06**	**0.00**	**0.05**	0.20	**0.05**	**0.03**
Bartlett	0.08	0.00	0.88	0.98	0.12	n.a.	0.66	0.18	0.00	0.00	0.00
Levene	0.08	0.00	0.71	0.97	0.32	n.a.	0.85	0.05	0.35	0.00	0.00

*Table 15: ANOVA results using Dickinson's methodology as IV[30]. * indicates Chi-square test.*

IV \ DV	1) size_bod	2) freq.	3) pr_ind	4) pr_ind_own	5) pr_ind:mgmt	6) * ceo_membe	7) fix_tot	8) var_tot	9) pens_tot	10) ltip_tot	11) ceo_own
Raw materials, manufacturing	7.58	10.42	0.61	0.75	0.77	0.50	0.67	0.13	0.19	0.01	0.03
Construction, real estate	7.63	11.13	0.60	0.71	0.73	0.47	0.65	0.09	0.26	0.00	0.07
Wholesale, transportation	7.44	10.44	0.58	0.71	0.74	0.36	0.70	0.09	0.20	0.00	0.04
Information, communication	6.68	11.95	0.69	0.78	0.84	0.37	0.63	0.19	0.17	0.01	0.04
Other service sector	7.54	11.28	0.62	0.76	0.83	0.31	0.66	0.13	0.19	0.01	0.02
Significance	0.13	0.44	0.12	0.59	**0.03**	0.29	0.44	**0.05**	**0.06**	0.66	0.32
Bartlett	0.13	0.04	0.19	0.00	0.03	n.a.	0.84	0.30	0.01	0.00	0.00
Levene	0.09	0.38	0.14	0.02	0.15	n.a.	0.88	0.14	0.59	0.05	0.00

*Table 16: ANOVA results using industry as IV[30]. * indicates Chi-square test.*

[31] Variable definitions DV: 1) Size of Board, 2) Frequency of board meetings, 3) Proportion independent members, 4) Proportion independent of owners, 5) Proportion independent of management, 6) CEO member of board, 7) Fixed pay in relation to total pay, 8) STI in relation to total pay, 9) Pensions in relation to total pay, 10) LTIP in relation to total pay and 11) CEO ownership stake

Board size and board meeting frequency

Both of the life cycle methodologies show a significant difference in means of the board size across the life cycle phases. There is no statistical significance for industries. From a theoretical standpoint, the significant difference in the means concerning board size for the different life cycle stages can be linked to previous research findings of Boone et al (2007) and Linck et al (2008) that the board size increase with the size of the company. Based on their findings, one can argue that mature firms often are larger in size than introduction/growth firms (see also Appendix F). Discrepancies in board size between the different life cycle stages seem to be a valid result.

Further, the ANOVA indicate that the board meeting frequency is statistically significant for the life cycle segmentation when using Dickinson's (2011) methodology. However, this result should be interpreted with caution as both Bartlett and Levene's tests reject the null hypothesis of equal variance, an important assumption for ANOVA. Having acknowledged this problem, there is still a theoretical link to the discrepancy in the board meeting frequency between life cycle stages. If the frequency of board meetings serves as a proxy for monitoring performed by the board in accordance with Vafeas' (1999) reasoning, the discrepancy can be put in relation to Filatotchev et al.'s (2006) framework concerning different life cycle stages requiring varying amount of monitoring. Another explanation may be that firms in the start-up and growth phases develop more unpredictably than mature companies, necessitating a higher need for strategy and resource functions that eventually results in a higher frequency of board meetings for firms in an early stage of the life cycle (Filatotchev et al. 2006).

Board composition

Concerning the fraction of independent directors both in relation to the company/management and majority owners, the ANOVA results show a significant difference in the means between different life cycle stages based on Dickinson (2011). This result could be explained by Filatotchev's (2006) framework by reasoning that as a firm progress toward maturity; this also increases the need for monitoring. Independent directors are acknowledged to be more effective at monitoring (Weisbach, 1988; Faleye, 2011), contributing to the link to principal-agent theory. A similar line of arguments could be led for the significance of the independence to management as well as CEO membership. In the latter case, the absence of the CEO on the board should render the board more effective at monitoring management.

Further, we find a statistical significance between firms in different industries for the fraction of directors independent to the management. The result that industry affect the board composition can be compared with findings by Coles (2008) that complex firms with higher advising requirements have more independent directors in the board, as well as with Boone et al (2007) finding that the board structure is a reflection of the firms competitive environment. Moreover, Lehn et al (2009) find empirical evidence that firm size, growth opportunities, merger activity and geographical expansion are significant determinants of the size and composition of boards, factors that could be argued to be industry related. Thus, it seems probable that there is a difference in means across the life cycle stages.

Incentive systems and CEO ownership

We find a significant difference between means for a variety of components of the incentive system; pensions for AR, variable pay and pensions for the industry classification, fixed, variable (STI) and LTIP and CEO ownership for Dickinson's methodology. For Dickinson, both LTIP and CEO ownership should be interpreted

with care, as they do not fulfil the assumption of equal variance, leaving the way open for misinterpreting and overstating a potential significant difference in means.

That there is a significant difference in means across life cycle stages for fixed, variable pay and pensions can be related to Filatotchev & Allcock's (2010) reasoning in the sense that the incentive system of the CEO needs to be aligned with the context and circumstances of the company. For example, one could argue that a firm in an early stage may not have the same resources to pay pensions to the CEO, but rather wants a large fraction of the CEO compensation to consist of STI or LTIP to align the agent with the principal's objective to grow the firm. Similar arguments can be led for fixed pay.

4.1.2 Results from regressions incorporating control variables

The purpose of the regressions[32] is to see how life cycles, in the presence of control variables, affect the corporate governance mechanism in question. The reduced model regressions are found on pp. 45-46, and the full model regressions are found in Appendix H. Note that in the following section, we will refer to both the AR and Dickinson models for the respective regressions using the different life cycle methodologies.

Board size and board meeting frequency

The regression results of both the reduced AR model and the reduced Dickinson model show a significant positive relationship between board size and our proxies for firm size (market cap and employees for Dickinson and sales for AR). As explained in the section on the Swedish context, firms with more than 1,000 employees can have up to three employee representatives in the board, supporting the roles of number of employees on board size. That the board size increases with the size of the company, meaning market cap, is in line with Boone et al (2007) and Linck et al (2008). It is also quite intuitive that the older the firm, the more likely it is that the firm is perceived to be mature, explaining why age and years since IPO contributes positively to the size of the board. For the Dickinson regressions, it is interesting to note that both age and years since IPO both are significant. When it comes to years since IPO, our findings are comparable to Boone et al (2007) in the sense that time since listing tends to correlate positively with size of board.

When using Dickinson's life cycle methodology, we find that mature firms have fewer meetings than firms in introduction phase. This contradicts with literature: Vafeas (1999) treats frequency of board meetings as a proxy for monitoring by the board. Filatotchev et al. (2006) postulate that the need for the monitoring function is stronger for mature firms than growth firms. From this perspective, our findings contradict with what we hypothesized. As an alternative explanation, it can also be argued that firms in introduction operate in a high velocity environment (Filatotchev et al. 2006), thus requiring more input from the board in the form of resources and strategy. In this view, it seems probable that board in introduction phases meet more often than in other stages.

Furthermore, the regression results from both the AR and Dickinson models find a significant positive relation between board meeting frequency and total assets and a significant negative relation between board meeting frequency and the number of

[32] Please refer to the abbreviations in appendix D concerning the variable definitions.

employees. Further, increasing volatility of the share price seems to increase meeting frequency. This result seems to be in line with previous literature since Boone et al. (2007) incorporates share price volatility as a control variable to measure cost of monitoring with respect to shares with high variances in price are thought to be more costly to monitor than others, partly because these firms tend to be operating in a more volatile environment. Moreover, boards seem to meet less frequent with time since IPO. This could be in line with the reasoning based on Filatotchev's framework (2006) that a mature firm acting in a low velocity environment with a predictable future require less time from the board than a firm active in a high velocity environment. IT and service sector firms also have boards that meet more often, potentially mirroring the high velocity environment of these industries.

Board composition

We find a negative relationship between the fraction of independent directors in relation to the both company/management and majority owners with the firm size in the form of number of employees. Further, we find that the larger the shareholding of the top shareholder, the fewer independent directors. This result is logical since a firm with one large shareholder is likely to have directors in the company's board that represent them. Moreover, from the AR regression, older firms seem to have a less independent board structure than younger firms. This could be ownership related in view of the Swedish Code only stipulating that two directors should be independent in relation to the majority owners, while only one director is permitted to be dependent on the firm/management.

When looking closer at independence versus owners, the regression results from both models show, rather intuitively, that a firm with a concentrated ownership structure tends to have fewer independent board members. Further, the regressions results of Dickinson show a positive significant relation between independence towards owners and net sales. This could be interpreted as a size effect, the smaller the company, the fewer independent directors in relation to total board size there are. There is seemingly a weak relation to life cycle's (AR) in the sense that both mature firms and stagnant firms have a higher need of independence, something that benefits the monitoring effectiveness.

For independence towards company /management, the picture is quite similar to that of independence towards both management and owners. Old firms, as well as firms with a large shareholder, have more directors that are dependent to the management. The regression results of AR and Dickinson show a significant contribution to independence from employees, indicating that firms that are large in terms of assets have a higher fraction of directors in the board that is dependent to the management, supporting the finding in the above paragraph.

Incentive systems

In both AR and Dickinson's models, firms in decline or stagnancy pay a lower proportion of fixed salary than earlier stage firms. This finding is rather unexpected since earlier stage firms are likely to have a higher proportion of other components than fixed (Filatotchev & Allcock, 2010). In addition, growth opportunities, size and ownership concentration seem to affect the proportion of fixed salary to the total incentive package. Firms in the information and communication industry rely less heavily on fixed pay.

For variable pay (STI), late stage firms rely more on variable pay than younger firms. This, in combination with the reverse effect for base salary, could imply that late stage firms incentivize management to return to growth by increasing the portion of variable

pay. In other words, from a principal agent theory, the higher weighting of variable compensation in these stages could be due to that the principal want to steer the agent into accomplishing objectives in theses stages to a higher extent that in other life cycle stages. The same reasoning holds even for the information and communication sector. Other than that, growth opportunities through Tobin's Q and the multiple EV / EBITDA show conflicting effects on variable pay. When it comes to volatility of the share, it appears that the more volatile share price the higher portion of variable pay. Both the volatility of the share and growth opportunities is indicative of the changes in the firm's environment. In other words, the higher the growth opportunities and volatility, the higher the velocity of the environment. Lehn et al. (2009) reason that firms with high growth opportunities will have a higher degree of information asymmetry. This, in turn leads to a stronger need for alignment between management and owners. We find that firms in a high velocity environment tend to pay a larger proportion of variable pay. This illustrate that the incentive systems applied differ, and supports the reasoning of Filatotchev & Allock (2010) in the sense that the incentive systems should be applied based on the firms' context and specific situation

From both models (AR and Dickinson), the main driver for pensions is seemingly the age of the firm. The older the firm, the higher is the fraction of pensions. There is a less significant and positive effect from ownership concentration by the six largest shareholders. The AR model shows that a higher growth opportunity through the multiple EV /EBITDA leads to a higher fraction of pensions. This result could be explained by older firm seeking a CEO with more experience than a firm in its inception resulting in that the experienced CEO want to be compensated to a larger extent with pension payments. The reasoning concerning the competence of the CEO and the CEO's preference for pension payments could also be applied to explain the relation between firms with a high EV/EBITDA has a higher fraction of pension in the CEO compensation.

We have chosen to put little emphasis on LTIP, the reason being the limited number of observations, poor data quality and low R^2 score[33]. More importantly, the AR-model fails to pass the F-test with the null hypothesis that the coefficients are different from zero. As LTIP deals with equity-incentives, we have chosen to include CEO ownership as a proxy. We find a weak relationship between firms in shake-out/decline in Dickinson's model and CEO ownership. It is intuitive that CEO's in early stage firms (introduction) have a higher ownership stake than late stage firms. Further, from both models, number of employees and the holdings of the largest shareholder affect the ownership of the CEO. For the variable ownership concentration, it is likely that it is not entirely independent of the dependent variable (CEO ownership. As such, we would rather emphasize the negative effect from number of employees. Smaller firms tend to have CEO's with a higher ownership stake, something that could be a parallel to life cycle theory. After all, early stage firms are, in median terms younger (Appendix F) and also relies more on equity-pay, contributing to CEO ownership.

[33] R^2 is a measure of how well fitted the model is to the sample.

4.1.3 Size, frequency, board composition and incentives over the life cycle

Briefly summarised, we find that the methodologies used for classifying firms into life cycles do not provide a clear link to corporate governance in its own right. We note from the test of means across the phases that board size, meeting frequency, composition and incentive systems seem to differ across the phases. When tested in the regression against control variables, we find some support for life cycle aspect on corporate governance, in particular for board size, frequency and some components of the incentive systems. Several of the control variables are also likely to capture elements of the firm's life cycle.

Hypotheses	Main findings (from a life cycle perspective)
I. Size and frequency	- Larger board size in later stages of the firm's life cycle. Board size seems to be related to the size of the firm. - Less frequent meetings the later the stage. As the volatility of the firm's share price increases, the more frequent the board reconvenes.
II. Board composition	- From a life cycle perspective, weak support for proportion of directors independent of owners (AR model). - The number of employees and concentrated ownership are underlying drivers that are negatively related to the fraction of independent directors in the board.
III. Composition of incentives	- Firms in stagnancy or shake-out/decline seem to pay a higher (lower) portion of variable (fixed) pay. - The velocity of the firm's environment (measured through growth opportunities and volatility of share price) plays a dominant role for the composition of the incentive package.

Table 17: Overview findings from quantitative study

Table 18: Regression results reduced model using Anthony & Ramesh's (1992) methodology. Please refer to Appendix D for description of variables.

Reduced model	1)	2)	3)	4)	5)	6) (logit)	7)	8)	9)	10)	11)
IV \ DV	size_bod	frequency	pr_ind_ind	pr_ind_own	pr_ind_mgmt	ceo_member of board	fix_tot	var_tot	pens_tot	ltip_tot	ceo_own
a) AR_1	0.35	-0.91	-0.01	0.01	0.03	-0.86	-0.03	0.07	-0.01	0.00	0.00
b) AR_2	0.22	-0.19	0.06	0.09 (*)	0.06	-0.70	-0.02	0.03	0.01	0.00	-0.01
c) AR_3	0.41	0.83	0.00	0.04	0.01	-0.97	-0.02	0.03	0.03	0.00	-0.02
d) AR_4	0.95 (**)	-0.82	0.05	0.10 (*)	0.04	-1.00	-0.06 (*)	0.08 (*)	0.03	0.00	-0.02
e) ind_1	-0.21	0.95	0.01	0.06	0.04		-0.03	0.04			
f) ind_2	-1.04 (**)	(omitted)	(omitted)	(omitted)	(omitted)		(omitted)	(omitted)			
g) ind_3	-0.23	0.18	0.03	0.07	0.05		-0.01	-0.01			
h)ind_4	-0.36	3.06 (*)	0.09 (*)	0.13 (**)	0.10 (**)		-0.10 (**)	0.09 (**)			
i) ind_5	(omitted)	3.07	0.05	0.11	0.12 (**)		-0.02	0.00			
j) log_tobin							-0.06 (***)	0.08 (***)			
k) log_evebitda								-0.04 (**)	0.03 (**)	-0.01 (*)	
l) log_marketCap										0.01 (*)	
m) log_assets	0.31 (**)	1.14 (***)				0.33 (***)	-0.03 (***)	0.03 (***)			
n) log_sales	0.38 (***)			0.04 (**)						-0.01 (*)	
o) log_employees		-0.79 (***)	-0.02 (***)	-0.03 (*)	-0.02 (***)						-0.01 (***)
p) log_volatility		4.09 (***)						0.07 (*)			
q) log_top1			-0.07 (***)	-0.06 (***)	-0.03 (*)		0.04 (**)				0.03 (***)
r) log_top3											
s) log_top6							-0.06 (**)		0.02 (*)		
t) log_age			-0.04 (**)			0.40 (*)		-0.04 (**)	0.02 (**)		
u) log_ipo	0.40 (***)	-1.05 (**)			-0.04 (**)						
_constant	-3.74	4.58	0.73 (***)	0.16	0.87 (***)	-5.71 (***)	1.25 (***)	-0.14	0.06	0.03	0.18 (***)
Prob > F	0.00	0.00	0.00	0.00	0.00	0.00 Prob > chi2	0.00	0.00	0.00	0.53	0.00
R2	0.55	0.17	0.27	0.13	0.18	0.11 Pseudo R2	0.28	0.34	0.13	0.03	0.12
Adj R2	0.53	0.11	0.23	0.08	0.13	n.a.	0.23	0.28	0.09	-0.01	0.10

Significance level: (***) = 99%, (**) = 95%, (*) = 90%

Variable definitions DV: Variable definitions DV: 1) Size of Board, 2) Frequency of board meetings, 3) Proportion independent members, 4) Proportion independent of owners, 5) Proportion independent of mgmt, 6) CEO member of board, 7) Fixed pay in relatino to total pay, 8) STI in relation to total pay, 9) Pensions in relation to total pay, 10) LTIP in relation to total pay and 11) CEO ownership stake

Variable definitions IV: a) Growth/ Mature, b) Mature, c) Mature/ Stagnant, d) Stagnant, e) Rawmaterials, manufacturing, f) Construction, real estate, g) Wholesale, transportation, h) Information, communication, i) Other service sector, j) log Tobin's Q (2011), k) log EV / EBITDA (2011), l) log Market Capitalisation (2011), m) log Total assets (2011), n) log Net Sales (2011), o) log Number of employees, p) log Equity price volatility last 360 days, q) log Holdings largest shareholder, r) log Holdings three largest shareholders, s) log Holdings six largest shareholders, t) log Age and u) log Years since IPO

Table 19: Regression results reduced model using Dickinson's (2011) methodology. Please refer to Appendix D for description of variables.

Reduced model	1)	2)	3)	4)	5)	6) (logit)	7)	8)	9)	10)	11)
IV \ DV	size_bod	frequency	pr_ind_ind	pr_ind_own	pr_ind_mgmt	ceo_member of board	fix_tot	var_tot	pens_tot	ltip_tot	ceo_own
a) DI_1	-0.32	-2.58 (*)	0.01	-0.01	-0.04	0.15	0.00	0.05	-0.02	-0.03 (**)	0.02
b) DI_2	-0.55	-3.46 (***)	-0.02	-0.05	-0.02	0.13	-0.04	0.00	0.02	-0.01	-0.01
c) DI_34	-0.45	-1.29	0.02	0.06	0.03	-0.60	-0.10 (**)	0.11 (*)	0.04	-0.03 (**)	-0.05 (*)
d) ind_1		0.83		0.03	0.03		-0.03	0.06	-0.02		
e) ind_2		(omitted)		(omitted)	(omitted)		(omitted)	(omitted)	0.06 (*)		
f) ind_3		0.66		0.02	0.03		0.00	0.01	(omitted)		
g) ind_4		3.68 (**)		0.11 (**)	0.09 (*)		-0.08 (*)	0.13 (***)	-0.03		
h) ind_5		3.04 (*)		0.06	0.10 (*)		-0.01	0.03	-0.01		
i) log_tobin			0.04 (**)				-0.06 (***)	0.10 (***)			
j) log_evebitda								-0.05 (***)			
k) log_marketCap	0.28 (***)									0.00 (*)	
l) log_assets		1.11 (***)				0.36 (***)	-0.03 (***)	0.03 (***)			
m) log_sales				0.02 (***)						0.00 (*)	
n) log_employees	0.45 (***)	-0.65 (**)	-0.03 (***)		-0.01 (**)						-0.01 (***)
o) log_volatility		2.58 (**)						0.08 (*)			
p) log_top1			-0.06 (***)	-0.06 (***)	-0.03 (*)		0.04 (**)				0.03 (***)
q) log_top3											
r) log_top6							-0.07 (**)		0.02 (*)		
s) log_age	0.37 (***)				-0.03 (**)			-0.02 (*)	0.03 (***)		
t) log_ipo	0.27 (*)	-0.97 (*)									
_constant	-1.08	5.00	0.69 (***)	0.34 (***)	0.91 (***)	-5.56 (***)	1.27 (***)	-0.21 (*)	0.11 (***)	0.03	0.17 (***)
Prob > F	0.00	0.00	0.00	0.01	0.00	0.00 Prob > chi2	0.00	0.00	0.00	0.04	0.00
R2	0.55	0.19	0.23	0.11	0.18	0.10 Pseudo R2	0.30	0.35	0.15	0.06	0.15
Adj R2	0.54	0.14	0.21	0.07	0.13	n.a.	0.25	0.30	0.11	0.03	0.13

Significance level: (***) = 99%, (**) = 95%, (*) = 90%

Variable definitions DV: Variable definitions DV: 1) Size of Board, 2) Frequency of board meetings, 3) Proportion independent members, 4) Proportion independent of owners, 5) Proportion independent of mgmt, 6) CEO member of board, 7) Fixed pay in relatino to total pay, 8) STI in relation to total pay, 9) Pensions in relation to total pay, 10) LTIP in relation to total pay and 11) CEO ownership stake

Variable definitions IV: a) Growth b) Mature, c) Mature d) Combined shake-out and decline (due to few observations in decline) d) Rawmaterials, manufacturing, e) Construction, real estate, f) Wholesale, transportation, g) Information, communication, h) Other service sector, i) log Tobin's Q (2011), j) log EV / EBITDA (2011), k) log Market Capitalisation (2011), l) log Total assets (2011), m) log Net Sales (2011), n) log Number of employees, o) log Equity price volatility last 360 days, p) log Holdings largest shareholder, q) log Holdings three largest shareholders, r) log Holdings six largest shareholders, s) log Age and t) log Years since IPO

4.2 Qualitative study – case background

This section contains information regarding the case company and perspectives provided by external practitioners that will be contrasted to the findings in the case company. We will then provide the analysis of how corporate governance in the case firm evolved over time in section 4.3.

4.2.1 Description - Fast-forward Corporation

In the end of the 1990s, two entrepreneurs backed by venture capital founded the case company. We have rendered the company anonymous, and will henceforth refer to it as "Fast-forward" in our thesis. The case company, active in the fast-moving IT/Media-industry, had an innovative technological solution monetising on the increasing Internet usage at the time. The market of Fast-forward's technological solution was in its inception when the case company started and has grown rapidly since then to become an established solution today. Fast-forward succeeded to become the market leader in Europe through an extreme growth over a number of years. After approximately five years, Fast-forward made a successful IPO. The ownership structure changed from consisting of active owners in the form of venture capital firms and founders to passive owners consisting of large pension and mutual funds approximately six months after the lock-up period. Post-IPO, the stock price of Fast-forward developed in a positive direction.

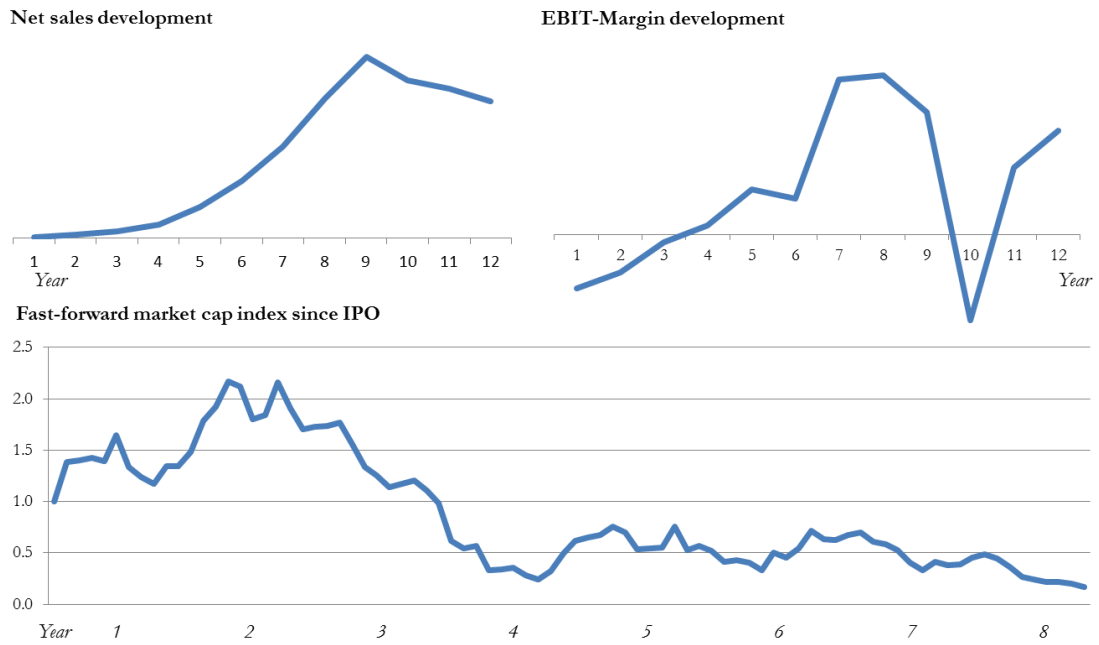

Chart 1: Overview development in sales, EBIT margin and share price development. All figures in relative terms and without actual vertical axes to not disclose the name of the case company.

Some time after the IPO, rumours saying that a Foreign Industrial player was in negotiations with Fast-forward to buy the company surfaced. Consequently, the stock price rose sharply. The board and management recommended all shareholders to accept the bid when the offer finally became public. However, a pension fund changed its position concerning the bid and acquired more shares to increase its voting power and also managed to convince other pension and mutual funds to vote against the bid. This resulted in a rejection of the offer and the bidder decided to withdraw from the negotiations.

In the aftermath of the rejected offer, Fast-forward took the decision to acquire a company in a new, rapidly growing segment in the market. This was a dire decision; shortly after the acquisition, competitor's actions and changed consumer patterns transformed the industry. As a result, Fast-forward entered a turbulent period that was characterised by top management and board members leaving the firm. It subsequently led to a weakening performance and a declining share price. Thereafter, the strategy of the company has been oriented towards getting back on the growth track and also took actions to improve profitability by cutting costs. However, the macroeconomic development was not favourable. Moreover, the competition toughened and Fast-forward saw a downward pressure on the prices of its products. Needless to say, it affected the company's stock and underlying financials.

Development of board composition, ownership structure and financials

The board composition of the case company, from the start until it became listed, consisted of representatives from venture capitalists, the angel investor, the entrepreneur, the external CEO and an independent chairman. The same year as the IPO, a new chairman with experience from listed companies was appointed, as well as an independent board member with a background in audit. Post-IPO, the board composition has slowly shifted toward a board consisting only of independent directors, as the external investors disappeared from the picture as they divested their shares. A couple of years later, the entrepreneur also left the board. The board composition post-IPO was quite stable until after the rejected bid, after which the case company suffered from a discontinuity of board members. The only person in the current board with operational experience from Fast-forward is the external CEO that was recruited in the beginning of Fast-forward's development. He has been a board member ever since he started his career at Fast-forward, even after he resigned from his executive position shortly after the rejected bid[34].

The chairman of Fast-forward at the time of the IPO stepped down a short period after the rejected bid. His successor was forced to resign only six months after the appointment due to his involvement in a scandal not related to Fast-forward. A new chairman was instated, and he currently holds the chair position. Further, the case company has changed CEO three times since the rejected bid. Approximately two years has been the longest duration a CEO has held during these years.

The ownership structure also changed from consisting of mainly active investors and founders until the IPO to a dispersed ownership structure with a few institutional investors in the form of pension funds and mutual funds of large Swedish banks after the IPO (see Appendix B). The change in the ownership structure post-IPO altered the composition of the nomination committee that is responsible for electing the board. Nowadays, it only consist of representatives from institutional owners such as pension funds and mutual funds of large Swedish banks and the chairman of the board of Fast-forward, who is elected by the same nomination committee. The current composition is a stark contrast to the concentrated shareholding of active investors and founders in the early stage of Fast-forward before the IPO, a contrast that is also visible in the nomination committee (Appendix B).

The financial performance of Fast-forward grew rapidly until the rejected bid. Thereafter, sales stagnated. The EBIT-margin dropped heavily after the rejected bid, but has in

[34] The CEO clearly stated prior to the bid that he would not stay on in any case for much longer.

recent years recovered. The share price is currently roughly 20 per cent of the original price at listing.

4.2.2 Practitioners' view on corporate governance in Sweden

Early stage – Venture Capital representatives on the board

The principal at the Nordic VC firm henceforth referred to as the principal, account for the fact that an exit is always in focus from a VC firm's perspective. Hence, a board director representing the VC investor in a portfolio company will focus on that the company in question has the best value development possible. Further, he accentuates that since a VC fund generally has a maximum life span of 10 years the exit usually become more pronounced as the fund matures. In addition to the financial resources a VC investor provides, the principal adds that the VC often serves as a source of knowledge as well.

Further, the principal reveals that the most time consuming part of their involvement in the portfolio company's board is in the beginning. It takes time to get the structures and interpersonal connections in place that allows for an efficient collaboration. The principal accentuates that as a VC representative in a portfolio company's board of directors it is important to challenge the top management of the company and ensure that the company is managed in the best possible way and have an appropriate strategic focus. If the board does not possess the necessary knowledge to support management, outside directors with the required expertise in a certain area is recruited. The principal also draw a clear demarcation that the VC act only through the board and not operationally in portfolio companies and this is considered the norm for the industry.

Board size and composition

Concerning the board size the principal states that it often grows in size as the company develops, but that five directors is common and that a larger size is usually not preferred. He also points out that it is important to have independent outside directors on the board in order to be able to have an unbiased point of view as opposed to the VC investor and entrepreneurs. This enables the independent outside directors to act as an intermediary in conflicts of interest between owners. VC financed companies often have refinancing rounds every 12/24 month. If the entrepreneurs do not invest more funds in the company, their ownership stake is diluted. As the entrepreneur is the one that often drives the company forward, it is important that the entrepreneur do not get too diluted so that he loses his incitement to grow the company. Furthermore it is of great importance that all investors in the board have the same time horizon for their involvement in the company. This is often related to where each fund is positioned in their fund's life span. As goal congruence is crucial in value creation, it is critical that the board and company are aligned over the whole predicted time horizon, the principal explains.

Internal control

As to the internal control related aspects of corporate governance the principal points out the importance of having an external audit of the company as an independent control function in combination with customised internal controls to the each portfolio company in question. KPI's is for example one way of capturing certain control aspects, but in reality the principal points out that they do not really have such a large focus on internal control. However, the principal stresses the importance the financial reporting has for control purposes and that a VC firm always goes through financial reports before investing. According to the principal, the board of the portfolio companies often meet

every month. Additionally, the investment contract between the company and the VC has many protective rights that control the risk of the VC fund. The investment contract is however more of a protection for the VC and is seldom used as a mechanism to pressure the portfolio company in question. However, it usually contains clauses granting the VC the power to veto board decisions illustrating the dominant position a VC have in a board. To limit our study we acknowledge that investment contracts is an important factor to consider, but we will not go into more depth concerning the role these contracts have in venture backed companies' corporate governance other than highlighting their importance.

Incentives

The principal accentuates that option plans for the top management is a must-have in portfolio companies. Further, it is important that the entrepreneurs have a large equity stake in the beginning and do not become too diluted as the company develops since their commitment is crucial to build the company. Hence, to achieve a good exit the VC needs to have the entrepreneurs on board: "The VC is dependent on the fact that the entrepreneur is on board to realise a good exit."

The principal further stresses that key employees also need to have the right incentives in place. In cases where key employees or entrepreneurs have become too diluted, the VC's often re-incentivise the key persons with for example options to align their goals with that of the VC-firm. The commitment of key employees/entrepreneurs is further cemented through vesting periods and clauses stipulating under which circumstances the options exercise.

4.2.3 From private to public – internal and external requirements

Corporate governance from an advisor's perspective

The IPO-advisor interviewed states that an IPO is generally an event that a company prepare a year in advance. Corporate governance related factors take the most time to prepare in order for the company to be able and meet the requirements of the listed market and the Code. Hence, the company need to find and appoint directors with experience from listed companies, a time-consuming process. According to the IPO-advisor well renowned names in the board is always a factor that is attractive from an investor perspective since its signal quality and their experience are viewed to contribute to the management of the company.

The quality of top management, incentive systems and owner structure is also of importance to investors, according to the IPO-advisor. Considering the change in ownership that entails an IPO, the IPO-advisor states that normally, approximately 50 per cent of the company is sold in the IPO. For the remaining anchor investors such as the entrepreneurs and early investors, it is common with a lock-up period of 6-12 months to assure new investors that these are committed. New investors fear the old ones will sell everything on the first day of trading. Traditional buyers in IPO's are mutual funds. The IPO stresses the importance of ensuring a good liquidity of the stock, by having as many owners as possible in the company once it is public. Additionally, the IPO-advisor's bank commits to have equity analysts covering the share post-IPO to increase the liquidity.

The IPO-advisor states that an IPO demand the company to adapt to the requirements of the public markets, which result in a formalisation of the corporate governance of the company in comparison to a private company. Among other things, a company that

pursues an IPO need to prepare corporate governance structures, prepare the accounting department for quarterly reporting, set up an investor relations team and prepare top management to the new context and expectations that awaits them in the public market.

Corporate governance development in a private company gone public

We also undertook an interview with another publicly listed firm to be able to contrast it to that of Fast-forward. In this company, the founder is still the CEO and majority owner, making it somewhat of a special case. When this firm turned public, it did not result in an ownership change similar to the one seen in the case of Fast-forward.

The CEO account for that the shift from private to public strongly affected the firm's corporate governance. In particular, as it changed its organisational form from a limited partnership to a public limited company, the board needed to follow the requirements of the Swedish Company Act as well as fulfilling the requirements of the public market. This led to changes in the board composition and the role of the board. The ownership structure remained stable. Concerning the application of the Code the CEO comments that they deviate when they view it as necessary and that the Code should never be a cost for the company. Another important regulatory change was the application of IFRS in 2005, which is a change that has simplified the decision making of the board since the requirement to value the company's assets to market value give a better understanding of the assets to debt relation and the value of financial instruments according to the CEO.

The CEO describes that his position as both majority owner and CEO reduce the power of the board in relation to its CEO. However, the advantage is that the board does not need to discuss incentive systems and principal-agent issues as the CEO has strong owner interests, the CEO add. The CEO comments that his role as CEO has shifted from being very operational in the beginning to becoming more strategic nowadays.

Concerning the board composition, the CEO stresses that it is of great importance to have board members that has extensive industry experience and that continuity in the board is critical since board members gain more experience of the company over time. Further, the CEO claims that discussions in the board become very theoretical if board members lack industrial experience. Hence, he believes that the primary quality of a board member is to have a deep understanding of the core business of the company.

Further, the CEO argues that companies of different sizes require different corporate governance. For example, a company with 10 billion SEK in assets cannot have the same governance as a company with 20 billion SEK in assets, the CEO states. For a successful growth company, the board need to make sure that the company do not run away without implementing adequate control systems, e.g. appropriate accounting systems. A board in a company with rapid growth needs to understand the risks involved and decide which limits are acceptable.

The corporate governance context of public companies

The Swedish corporate governance code was implemented in 2005 following mistrust among the public towards the listed companies going through scandals at the time of the IT-bubble. Although Mr Kristiansson says he do not think investors base their investment decision on a firm's specific corporate governance, investors do consider the general perception towards the country's reputation for delivering good corporate governance principles. The latter is more prevalent for international investors with limited local knowledge.

Concerning investors' investment decision Ms Levander thinks that corporate governance is considered and that corporate governance has become more important today. Ownership structure, board composition, internal control and incentive systems etc. is important she states. Additionally, she also reasons that investors today have understood the detrimental value effect from crises related to CSR, ethics and sustainability. In effect, firms care for good corporate governance.

"The Code is written with the intent to encompass all categories of listed companies", Mr Kristiansson states. The Code is self-regulatory and based on the principle – "follow or explain". In this sense, small companies are able to deviate from procedures that are more targeted towards large listed companies, he reasons. Ms Levander shares this opinion. However, she thinks that companies follow the Code too stringently, especially small cap companies. She thinks that companies should dare to deviate and motivate this because it is both better for the company and also allows for new perspectives and a development of the Swedish Corporate governance practices.

Concerning the discussion of insiders and outsiders, the Swedish model differs from the Anglo-Saxon system with respect to Swedish board members being elected by the owners through a nomination committee. In the UK, the residing board appoint new board members. Hence, the corporate governance in the Anglo-Saxon countries as the UK has focused on including outsiders in the board in order to have an independent board. Based on this difference, Mr Kristiansson views that the requirement of independent directors in the Swedish code is not a vital issue, rather it is included because it "looks good" from an investor perspective, something that Ms Levander supports.

Mr Kristiansson does not think that the Swedish Corporate governance board includes firm life cycle perspective in the development of the Code. They (the Board) usually divide companies into small new companies and large old companies when debates on certain issues arise. The composition of the Swedish Corporate governance board is also mainly composed of representatives with experience and engagements in "large, old" listed companies and large institutional pension funds. Only one director has experience from smaller companies. This potentially affects the Code.

Ms Levander thinks corporate lifecycle plays a role in corporate governance. She supports her argument by citing an example concerning compensation policy; stockowner programs are beneficial in growth companies, while it is not obvious what the reason is in more mature companies. The reason to why this is not always wise is rooted in the potential costs of dilution for existing investors by implementing a new equity incentive program. Further, bonuses connected to milestones in growth companies are beneficial compared to more mature companies, which are harder to steer with milestones given the complexity of these organisations, she reasons. Another example in which firm life cycle matter is related to composition of the board, Ms Levander adds. Companies need to make sure that there are persons in the board with the appropriate knowledge, for example persons with experience from growth companies and "company voyages". Such experience is likely to prove valuable for companies. Further, she points out that the boards' focus on control shall always be prioritised under any circumstances because ensuring control is the boards' main responsibility. She further elaborates that it is important that the board put pressure on the CEO and states that the board "should be a little of a pain in the ass" and need to make demands if necessary. "If you are in a board you need to put down the time

required to do what is required of you." However, as a board member you need to trust that the material provided for a decision is approved and correctly verified by the auditor. Board members do not have time to control everything by themselves, Ms Levander explains.

Concerning possible future EU harmonisation of corporate governance practices, Mr Kristiansson is of the opinion that corporate governance regulation should be adapted to the culture and legal environment of the specific country, rather than adopting a "one size fit all" regulation across the EU. Ms Levander shares his belief and adds "A lot of people think the Swedish model is good and if a harmonisation leads to that good things disappear it is not desirable".

The adaption of compensation to the firm's life cycle

"As compensation often steers behaviour, one have to consider the differences in the compensation mix", Mr Flintull states. "It is about aligning the interests of the board and management", he reasons. Mr Flintull describes that compensation is composed of a fixed part encompassing base salary and retirement benefits and a variable part consisting of no-equity based short term incentives (STI) and long term incentives (LTIP). However, tax reasons often steer the compensation policy, he adds. Further, the board needs to assess the requirements of the firm– "If the company needs the best CEO on the market, it can't pay a median salary." A company needs to consider its peer group and the critical competences the CEO must have and how the salary mix should be constructed, he reasons. Compensation can be directly related to the company's lifecycle stage Mr Flintull asserts. Depending on where the firm is in its life cycle it attracts different kinds of CEO-personalities, something the company's objectives and compensation mix must reflect. Table 20 is Mr Flintull's depiction of optimal CEO compensation mixes depending on where the company is in its lifecycle.

CEO compensation mix	Introduction	Growth	Mature	Decline
Base	*	**	***	*****
STI	**	**	***	
LTI	***	***	**	
Pension		*	**	***

Table 20: Compensation mix over different life cycles as per CEO compensation expert[35].

In the introduction phase the company has little resources and want to pay little fixed salary, attracting persons willing to work for a potential high financial reward in the future. As, the company grows, its resources grows as well, allowing the company to attract talent that is not willing to take the risk of joining an introduction firm, but has the competence suitable for the firm's objectives in the growth phase. As, the company matures, it seeks a CEO that act more as a steward of the company and has experience from managing large mature companies, hence the company need to compete against other mature companies for talent resulting in a need to align the compensation mix to their peer group and the firm's objectives. In a decline phase, the company need to compensate talent with high fixed salaries in order for the CEO to take the risk of joining a company in decline according to Mr Flintull.

[35] Number of *-illustrate the importance of the salary component, where * is the lowest and ***** is the highest

4.3 Analysis - Development of Fast-forward's corporate governance

The analysis is structured according to Filatotchev et al.'s (2006) framework to capture the development of Fast-forward's corporate governance development as the company progress through the different thresholds in its life cycle. The analysis is divided into three main parts based on the thresholds specified in Filatotchev, 2006 framework; 1) Founder/IPO-threshold, 2) IPO/Maturity-threshold and 3) Maturity/Decline-threshold. In addition, we will structure the analysis by the monitoring, resource and strategy functions described in their framework (Filatotchev et al, 2006). We have opted for this structure rather than according to the hypotheses (board size, frequency; board composition and incentive system) with the reasoning that the framework is better able to capture the evolution across life cycle stages. In figure 5, events of importance for our analysis are presented in the form of a timeline for Fast-forward.

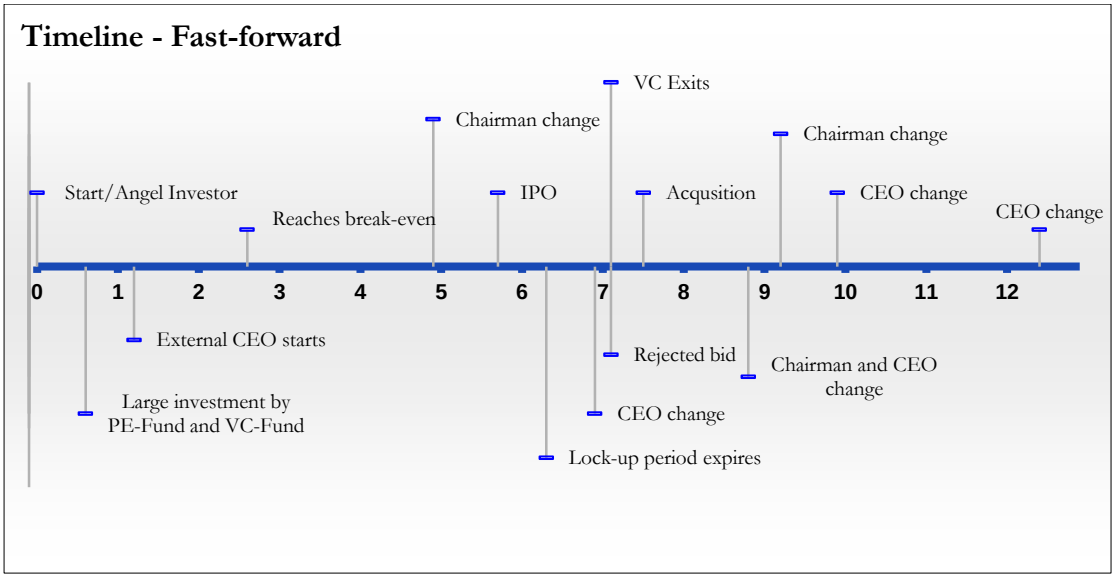

Figure: 5: Timeline - Fast-forward including major events.

4.3.1 Founder/IPO-threshold

The Founder/IPO-threshold is defined as the time period from the start until after the completion of Fast-forward's IPO. For Fast-forward, this period was characterized by high velocity in the business environment with rapid changes taking place continuously. Theory prescribes a governance objective of wealth creation that puts more emphasis on the strategy and resource functions than monitoring (Filatotchev et al, 2006). Monitoring in the early phase was characterized by how the governance structures became increasingly formalized. This is in line with Quinn & Cameron (1983). Three examples of the increased formalization is the pressure from the external investors to deliver results, the recruitment of an external chairman and CEO and the insertion of KPI's as steering mechanisms.

> *"In the beginning the board focused 90 % on the business and 10% on formalities"*
>
> Angel investor

From the start Fast-forward had an external financier in the form of a well-known Angel Investor that the company was accountable to already from the start, since the Angel investor had incentives to monitor the development of the company. The Angel investor accentuated that during the early stage the investors and entrepreneurs objectives is intertwined because both are owners in the company and both want to grow the

company. Hence, the focus is on wealth creation. Monitoring was not the primary concern as the Angel Investor points out by the above remark.

Shortly after the firm's founding, a venture capital firm and a Global PE firm injected a considerable amount in Fast-forward and the company's accountability increased towards it's investors along with the board size since all investors wanted to be able and influence their investment through the board room.

The Global PE investor adds that as Fast-forward evolved governance structures became more formalised and exemplifies with "in the beginning we helped out with things such as finding office space, as the company grew, the board focused more on strategy and control and the operational issues were delegated to management. Internal control became more formalised as the company developed." As an investor it is important to act through the board and not be operational in the company the Angel investor point out. The other investors have the same opinion and this is generally the norm according to the principal of the Nordic VC-fund that we interviewed to get an external perspective on the role VC's play.

Further, an external CEO was recruited to the company. The entrepreneur was initially also the CEO. According to the Global PE Company the entrepreneurs accepted this change in a good manner and understood the necessity of having a more experienced person as CEO in terms of increasing accountability towards the investors. According to a board member representing a VC fund, they had conditioned the investment in Fast-forward on the recruitment of an external CEO. Another VC-investor agreed that it was a good decision to hire an external CEO, as this would not mix the ownership role with the CEO position. The entrepreneur accepted, and agreed to a new role as member of the board. The angel investor agrees with this saying "it's important to separate the ownership role and operational role". It seems that this is an ordinary separation by VC's based on the information provided by a VC not engaged in Fast-forward that we interviewed.

The Angel Investor points out the importance of breaking down the business into Key Performance Indicators (KPI) in order to follow the development of the company and understand the business drivers. Both, the VC investor and Global PE investor agree concerning the importance the KPIs had as a monitoring device for the board, which enabled the board to focus on the key drivers of the business and react to deviations. The Angel investor believes that the KPI's enabled the board to focuses on breaking down the business into key drivers. This made it easier to prepare Fast-forward for an IPO. Another facilitative factor was the fact that Fast-forward early on had to be accountable to the outside investors.

Resources

Three factors contributed to the resource function. First, the board members had extensive knowledge from other firms that were brought to work in Fast-forward. Second, the board played an important role while utilising their network when recruiting the external CEO and chairman. Third, as Fast-forward moved toward listing, the board and the investors changed the board composition to include members with experience from IPO's, in line with the general recommendations put forward by the IPO advisor.
Through receiving venture-backing early, Fast-forward was able to be aggressive when the IT-industry as a whole was in the aftermath of the dotcom bubble according to one of the VC-investors. In addition to a financial resource, the VC's provided knowledge

and human capital networks to the firm in combination with the legitimacy that the Global PE-firm provided as being a prominent actor at the time. The fact that the investors had a long-term focus in alignment with that of the entrepreneurs resulted in a unison board, were all had the same goal. As the Global PE representative put it "I think Fast-forward had a really good board composition; the entrepreneur was operational and the heart and soul of Fast-forward. The board allowed for effective communication and since all directors were engaged in the company as owners and had their roles, the focus of the board was clear and unison." "The CEO and entrepreneurs were great, the chairman was extremely good and the investors were really competent and easy to work with – In short, we had a world-class team, which made everything easy" according to the VC-investor.

Further, the recruitment of the external CEO and chairman with extensive industry experience proved to be a major advantage for Fast-forward according to all interviewed. The principal of the VC fund interviewed also emphasized the importance of external and neutral intermediaries that could facilitate and mediate in case of disagreements between owners, founders and investors. According to the Global PE firm the external CEO allowed for a better structure of the corporate governance in combination with the knowledge the external CEO provided to the company. The chairman introduced the KPI system similar to the one used at his old employer. The fact that external people was attracted coincides with Lynall et al's findings (2003) in the sense that they not only gave legitimacy to the management towards potential investors, they also provided Fast-forward access to their network and resources.

As the company grew and it was decided to take the company public, new board members and a new chairman with experience from listed companies entered the board. The Global PE representative claims it was necessary to have people with experience from listed companies both due to the listing requirements by the stock exchange and the knowledge these individuals possessed about operating as a public company. According to the IPO-advisor, firms tend to start preparing for listing a year in advance and also points out that a board consisting of directors with a legitimate track record is often perceived as a sign of quality from the IPO-investors perspective. Governance related issues, such as preparing the finance department for quarterly reporting and an investor relations team all take time to prepare. The Angel investor recalls "When it was decided to take Fast-forward public, we needed to change chairman to get a person with more experience form listed companies. We also needed to refine processes and make sure that for example the compensation committee was well defined. My experience was that it was an easy transition due to that the Global PE firm had required adequate structures long before an IPO." The Global PE representative remembers that "We had to make sure that the accounting department was able to handle the quarterly reporting, so we test-ran this to ensure that the accounting department was able to fulfil the requirements of a public market and also needed to implement an investor relations function".

Strategy

As previously stated, the majority of the board's work evolved around questions related to the business. The board was heavily involved in advising and giving counsel to management. Apparently, one reason to the committed effort by the external board members is their significant ownership stake that was managed actively.

Fast-forward's business environment in the early stage were characterised by high velocity, accentuating the importance of the board to focus on the business and enabling the management to make rapid decisions to be able and respond in an adaptive manner to changes. The KPI's in Fast-forward contained much information as to what would happen during the next quarter. This predictive ability of the KPI's enabled the board to discuss issues proactively rather than reactively. Thereby, the focus was much more on strategy related questions in a proactive fashion.

The external CEO remembers that his objectives when assigned to the position were to "grow the company as fast as possible" with the assurance that "as long as Fast-forward grows, resources will be available". Gradually, as the firm became more established, the strategy turned towards "profitable growth". This objective was enhanced through incentive compensation in the form of options according to the Angel investor. The former CEO remembers, "As I performed well my position in the board became stronger and more people listened to my opinion". According to the VC investor it was of importance to provide trust to the CEO in order for him to feel that he had the board behind him in his role.

In this phase of growth, the board exhibits similar characteristics as to Huse & Zattoni's (2008) article in the sense that they exert an advising role for management. The VC investor points out: "As Fast-forward evolved the KPI's had an important role as a mechanism for the board to monitor and base decisions concerning the future strategy upon."

Observations - Founder/IPO-threshold

The phase before the IPO was characterized by strong board involvement concerning the contribution of resources and advice to management. In light of this, there was less emphasis on the monitoring function. Yet, as the organisation grew, investors gave the CEO a slightly different mandate (profitable growth) and as the firm chose to go public, the governance structures became increasingly formalized. Another example is the use of KPI's that were used not only as input to monitoring, but also to evaluation of strategy.

From a life cycle perspective the board's role has developed from focusing on business and operational issues in the beginning to gradually become more monitoring and taking strategic decisions based on aggregated information measures from the organisation in the form of KPI's. That the board is taking a more advisory role in the growth phase is in line with Huse & Zattoni's (2008) findings.

All board members interviewed in this life cycle stage gave a highly positive account of the board composition, the aligned goals between management, board and owners as well as the success the firm enjoyed. This illustrates that the right mix of resources resulted in a successful corporate governance. A related aspect of the resource function was that requirements of the public market clearly steered the appointment of the new chairman and the independent board member indicating the adaption of the corporate governance to the new context's requirements.

The preparations for the IPO and the listing itself moved Fast-forward towards the IPO-threshold. Further, the objective of the CEO to grow the company as fast as possible in combination with the VC-investors view of empowering the CEO to make sure he understand he has the board behind him, allow for the management to adapt to a high velocity environment that characterise the early stage of the firm's life cycle according to

Filatotchev et al. (2006). The CEO membership is also a sign that the CEO has an important role in the early stage of Fast-forward and since the entrepreneur is also a member of the board and operationally active in the company this result in a board composition with insiders, owners and an independent chairman. The presence of an independent chairman meant that there was a neutral intermediary between management, founders and investors; thereby fostering a fruitful relationship, in accordance with the VC principal's observation.

4.3.2 IPO/Maturity- threshold

The IPO/Maturity-threshold is defined as the time period between the IPO and the rejected bid, where the accountability requirements of Fast-forward increased due to being a listed company with many external shareholders and other stakeholders. The increased accountability to external shareholders result in a shift in governance toward a wealth protective objective, characterised by an increased importance of the monitoring function of the corporate governance, while maintaining a high focus on strategy due to that the company still act in a high velocity environment. The resource function is still important, but not as critical as in the preceding life cycle phase.

Monitoring

As mentioned, the preparations for the IPO prepared the organisation for more extensive monitoring through increased requirements, e.g. quarterly reporting and fulfilment to provide the market with accurate information. Further, the sale of Fast-forward to the Foreign Company that failed to materialize led to changes in the board composition that later seem to have altered the focus of the board's work. As the bid was ultimately rejected, the owners felt the need to go on the offensive, and consequently made an acquisition. The latter event is indicative of the profound changes to the governance structures that were accentuated by the speed with which the acquisition took place. These changes strengthened the monitoring focus and composition of the board.

"As Fast-forward transcended towards its IPO the focus shifted toward a 10 % focus on the business and 90 % on formalities, especially when the company became listed"

Angel investor

The listing of Fast-forward resulted in a shift toward a more monitoring role of the board due to the increased accountability and transparency required as a listed company with many stakeholders. One reason to why the need for monitoring increased is found in the relatively more short-term focus in the stock market with investors wanting to have the opportunity to enter and exit a stock based on the most recent information available, quarterly reports. This led the board to strengthen the focus on financial metrics, in line with Strömsten & Kraus (2012).

The shift from a board consisting of a concentrated group of majority holders with a long-term perspective, to a company with a passive ownership structure consisting of pension funds and other types of funds was a huge shift that the corporate governance of the company needed to adapt to according to the chairman at the time and the VC investor. The company also needed to comply with the corporate governance regulations and recommendations for listed companies. Viewing the board composition a year after the IPO clearly illustrates a shift from a board consisting of a majority of owners and insiders to a board with a majority of independent outsiders in relation to the company. This signal a shift in the board composition towards a focus on wealth protection and

having a majority of outsiders on the board serve as a structure to manage principal-agent related problems according to principal-agent theory.

Another effect of the listing was seen internally. The chairman at the time remembers that the listing called for a more structured way of handling the information flow. In the past, the company was very open and information was spread out in the company to boost morale and team spirit when positive news realised. As a listed company, information needed to be contained and controlled in order not to leak out share price affecting news to the wrong persons. In this way the board strengthened the internal controls concerning the information flow, which resulted in a more formalised structure in the company. Further, as a listed company it was of utmost importance that all processes related to the accounting and investor relations functioned well due to the accountability a listed company has and that the risks of the company was understood and handled in an adequate way, especially since Fast-forward grew rapidly at the time after the IPO according to the chairman at the time.

Partly as a consequence of the unsuccessful sale, the old investors sold out. The institutional owners that had blocked the sale had increased their ownership stake in Fast-forward. The institutional investors utilised their position in the nomination committee to influence the new members of the board. At the same time, the CEO chose to step down and take a place in the board. The chairman, who was convinced to stay on amid the turbulence, resigned a year later. Lacking continuity and the turbulent situation that followed with a declining share price arguably led to a shift in the focus of the board. As the business model is rather complex, it is likely that the focus shifted towards monitoring the financial results more closely than before, with the belief that the financial data would convey the same message concerning the state of Fast-forward. A former chairman recalls board members needed time to properly understand the business model.

The new owners quickly put growth back on the agenda. At the same time, the new CEO advocated an acquisition to expand the scope of the firm's business activities. Incentivised by a significant portion of options, the new CEO managed to convince the board to give a green light. The chairman recalls that the board was ultimately convinced to accept, in particular when they were afraid that Fast-forward would fall behind in the competition. It resulted in a merger of two very distinct organisations, leading to a situation that was increasingly difficult for the board to monitor.

Increased monitoring, due to both requirements of being listed and through the entry of different type of investors that by their very nature did not want to be insiders of the company, freeing up their ability to buy and sell stocks in the company. This effectively altered the discussions within the board towards a more reactive focus on (negative) events. Monitoring also affected the direction of the information flow internally in the firm. The acquisition bid led to change in investors, reinforced monitoring through an even more dispersed ownership base and use of external board members on the one hand, and on the other, lacking continuity led to limited discussions of strategy.

Concerning the new type of investors that entered Fast-forward post the listing, one of the VC investors comments that the change in ownership needs to be considered in Fast-forward's case. As the company went from having active owners out of "flesh and blood" to a passive ownership structure, it led to a more intense monitoring and board composition than before. This can be motivated by principal-agent related theory and the

fact that the passive owners view the company as an investment that they are able to exit whenever they want. Passive owners wanted to avoid being classified as insiders, something that would limit their ability to buy and sell the stock at any time. Hence, the focus shifted from a long-term perspective to a short-term perspective focused on quarterly reports, resulting in a shift towards a short-term oriented focus of the management, as well as in the board according to the VC investor. The prior chairman remembers that the accounting of Fast-forward was very conservative before the listing, but as the management later became under a higher pressure after the rejected bid and the bad acquisition, more aggressive accounting principles were promoted and it was important as a board to say no in these situations.

Resources

During this phase, the board went through significant changes in terms of its composition. This had two effects, first that the board struggled to maintain the same level of deep knowledge as before. Second, the changes, combined with the new context of being listed, implied that a different skill set was needed. Looking at the organisation, the firm also experienced the impact caused by employees exercising their options and leaving the company.

The exit by many of the active investors together with the change in board composition and top management resulted in that knowledge and expertise left the company after the IPO and after the rejected bid. According to the VC investor, there "was a generation shift in the top management, on lower levels in the company and in the ownership structure". One reason for this was connected to the incentive systems resulting in that key employees exercised their option plans post-IPO and left Fast-forward, the VC investor adds. According to the former CEO, the consequence of the resulting knowledge loss was especially negative for a complex firm as Fast-forward. The former CEO explains by stating that Fast-forward has a complex business that it takes time to understand, even if you have an excellent track record from previous positions in other companies. The CEO of the listed company we interviewed agrees with that it is an absolute necessity to have industry experience to be able and contribute to strategic discussions in the boardroom.

Further, the CEO change affected the company negatively since an internal quite young CEO with limited experience residing abroad filled the position after the previous-CEO. This resulted in that the new CEO did not get the organisation behind him as the former CEO had according to the chairman at the time. The former CEO were still a board member of the company, so in this way the board was still able to access his knowledge in board discussions but not his execution skills. Additionally, the shift of ownership from engaged and active investors with financial resources and competence was replaced with passive ownership focusing on the short-term, resulting in that the company had better access to financial resources by being listed but in return had to focus more on the short-term. The shift to institutional investors resulted in that the nomination committee consisted to a higher degree of representatives from institutional owners responsible for electing board members; see Appendix B for table of nomination committee composition since IPO.

Strategy

In the year following the IPO, the board was heavily involved with negotiations with a Foreign Industry player. It seemed as if this possible sale consumed considerable efforts within the board. Moreover, due to lacking continuity and new board members with more financial expertise than industry expertise, the focus shifted towards monitoring.

This caused the strategy function on the one hand to be downplayed due to the difficulty of discussing a complex business model without time to absorb its complexity and on the other hand to meet the requirements of being a listed company. As a consequence, the board's ability to provide advice and counsel to the management was reduced.

Based on the actions by top management and the board it seems that everyone expected that Fast-forward would be acquired and when this did not occur the board was put in an unexpected situation. At the same time as the board felt frustrated by being overrun by the pension funds that had been informed about the acquisition plans all along according to the VC-investor.

According to the former CEO, VC investor and Chairman it is clear that the negotiations with the rejected acquirer had been under way for a long time. Hence, the main objective of the board seems to have been to sell the company to the Foreign Industrial player. The VC investor further accentuate this by stating "we had cut down on our investments in order to prepare the company for the deal, but the pension funds did not understand this since they rejected the bid, even though we had communicated this to them several times before we went public with the bid to the market." The Chairman further remembers that "the pension funds changed their mind in the last minute and to turn down that offer is to have an unrealistic picture of the future." The VC investor says that maybe one of the board members did not sell in the offer to the pension funds in a persuasive way due to that the board member knew that he would lose his job if the Foreign Industrial player bought Fast-forward, illustrating another opinion of the reasons for the rejected bid.

After the rejection of the bid, the board focused on acquiring growth. This decision did not turn out well in combination with the ensuing lack of continuity that derived from the CEO stepping down and the Chairman who was requested to stay on for a year until he were to be replaced. A year later, the newly appointed chairman was quickly forced to step down due to his problematic involvement in a scandal at the time unrelated to Fast-forward. Fast-forward thus needed to find a new chairman again, at a time when the business climate went sour and Fast-forward's profits declined, resulting in a need for the board to focus on a turnaround of the company and finding a new CEO and Chairman. Hence, the strategy of the company after the rejected bid and the turnover of key persons resulted in a discontinuity of the board's strategic focus in a high velocity environment where the strategic role of the board is highly important.

Observations - IPO/Maturity- threshold

In the phase after being listed Fast-forward saw significant changes to its governance structure. Board composition, focus of the board and the type of owners changed. Two events related to mergers and acquisitions reinforced the speed with which these changes took place. Subsequently, this led to increased focus on monitoring, and reduced utilisation of the resource and strategy functions. Although this is as prescribed by Filatotchev et al (2006), we see a discrepancy with respect to what led to this result in the sense that exogenous events played an important role.

The shift toward more monitoring being exercised by the board is illustrated by the alterations of the board composition. After the IPO, it consisted of a majority of independent board members; something that was not observed to the same extent prior to the decision to go public. This transition is in line with the principal-agent theory that an independent board is more effective in monitoring (Faleye, 2011). The responsibility

of providing accurate and reliable quarterly reports to the public market in a higher extent than compared to pre-IPO further increased the monitoring of the board.

4.3.3 Maturity/decline-threshold

In our view, the Maturity/Decline-threshold starts with the unsuccessful acquisition that Fast-forward made to return to the growth path. As the organisation expanded in scope, it became increasingly harder to steer. The markets for Fast-forward were also affected by the general economic downturn. At the same time, the market participants had started to consolidate the market. Still, the velocity of the business environment decreased relatively compared to the previous life cycles. Fast-forward currently is in this phase, trying to revitalise themselves.

Monitoring

Monitoring was the primary concern of the board. This is evidenced by how the board responded to Fast-forward not delivering the results the board wanted nor matched its earlier history of growth. Fulfilment of external requirements, for instance the Code - which was impeccably applied - was never an issue, leading one to wonder whether isomorphic processes lay behind. Although the underlying reasons may be many, it led to a high pressure on the management to turn things around. In parallel, the board paid close attention to every small deviation from plan and often drilled deep to uncover the reason for the cost increase. Further, the complexity of the business coupled with discontinuity made incentive programs ineffective, a former CEO says.

After a period of discontinuity in the board and top management in combination with stagnation in growth, losses and a new issue, the board focused extensively on monitoring. The business was also fairly complex after the acquisition. The newly appointed CEO at the time recalls that "the organisation had no structure at all with seven hierarchical levels between the CEO and the clients and no investment in technology had been done." This, along with the discontinuity within management, caused the incentive systems to be ineffective. For example, because of the lacking continuity, none of the LTI programs had the desired effect before personnel moved on to new pastures, the former CEO comments.

Additionally, the industry at the time was in consolidation and a competitor acquired its way to being the market leader in Europe. With time, this resulted in Fast-forward becoming number two in its primary segment. In this kind of situation the focus need to be on the business and how Fast-forward can reclaim its position or change direction, but the board only focused on monitoring and on complying with all aspects of the corporate governance code even if you as a company are permitted to deviate from the code if it fits the company better according to the CEO at the time. "From the start when I came into the company I noted that the board was not unison and inert, but it developed to become even worse". Mr Kristiansson notes that too many companies may follow the Code too meticulously for the needs of the specific firm. It could even be interpreted as a coercive form of isomorphism (DiMaggio & Powell, 1983) caused by the external environment putting pressure on all firms to adhere to the Code.

The CEO at the time remembers that the board wanted to confirm every financial business decision on ridiculously low levels. The only thing they cared about was how the money was spent and they drilled deeper and deeper into every minor problem that occurred. When the business environment harshened again, the board refused to acknowledge the arguments promoted to them saying it would be tough to meet the targets, the prior CEO says. "It was like talking to a wall" and "Instead of solving the

problem you had to report about the problem", the former CEO adds. The former chairman recalls from his experience that such episodes can lead to breaches of trust, rendering the relation between board and management difficult. Subsequently, negative news from the company could, in cases of mistrust between board and management, reinforce the emphasis put on monitoring. This is particularly relevant for firms in stagnancy or decline, as the board would drill further into the numbers than initiate an open discussion of the firm's strategy enabling a turnaround.

Resources

From a resource perspective it seems that the discontinuity of the board and top management has resulted in a lack of operational experience from the industry Fast-forward act in, based on the board members description of the situation. This has resulted in an exaggerated focus on monitoring due to that the board members may not have the operational expertise required for discussing the strategic aspects of the Fast-forward's business based on the board member and prior CEO's description of the situation.

Additionally, the board member has described a distance between the passive owners and the board and an increased distance between the board and the company. This could be linked to the prevalent perception that investors prefer boards with a majority of independent directors, based on Mr Kristiansson's comment that they have included the requirement of independent directors in the Code on the basis that it "looks good" from an external perspective. The current board composition of Fast-forward could also be said to correspond with the development of a firm's governance towards a wealth protective objective as it matures in line with Filatotchev et al.'s (2006), to enhance the monitoring role of the board and comply with the corporate governance code to fulfil the requirements of the external shareholders. As there was a seemingly sufficient capacity in the board to monitor effectively, the firm had little use of external resources to further extend the monitoring capacity of the board, leading to a low utilisation of the resource function.

Strategy

> *"The board was reactive instead of proactive in a situation where they needed to be the opposite".*
>
> A former CEO

As mentioned, according to a former CEO, the board was more concerned with results than the formulation of strategy itself. In fact, the chairman set the target performance and monitored on the basis of deviations from the plan. These deviations were more often than not discussed when they had occurred. This reactive approach dominated the board's work and crowded out the strategic dimension, resulting in low utilisation of the strategy function. Filatotchev et al. (2006) points out that this phase tends to exhibit low usage of the strategy function. As a way to return to a new trajectory of growth, Filatotchev et al. (2006) prescribe that a delisting in some cases is advisable. Such views were even raised among those we interviewed.

The prior CEO remember that his objective at the time of appointment was to make the company grow and become profitable again as well as making sure that Fast-forward never is placed in the same situation again. This resulted in implementations of an operational excellence programs to make the company more efficient and improve the cost control. Business units were implemented to allow for a better structure since the organisation needed to become more responsive and adapt to its regional presence in combination with a flatter organisation by reducing middle management. According to

the CEO at the time, cost control and a better structure was necessary since Fast-forward acted in a mature market.

The board's focus on strategy was too low even though the need to focus on the business was evident, the prior CEO and a board member claim. Hence, the extreme focus on monitoring resulted in that that the strategic dimension of the board were not prioritised and as Fast-forward's performance went down again due to a renewed decline in the business environment the board focused even more on monitoring activities resulting in a recent CEO change together with a declining stock price.

Observations - Maturity/decline-threshold

This phase is characterized by a consolidated market showing signs of maturity. The board undertook extensive monitoring of management, and intervened in every deviation from the plan. From a board composition aspect, the board currently contains only independent directors. This can be related to the ownership structure. The nomination committee, for instance, was dominated by institutional investors drawing from their networks when proposing new board members.

In sum, one can ask the question whether the board is too fixed with complying to for example the Code when proactive strategy discussions should be the order of the day to enable a successful turnaround. This can be interpreted as a sign of isomorphism and incentives of professional board directors to "over comply" with the Code since they work in several companies' boards and hence their reputation is very important, which may inhibit them to deviate from the Code.

4.3.4 Size, frequency, board composition and incentives over the life cycle

The corporate governance system in Fast-forward evolved substantially from being an entrepreneur driven organisation through strong influence from venture capital firms towards its current status as a publicly listed firm with a dispersed ownership. The ownership type has been a strong driver for the changes seen with respect to board composition and relation between board and management.

Hypotheses	Main findings (from a life cycle perspective)
I. Size and frequency	- The size of the board has remained fairly stable over the years. - With respect to frequency, the content and the agenda of the board meetings seem to matter more than the actual number of board meetings.
II. Board composition	- When Fast-forward decided to go public, there was an influx of independent board members with more expertise from listed firms. Further, it appears that it provided legitimacy vis-à-vis potential investors. The development in the board composition mirrors the ownership changes of the firm.
III. Composition of incentives	- Equity-incentives through the use of options were prevalent in the initial phase. As the firm progressed, the firm lacked continuity and failed to see any effect from incentive systems as key personnel left before the incentive programs expired.

Table 21: Overview main findings from qualitative study in relation to hypotheses.

5. Concluding remarks

5.1 Corporate governance evolves over the firm life cycle

This paper is aimed at addressing the perceived uniformity in the corporate governance literature (Lynall et al., 2003; Filatotochev et al., 2006) by investigating whether the corporate governance of Swedish firms evolves over their corporate life cycle. Through incorporating a wide theoretical base and a mixed methods approach consisting of a qualitative case study and a cross-sectional quantitative study, the paper aimed at testing the following hypothesis:

The needs and functions of the firm differ between its life cycle stages, leading the firm to apply corporate governance structures accordingly.

When it comes to our three sub-hypotheses[36], we find statistical differences in the means of corporate governance for the respective life cycle stages concerning board size, board composition (fraction of directors independent in relation to the management/company and majority owners) and the CEO compensation concerning the fraction of fixed, variable and pension components of the salary. This indicates that there are dissimilarities between the means for companies in different life cycle stages, implying that the corporate governance is affected by the firm's lifecycle. However, it is probable that some control variables[37] may capture characteristics of several life cycle stages, e.g. the *size of the firm* is likely to coincide with maturity, and *growth opportunities* with growth firms. This in turn, blurs the interpretation of our findings.

First, concerning the hypothesis related to the size of the board and its meeting frequency, the regression results show that mature firms have fewer board meetings than firms in the introduction phase, indicating that the board activity in in the introduction phase is higher. This could be related to the emphasis on resource and strategy in the beginning of a firm's life cycle according to Filatotchev et al (2006). Thus, for early stage firms, it appears that board meetings are driven by a proactive rationale, in contrast with Vafeas (1999) and Huse & Zattoni (2008), who found that meeting frequency is related to poor performance. From the case study we note that the content and the agenda of the board matter more than meeting frequency, leading us to the conclusion that board meeting frequency is not an optimal proxy for monitoring.

Second, turning to board composition, we do not find a significant relationship to the life cycle stages. Rather, board composition depends on the firm size, industry and ownership structure. The empirical findings of the qualitative case study show that the role of the board changes as the firm progresses through its life cycle. More emphasis is put on the board's contribution to the firm in an early stage, in line with the resource dependency theory Lynall et al. (2003). This is illustrated by the shift in the focus of the board's role from a strategic and resource oriented role in the beginning towards a monitoring role as the firm matures, a finding that supports Huse & Zattoni (2008). Further, the board composition of the studied firm has changed from active investors to solely independent directors today. This change is in line with Filatotchev et al.'s (2006) who reason that the governance objective moves towards wealth protection after the

[36] 1) Board size and frequency of board meetings, 2) Board composition and 3) Composition of incentives.
[37] E.g. growth opportunities, share price volatility and firm size.

firm has crossed the IPO-threshold. The change is demarcated by the increased representation of outside directors on the board arising from higher requirements of accountability towards the external shareholders. Similarly, this is further reflected through the competence among the board members, which has shifted towards primarily consisting of independent board professionals who tend to be simultaneously active in several other boards. This, in combination with a strict compliance with the Swedish Code for Corporate Governance, has led us to consider the impact of isomorphism. This result could be a sign that listed firms comply to the Code due to coercive reasons (DiMaggio & Powel, 1983) instead of opting to deviate even though compliance is not optimal from the firms' point-of-view.

Third, with respect to the composition of incentive systems, control variables such as growth opportunities, information asymmetry, firm size and ownership concentration seem to affect the components that together make up the total CEO compensation. We find, contrary to our hypothesis, that firms in later stages pay a higher proportion of STI. Given firstly that STI is often coupled to the firm's performance and secondly the cross-sectional design of our study, it could be that the role of business cycles distort the result. Another possible explanation can be found within the context of the board's effectiveness at control, with mature firms having a stronger need for alignment between dispersed owners and management, leading to a higher portion of STI. From the study of Fast-forward we conclude that early stage firms indeed rely on equity-incentives, in accordance with Filatotchev & Allcock (2010). For later stages of the life cycle, we find inconclusive evidence related to incentives, much due to the lacking continuity in both the management and the board of directors, which inhibits the incentive program to run its full course.

In addition, the case study further illustrates a change in its ownership type as the firm progressed across its life cycle. Initially, the investors included the founders, an Angel investor and VC-funds in the pre-IPO period. Later, it gradually shifted towards a dispersed ownership structure with pension funds and mutual funds as majority owners. Hence, the ownership structure is linked to the firm's life cycle stage and it affects the corporate governance of the firm through the nomination committee who proposes the board composition.

Lastly, another interesting finding related to the case study is the discontinuity of board members in a complex industry in combination with the lack of operational experience of new board members. In our case study, this resulted in an adjustment of the board's focus towards primarily monitoring activities at the expense of strategic discussions.

5.2 Contributions to literature and practice - Notion of firm life cycle theory

Based on the combination of findings from the qualitative and quantitative studies, we conclude that firms adapt their corporate governance to a certain extent to the firms' life cycle stages. Thus, a uniform view of corporate governance is not merited. However, we also find that firm specific contingencies and the context of a public market dictate much of the variation observed in corporate governance. Yet, we argue that some of these characteristics are likely to capture certain aspects of the firm's life cycle. Further, we have shown how resource dependency theory and isomorphism have an impact on corporate governance through 1) the role of the board across the firm's life cycle stages, 2) distinct drivers to why boards have independent members over the firm life cycle and 3) how external requirements affect the application of governance mechanisms. These

conclusions indicate the importance of taking a broad theoretical approach to an evolutionary perspective on corporate governance using firm life cycle theory. Our findings provide legitimacy to the claim that firms should not be afraid to deviate from the Swedish Code for Corporate Governance if that contributes to the company's business. Thereby, this study is relevant to both practitioners and regulators.

5.3 Suggestions for future research

Our study takes a positive approach at understanding whether corporate governance evolves over the life cycle of the firm. We have shown that it can be fruitful to treat corporate governance through the lens of firm life cycle theory. As such, it would be of interest to take a normative approach to investigate which set of governance structures are optimal at which stage of the firm's life cycle.

Further, it would be of interest to apply the same methodology as used in this thesis to a sample of non-listed companies to study the relationship between a firm's life cycle stage and its corporate governance. In this context it needs to be highlighted that private companies do not have to fulfil the requirements of the Swedish corporate governance code and the public market expectations.

In the qualitative case study we have only addressed former board members, investors and CEOs. Hence, a case study with interview objects from middle management and further down in the organisational structure is of interest to analyse how the development of a firm's corporate governance impacts the organisation. Further, an ideal situation would be to study a firm's corporate governance continuously as it develops across its life cycle, rather than performing a retrospective study of the progress and changes related to this evolution.

Finally, the qualitative case study showed the importance of the type of investor, e.g. mutual fund or venture capital. Hence it would be fruitful to undertake a comparative study of the corporate governance development contrasting how the type of investor affects the corporate governance across the firm's life cycle.

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Annual reports

All data and information referring to the 222 companies of the sample was retrieved from the respective annual reports of the financial year 2011, or the latest available period for firms with a broken financial year. In addition, the corporate websites were consulted for ownership information. Please refer to Appendix E for a complete list of the sample. Data was retrieved in October, 2012.

Appendix

Appendix A - List of interview persons

A1. List of interview persons Fast-forward

Date & Interview context	Interview person	Engagement in Fast-forward
16-11-2012 - in person	CEO	Between period 10-12
16-11-2012 – telephone	Global PE investor	Between period 1- 6
20-11-2012 - telephone	Angel Investor	Until period 6
21-11-2012 – in person	Chairman	Between period 5-9
23-11-2012 – in person	VC investor	Between period 1- 7
23-11-2012 - telephone	Ex-CEO /current board member	From period 1 until today

A2. List of interview persons – external perspective

Date & Interview context	Interview person
13-11-2012 – in person	Executive member in the Swedish Corporate Governance Board
16-11-2012 – in person	MD Nordic Investor Services
16-11-2012 – in person	Managing Consultant - Towers Watson – CEO compensation
20-11-2012 – in person	Principal at Nordic VC-fund
20-11-2012 – in person	Founding CEO and majority owner in listed Midcap company
20-11-2012 – in person	IPO-advisor – Corporate Finance – Large Swedish bank

Appendix B - Fast-forward's board composition and Nomination committee

B1. Description of Fast-forward's Nomination committee development over time

Time period	Composition of Nomination Committee at present	Shareholding
12-present	Large Swedish bank representative	16,50%
	Pension fund representative	13%
	National Pension fund representative	9,14%
	Chairman of the board	
Time period	**Nomination committee at Annual Report (AR) date**	**Shareholding at AR date**
11	Pension fund representative	13%
	National Pension fund representative	9,10%
	Swedish bank mutual fund representative	11,40%
	Chairman of the board	
10	Pension fund representative	14,90%
	National Pension fund representative	9,10%
	Swedish bank mutual fund representative	8,80%
	Chairman of the board	
9	Pension fund representative	14,87%
	National Pension fund representative	9,13%
	Swedish bank mutual fund representative	9%
	Chairman of the board	
8	Pension fund representative	14,90%
	National Pension fund representative	9,10%
	Pension fund representative	8,00%
	Chairman of the board	
7	Pension fund representative	14,60%
	Swedish bank mutual fund representative	N/A
	Pension fund representative	4,57%
	Founder	N/A
	Chairman of the board	
6	Pension fund representative	13,02%
	VC representative	9,53%
	Founder	3,62%
	Chairman of the board	
5	PE Investor representative	15,34%
	VC representative	9,67%
	Hedge Fund representative	N/A
	Founder	7,28%
	Chairman of the board	

B2 – Description of Fast-forward's board composition development over time

Time period	Board Size	Board meetings	Personnel changes	Director characteristics	Male	Female	Female representation (%)
12	6	N/A	X	5 Independent Former CEO	4	2	33%
11	7	16		6 Independent Former CEO	4	3	43%
10	8	15	X	7 Independent Former CEO	5	3	38%
9	6	17	Y	5 Independent Former CEO	4	2	33%
8	9	16	XY	7 Independent Entrepreneur Former CEO	8	1	11%
7	8	19	X	6 Independent Entrepreneur Former CEO	7	1	13%
6	7	20		4 Independent External investor representative Entrepreneur CEO	5	2	29%
5	8	17	Y	2 Independent 3 External investor representative Angel Investor Entrepreneur CEO	7	1	13%
4	8	N/A		Independent chairman 4 External investor representatives Angel Investor Entrepreneur CEO	8	0	0%
3	8	N/A		Independent chairman 4 External investor representatives Angel Investor Entrepreneur CEO	8	0	0%
2	8	N/A		Independent chairman 4 External investor representatives Angel Investor Entrepreneur CEO	8	0	0%
1	8	N/A	XY	Independent chairman 4 External investor representatives Angel Investor Entrepreneur CEO	8	0	0%

X=CEO change
Y=Chairman change
Chairman always independent

Appendix C - Example of interview questions

The structure of the interview document below reflects the semi-structured type of questionnaires we used for each interview related to Fast-forward. Based on the interview objects experience and role in Fast-forward, specific questions were added to the general template to collect unique data from each individual in an appropriate way. In this way, we could also contrast earlier findings from earlier interviews. Further, concerning the external interviews, the interview documents applied was customized to each interview objects specific expertise to collect relevant data in combination with the interview template applied for Fast-forward, but on a general level rather than a firm specific. All interviews were conducted in Swedish, explaining why the questionnaire is attached in Swedish.

Person och bolagsstyrning

1. Skulle du kunna berätta kortfattat om din roll i Fast-forward?
2. Hur skulle du beskriva bolagsstyrningen i Fast-forward med avseende på:
    a. Fokus i styrelsens arbete
    b. Styrelsens sammansättning
    c. Incitamentssystem och utformning till ledande befattningshavare, inklusive styrelsen och ledning
    d. Mekanismer för internkontroll
    e. Grad av kontroll och påverkan från investerare
3. Kan du exemplifiera händelser som inverkade och hade konsekvenser för bolagsstyrningen?
4. I vilken grad kan du se ett mönster i utvecklingen av bolagsstyrningen?
5. Utifrån din erfarenhet från andra företags bolagsstyrning, i vilken grad skulle du säga att Fast-forwards utveckling skiljer sig/är lik den du har upplevt i andra bolag? Exemplifiera gärna.

Betydelsen av företagets kontext

6. Hur påverkade listningen av Fast-forward bolagsstyrningen?
7. Hur påverkade det faktum att Fast-forwards tjänst/lösning blev mer etablerad bolagsstyrningen?
8. Är det något annat exempel du kommer på som förändrade bolagsstyrningen?
9. Vilka faktorer fokuserade valberedningen på när det gäller styrelsens sammansättning?
10. Hur har löneutskottets arbete förändrats?
11. Hur har redovisningsutskottets arbete förändrats?
12. Vad har du för synpunkter på Svensk Kod för Bolagsstyrning?

Livscykel som koncept - vi förklarar specifikt vad vi gör i uppsatsen, t.ex. att vi har klassificerat företag till en fas av livscykeln.

13. Vad är din spontana reaktion på ett sådant koncept?
14. Att gå från uppstart, till tillväxt, till moget företag, hur anser du att detta påverkar:
    a. Valberedningen?
    b. Löneutskottet?
    c. Redovisningsutskottet?

Avslutningsvis, är det något annat du vill lägga till?

Appendix D - Definition of variables used in quantitative study

D1. Definition of corporate governance variables

Variable	Definition
Size BoD	Size of board of directors at year end (time of annual report)
Frequency	Board meeting frequency over the financial year
Prop_ind_ind	Purely /size_bod to remove size effect on board composition
Prop_ind_own	ind_own/size_bod to remove size effect on board composition
Prop_ind_mgmt	ind_mgmt/size_bod to remove size effect on board composition
Ceo_member	Dummy to incorporate CEO membership of board
Fix_tot	Fixed salary (other benefits included) as a proportion of total salary
Var_tot	Variable salary as proportion of total salary
Pens_tot	Pension benefits as proportion of total salary
Ltip_tot	Long-term incentive plans as a proportion of total salary
Ceo_Own	CEO ownership of the firm measured as holdings of B-shares in relation to total number of shares outstanding

D2. Definition of control variables

Variable	Definition
Age	Current year minus year t of incorporation. Collected from Orbis.
Yrs_IPO	Current year minus year t of IPO. Orbis as primary source. As there were roughly 40 observations missing, the company history was used as secondary source. For companies with a background of multiple acquisitions and divestitures, the earliest listing of the company was chosen
Eqprice_vol_360	Equity price volatility last 360 (working) days from year-end 2011. The equity price volatility is calculated as the standard deviation of the logarithm of each individual trading day's equity price movement for last 360 trading days
Employees	Number of employees last available year, financial year 2011
Tobins_q	Tobin's q, defined as market capitalisation of equity + book value long-term interest debt over book value of equity (total shareholder's equity) + book value long-term interest debt
MarketCap	Market capitalisation, shares outstanding times market price at year end
Assets	Book value total assets 2011
Sales	Net sales 2011
Index	Index listing at Nasdaq OMX Nordic, either Small, Mid or Large
EV_EBITDA	Multiple; enterprise value over EBITDA, current year 2011 with enterprise value as of year-end 2011. Negative multiples omitted from further analysis
Top1	Ownership concentration, shareholdings of largest shareholder
Top3	Ownership concentration, shareholdings of three largest shareholder
Top6	Ownership concentration, shareholdings of six largest shareholder
Industry_xx	Industry classification with the help of dummy variables, NACE Rev 2, main categories that is the same industry classification that SCB is using. See p. 43 REV (2008) classification, high level used for national accounts - Ind_1 = A, B, C, D (1) - Raw materials, manufacturing - Ind_2 = F, L (2) - Construction, real estate - Ind_3 = G, H, I (3) - Wholesale, transportation - Ind_4 = J (4) - Information, communication - Ind_5 = (M, N, O, Q, R) (5) - Other service sector

D3. Industry classification, NACE Rev 2, main categories

Industry	Frequency
A - Agriculture, forestry and fishing	2
B - Mining and quarrying	6
C – Manufacturing	98
D - Electricity, gas, steam and air conditioning supply	3
F – Construction	4
G - Wholesale and retail trade; repair of motor vehicles and motorcycles	22
H - Transportation and storage	3
I - Accommodation and food service activities	1
J - Information and communication	42
L - Real estate activities	13
M - Professional, scientific and technical activities	14
N - Administrative and support service activities	6
O - Public administration and defence; compulsory social security	1
Q - Human health and social work activities	3
R - Arts, entertainment and recreation	4
Total number of companies	*222*

Note: only classification of industries present in the sample is included. Financial firms have been omitted from the sample.

High level grouping of the industries used for national account statistics in the table below. This grouping helped us to narrow down the number of industry dummies.

	ISIC Rev. 4/ NACE Rev. 2 sections	Description
1	A	Agriculture, forestry and fishing
2	B, C, D and E	Manufacturing, mining and quarrying and other industry
2a	*C*	*Of which: manufacturing*
3	F	Construction
4	G, H and I	Wholesale and retail trade, transportation and storage, accommodation and food service activities
5	J	Information and communication
6	K	Financial and insurance activities
7	L	Real estate activities*
8	M and N	Professional, scientific, technical, administration and support service activities
9	O, P and Q	Public administration, defence, education, human health and social work activities
10	R, S, T and U	Other services

* which includes imputed rents of owner-occupied dwellings

Source: NACE REV 2 (2008), p.43

Appendix E - Sample including life cycle stages as of year-end 2011

#	Index	Company	AR (1992)	Dickinson (2011)	#	Index	Company	AR (1992)	Dickinson (2011)
1	Large	ABB Ltd	Stagnant	Mature	114	Small	Acando AB	Stagnant	Mature
2	Large	Alfa Laval AB	Mature	Mature	115	Small	A-Com AB	Mature/Stagnant	Introduction
3	Large	Alliance Oil Company Ltd	Growth/Mature	Growth	116	Small	Addnode AB	Mature/Stagnant	Mature
4	Large	Assa Abloy AB	Growth/Mature	Mature	117	Small	Aerocrine AB	Growth/Mature	Introduction
5	Large	AstraZeneca PLC	Mature/Stagnant	Mature	118	Small	Alltele Allmanna Svenska Telefon AB	Growth	Mature
6	Large	Atlas Copco AB	Stagnant	Mature	119	Small	Anoto Group AB	Mature	Shake-out
7	Large	Atrium Ljungberg AB	Mature	Growth	120	Small	Arcam AB	Growth/Mature	Growth
8	Large	Autoliv Inc.	Growth	Mature	121	Small	Arise Windpower AB	Growth	Growth
9	Large	Axfood AB	Growth/Mature	Mature	122	Small	Artimplant AB	Stagnant	Shake-out
10	Large	Boliden AB	Growth/Mature	Mature	123	Small	Aspiro AB	Growth/Mature	Shake-out
11	Large	Castellum AB	Growth/Mature	Growth	124	Small	Avega Group AB	Mature	Mature
12	Large	AB Electrolux	Stagnant	Mature	125	Small	Beijer Electronics AB	Stagnant	Growth
13	Large	Elekta AB (Publ)	Mature/Stagnant	Mature	126	Small	Bergs Timber AB	Mature/Stagnant	Growth
14	Large	Telefonaktiebolaget LM Ericsson	Stagnant	Mature	127	Small	Biotage AB	Growth	Mature
15	Large	Fabege AB	Stagnant	Mature	128	Small	Bong AB	Growth	Mature
16	Large	Getinge AB	Stagnant	Growth	129	Small	Boule Diagnostics AB	Growth	Growth
17	Large	Hennes & Mauritz AB	Stagnant	Mature	130	Small	BTS Group AB	Mature/Stagnant	Mature
18	Large	Hexagon AB	Mature	Mature	131	Small	Catena AB	Stagnant	Shake-out
19	Large	Holmen AB	Stagnant	Mature	132	Small	CellaVision AB	Growth/Mature	Mature
20	Large	Hufvudstaden AB (Publ)	Stagnant	Mature	133	Small	Cision AB	Stagnant	Mature
21	Large	Husqvarna Ab	Stagnant	Mature	134	Small	Coastal Contacts Inc.	Growth	Mature
22	Large	L E Lundbergforetagen AB	Mature	Mature	135	Small	Concordia Maritime AB	Mature	Growth
23	Large	Lundin Mining Corporation	Growth/Mature	Mature	136	Small	Connecta AB	Mature	Mature
24	Large	Lundin Petroleum AB	Growth/Mature	Mature	137	Small	Consilium AB	Mature/Stagnant	Growth
25	Large	Meda AB	Mature	Growth	138	Small	CTT Systems AB	Mature	Introduction
26	Large	Millicom International Cellular SA	Growth/Mature	Mature	139	Small	Cybercom Group AB	Mature	Mature
27	Large	Modern Times Group AB	Mature	Mature	140	Small	Dedicare AB	Growth/Mature	Shake-out
28	Large	NCC AB	Mature/Stagnant	Mature	141	Small	DGC One AB	Growth/Mature	Mature
29	Large	Oriflame Cosmetics S.A.	Stagnant	Mature	142	Small	Diamyd Medical AB	Growth/Mature	Introduction
30	Large	Peab AB	Mature/Stagnant	Mature	143	Small	Doro AB	Mature	Mature
31	Large	SAAB AB	Stagnant	Mature	144	Small	Duroc AB	Growth	Growth
32	Large	Sandvik AB	Mature	Mature	145	Small	Elanders AB	Mature/Stagnant	Mature
33	Large	Svenska Cellulosa AB SCA	Stagnant	Mature	146	Small	Electra Gruppen AB	Stagnant	Mature
34	Large	SCANIA AB	Growth/Mature	Mature	147	Small	Elos AB	Stagnant	Mature
35	Large	Securitas AB	Stagnant	Mature	148	Small	Enea AB	Stagnant	Mature
36	Large	Semafo Inc	Growth	Growth	149	Small	EpiCept Corp	Mature	Decline
37	Large	Skanska AB	Stagnant	Mature	150	Small	Etrion Corporation	Growth	Introduction
38	Large	SKF AB	Mature/Stagnant	Mature	151	Small	eWork Scandinavia AB	Mature	Mature
39	Large	SSAB AB	Growth	Growth	152	Small	Feelgood Svenska AB	Growth/Mature	Introduction
40	Large	Stora Enso Oyj	Growth	Mature	153	Small	Fingerprint Cards AB	Mature/Stagnant	Introduction
41	Large	Swedish Match AB	Stagnant	Shake-out	154	Small	FinnvedenBulten AB	Growth	Mature
42	Large	Tele2 AB	Mature	Mature	155	Small	FormPipe Software AB	Mature/Stagnant	Mature
43	Large	TeliaSonera AB	Mature	Mature	156	Small	Geveko AB	Mature	Mature
44	Large	Tieto Oyj	Mature	Mature	157	Small	Global Health Partner AB	Growth	Mature
45	Large	Trelleborg AB	Mature	Mature	158	Small	Hemtex AB	Mature/Stagnant	Introduction
46	Large	AB Volvo	Growth/Mature	Growth	159	Small	HMS Networks AB	Mature	Mature
47	Large	Wallenstam AB	Mature	Growth	160	Small	IAR System Group AB	Stagnant	Mature
48	Mid	AarhusKarlshamn AB	Mature	Mature	161	Small	Image Systems AB	Growth/Mature	Introduction
49	Mid	Active Biotech AB	Mature	Introduction	162	Small	Intellecta AB	Mature	Mature
50	Mid	Addtech AB	Mature	Mature	163	Small	ITAB Shop Concept AB	Mature	Growth
51	Mid	Axis AB	Mature/Stagnant	Mature	164	Small	Kabe AB	Mature	Mature
52	Mid	B&B Tools AB	Mature/Stagnant	Mature	165	Small	Karo Bio AB	Stagnant	Introduction
53	Mid	BE Group AB	Mature	Mature	166	Small	Know IT AB	Mature/Stagnant	Mature
54	Mid	Beijer Alma AB	Mature	Mature	167	Small	Lagercrantz Group AB	Mature/Stagnant	Mature
55	Mid	G & L Beijer AB	Mature/Stagnant	Mature	168	Small	Lammhults Design Group AB	Mature	Mature
56	Mid	Betsson AB	Stagnant	Mature	169	Small	Malmbergs Elektriska AB	Mature/Stagnant	Mature
57	Mid	Bilia AB	Mature	Mature	170	Small	Micro Systemation AB	Mature/Stagnant	Mature
58	Mid	Billerud AB	Mature/Stagnant	Mature	171	Small	Micronic Mydata AB	Growth/Mature	Mature
59	Mid	BioGaia AB	Mature/Stagnant	Mature	172	Small	Midsona AB	Stagnant	Shake-out
60	Mid	BioInvent International AB	Mature	Introduction	173	Small	Midway Holding AB	Growth	Mature
61	Mid	Bjorn Borg AB	Mature/Stagnant	Mature	174	Small	Moberg Derma AB (Publ)	Growth/Mature	Introduction
62	Mid	Black Earth Farming Ltd	Growth	Shake-out	175	Small	Morphic Technologies AB	Growth/Mature	Decline
63	Mid	Byggmax Group AB	Mature	Mature	176	Small	MQ Holding AB	Mature	Mature
64	Mid	CDON Group AB	Growth/Mature	Growth	177	Small	MSC Konsult AB	Stagnant	Decline
65	Mid	Clas Ohlson AB	Mature/Stagnant	Mature	178	Small	MultiQ International AB	Mature/Stagnant	Growth
66	Mid	Cloetta AB	Mature	Shake-out	179	Small	Nederman Holding AB	Growth/Mature	Mature
67	Mid	Concentric AB	Growth	Mature	180	Small	Nordic Service Partners Holding AB	Growth/Mature	Mature
68	Mid	Corem Property Group AB	Mature/Stagnant	Growth	181	Small	Note AB	Mature	Shake-out
69	Mid	Dios Fastigheter AB	Mature/Stagnant	Growth	182	Small	Novotek AB	Mature/Stagnant	Mature
70	Mid	Duni AB	Stagnant	Mature	183	Small	Oasmia Pharmaceutical AB	Stagnant	Introduction
71	Mid	Eniro AB	Stagnant	Mature	184	Small	Odd Molly International AB	Mature	Mature
72	Mid	Fagerhult AB	Stagnant	Growth	185	Small	OEM International AB	Mature/Stagnant	Mature
73	Mid	Fast Partner AB	Mature	Growth	186	Small	Opcon AB	Mature/Stagnant	Introduction
74	Mid	Fastighets AB Balder	Growth	Growth	187	Small	Orexo AB	Mature/Stagnant	Introduction
75	Mid	Fenix Outdoor AB	Growth	Mature	188	Small	Ortivus AB	Mature/Stagnant	Shake-out
76	Mid	Gunnebo AB	Stagnant	Mature	189	Small	PartnerTech AB	Mature	Mature
77	Mid	Haldex AB	Mature	Shake-out	190	Small	Phonera AB	Growth/Mature	Mature
78	Mid	HEBA Fastighets AB	Mature	Growth	191	Small	Poolia AB	Stagnant	Mature
79	Mid	HEXPOL AB	Growth/Mature	Mature	192	Small	Precise Biometrics AB	Mature/Stagnant	Introduction
80	Mid	HiQ International AB	Stagnant	Mature	193	Small	Prevas AB	Mature/Stagnant	Mature
81	Mid	Hoganas AB	Mature/Stagnant	Mature	194	Small	Pricer AB	Mature	Mature
82	Mid	Industrial & Financial Systems AB	Mature/Stagnant	Mature	195	Small	Proact IT Group AB	Growth	Mature
83	Mid	Indutrade AB	Mature	Mature	196	Small	Probi AB	Mature/Stagnant	Mature
84	Mid	JM AB	Stagnant	Mature	197	Small	Profilgruppen AB	Mature	Mature
85	Mid	KappAhl AB	Mature	Mature	198	Small	RaySearch Laboratories AB	Mature	Mature
86	Mid	Klovern AB	Growth/Mature	Growth	199	Small	ReadSoft AB	Mature	Mature
87	Mid	Kungsleden AB	Mature/Stagnant	Decline	200	Small	Rederi AB Transatlantic	Growth	Growth
88	Mid	Lindab International AB	Stagnant	Mature	201	Small	Rejlerkoncernen AB	Stagnant	Growth
89	Mid	Loomis AB	Mature/Stagnant	Mature	202	Small	RNB RETAIL and Brands AB	Growth/Mature	Introduction
90	Mid	Medivir AB	Mature	Introduction	203	Small	Rottneros AB	Mature/Stagnant	Mature
91	Mid	Mekonomen AB	Mature	Mature	204	Small	Rorvik Timber AB	Mature	Introduction
92	Mid	Net Entertainment NE AB	Growth	Mature	205	Small	Seamless Distribution AB	Growth/Mature	Introduction
93	Mid	Net Insight AB	Mature	Shake-out	206	Small	Sectra AB	Mature/Stagnant	Mature
94	Mid	New Wave Group AB	Mature	Mature	207	Small	Semcon AB	Mature/Stagnant	Mature
95	Mid	NIBE Industrier AB	Mature	Mature	208	Small	Sensys Traffic AB	Stagnant	Shake-out
96	Mid	Nobia AB	Mature	Mature	209	Small	Sigma AB	Stagnant	Mature
97	Mid	Nolato AB	Stagnant	Mature	210	Small	SinterCast AB	Mature	Growth
98	Mid	Nordic Mines AB	n.a.	Introduction	211	Small	Softronic AB	Mature/Stagnant	Mature
99	Mid	PA Resources AB	Growth/Mature	Growth	212	Small	StjarnaFyrkant AB	Mature/Stagnant	Shake-out
100	Mid	Proffice AB	Stagnant	Mature	213	Small	Studsvik AB	Growth/Mature	Mature
101	Mid	Rezidor Hotel Group AB	Mature/Stagnant	Growth	214	Small	Svedbergs I Dalstorp AB	Stagnant	Mature
102	Mid	AB Sagax	Growth	Growth	215	Small	Transcom Worldwide S.A.	Growth/Mature	Growth
103	Mid	SAS AB	Mature/Stagnant	Introduction	216	Small	Trigon Agri A/S	Growth/Mature	Introduction
104	Mid	SkiStar AB	Mature/Stagnant	Mature	217	Small	Uniflex AB	Mature	Shake-out
105	Mid	SWECO AB	Mature/Stagnant	Mature	218	Small	VBG Group AB	Mature	Mature
106	Mid	Swedish Orphan Biovitrum AB	Growth/Mature	Growth	219	Small	Venue Retail group AB	Growth/Mature	Introduction
107	Mid	Swedol AB	Mature	Mature	220	Small	Vitec Software Group AB	Growth	Growth
108	Mid	Systemair AB	Mature	Mature	221	Small	Vitrolife AB	Growth/Mature	Growth
109	Mid	TradeDoubler AB	Mature/Stagnant	Shake-out	222	Small	XANO Industri AB	Stagnant	Mature
110	Mid	Transmode Holding AB	Growth	Mature					
111	Mid	Unibet Group PLC	Mature/Stagnant	Mature					
112	Mid	Wihlborgs Fastigheter AB	Growth	Growth					
113	Mid	AF AB	Stagnant	Mature					

Appendix F - Descriptive statistics for sample firms in each life cycle stage

All in median, based on year-end 2011 figures. SEK thousand	Full sample	Dickinson (2011), median measure last three years					AR (1992)				
		Introduction	Growth	Mature	Shake-out	Decline	Growth	Growth / Mature	Mature	Mature / Stagnant	Stagnant
n	222	24	38	138	17	4	26	37	61	51	46
%	100%	10.81%	17.12%	62.16%	7.66%	1.80%	11.71%	16.67%	27.48%	22.97%	20.72%
Sales	1,499,825	199,614	1,431,353	2,513,950	408,058	74,574	1,317,344	1,200,753	1,532,000	1,513,000	2,390,500
EBITDA	172,900	-12,153	273,985	342,450	15,113	-31,912	173,804	86,144	167,588	155,208	407,550
Net income	82,929	-55,064	90,044	133,848	18,000	-46,491	36,652	30,360	84,800	76,369	136,848
Dividends	25,434	0	35,418	67,722	0	0	9,022	0	30,941	28,877	99,000
Sales growth (change 2010)	9.48%	12.62%	11.80%	8.05%	-0.97%	9.90%	17.49%	12.18%	9.69%	6.15%	3.66%
ROA (after tax)	5.75%	-14.41%	3.97%	7.83%	2.81%	-11.32%	3.29%	5.42%	6.51%	6.51%	6.19%
Employees	598	77	213	1,213	142	57	245	239	482	498	1,912
Assets	1,633,298	449,376	4,572,781	2,082,353	568,892	152,084	1,843,400	1,625,300	1,641,296	1,346,000	2,524,850
Market capitalisation	1,138,593	403,467	1,783,753	1,615,336	345,338	91,272	1,236,068	921,117	1,056,737	1,012,122	1,675,164
Share price volatility, last 360d	0.39	0.60	0.35	0.36	0.47	0.42	0.36	0.45	0.38	0.38	0.35
EV / EBITDA	7.21	11.86	10.43	6.41	6.94	34.45	7.63	6.65	7.79	6.33	7.09
Tobin's Q	1.40	1.81	1.00	1.51	1.44	0.95	1.19	1.22	1.46	1.49	1.41
Ownership concentration top 6	54.81%	58.32%	60.09%	55.83%	64.61%	12.33%	47.85%	49.98%	57.14%	61.26%	57.62%
Age	24	15	24.5	28	22	17	14.5	16	24	28	66

Appendix G - Correlation matrices

G1. Correlation matrix corporate governance variables (DV)

DV	size_b	frequency	pr_ind_ind	pr_ind	pr_ind_r	fix_tot	var_tot	pens_t	ltip_t	ceo_ow
size_bod	1.00									
frequency	-0.18	1.00								
pr_ind_ind	**-0.43**	0.12	1.00							
pr_ind_own	0.08	0.05	**0.69**	1.00						
pr_ind_mgmt	**-0.41**	0.07	**0.56**	0.19	1.00					
fix_tot	**-0.32**	0.11	0.10	-0.04	-0.06	1.00				
var_tot	0.14	-0.04	0.09	0.10	0.18	**-0.75**	1.00			
pens_tot	**0.24**	-0.11	**-0.27**	-0.06	**-0.20**	**-0.32**	**-0.33**	1.00		
ltip_tot	0.05	0.03	0.00	-0.03	0.11	**-0.20**	0.05	-0.16	1.00	
ceo_own	**-0.24**	-0.13	0.10	-0.01	-0.07	**0.31**	**-0.20**	-0.15	-0.07	1.00

Variable definitions DV: 1) Size of Board, 2) Frequency of board meetings, 3) Proportion independent members, 4) Proportion independent of owners, 5) Proportion independent of mgmt, 6) CEO member of board, 7) Fixed pay in relation to total pay, 8) STI in relation to total pay, 9) Pensions in relation to total pay, 10) LTIP in relation to total pay and 11) CEO ownership stake.

G2. Correlation matrix control variables (IV), excluding industry

IV	tobins	ev_ebitda	marketc~2(	assets_	netsale~2	eqprice_~2	employe	top_1	top_3	top_6	age	yrs_ipo
tobinsq_2011	1.00											
ev_ebitda	0.12	1.00										
marketc~2011	0.15	-0.06	1.00									
assets_2011	-0.05	-0.09	**0.83**	1.00								
netsale~2011	0.00	-0.11	**0.81**	**0.95**	1.00							
eqprice_~360	-0.15	0.04	-0.19	-0.17	-0.14	1.00						
employees	0.00	-0.08	**0.52**	**0.59**	**0.70**	-0.13	1.00					
top_1	-0.06	0.03	0.07	0.02	0.04	-0.14	0.06	1.00				
top_3	-0.10	0.03	-0.01	-0.03	-0.01	-0.10	0.03	**0.89**	1.00			
top_6	-0.11	0.00	-0.05	-0.05	-0.03	-0.11	0.02	**0.78**	**0.95**	1.00		
age	-0.14	-0.07	0.06	0.13	0.18	-0.11	0.18	0.04	0.04	0.03	1.00	
yrs_ipo	-0.13	-0.06	**0.26**	**0.40**	**0.42**	-0.09	**0.30**	0.12	0.09	0.08	**0.32**	1.00

Variable definitions IV: a) Tobin's Q (2011), b) EV / EBITDA (2011), c) Market Capitalisation (2011), d) Total assets (2011), e) Net Sales (2011), f) Number o employees, g) Equity price volatility last 360 days, h) Holdings largest shareholder, i) Holdings three largest shareholders, j) Holdings six largest shareholders, k) Age and l) Years since IPO

Appendix H - Full model regressions

H1. Regressions, full model, using AR's methodology (1992)

Full model	1)	2)	3)	4)	5)	6) (logit)	7)	8)	9)	10)	11)
IV \ DV	size_bod	frequency	pr_ind_ind	pr_ind_own	pr_ind_mgmt	ceo_member of board	fix_tot	var_tot	pens_tot	ltip_tot	ceo_own
a) AR_1	0.41	-0.65	-0.05	-0.03	0.03	-0.99	-0.06	0.06	0.00	0.00	-0.02
b) AR_2	0.15	0.45	0.04	0.07	0.08	-1.03	-0.05	0.03	0.02	0.00	-0.02
c) AR_3	0.41	0.86	-0.01	0.02	0.01	-1.13	-0.06	0.04	0.03	-0.01	-0.03
d) AR_4	0.65	0.13	0.03	0.09	0.06	-1.49 (*)	-0.12 (**)	0.09 (*)	0.04	-0.01	-0.05 (*)
e) ind_1	0.16	1.66	-0.07	0.04	0.04	0.65	-0.02	0.03	0.01	-0.01	-0.03
f) ind_2	(omitted)	(omitted)	-0.09	(omitted)	(omitted)	-0.70	0.01	-0.03	0.05	-0.02	(omitted)
g) ind_3	0.12	1.06	-0.05	0.08	0.03	0.13	0.01	-0.01	0.02	-0.01	-0.02
h)ind_4	0.25	3.96 (**)	0.04	0.15 (*)	0.11	0.41	-0.09 (**)	0.09 (**)	0.00	0.00	-0.03
i) ind_5	0.52	4.25 (**)	(omitted)	0.12	0.13 (*)	(omitted)	(omitted)	(omitted)	(omitted)	(omitted)	-0.04
j) log_tobin	-0.63	1.98	0.05	0.03	0.00	0.16	-0.10 (**)	0.11 (**)	-0.01	-0.01	0.02
k) log_evebitda	0.10	0.24	-0.03	-0.02	0.01	0.08	0.03	-0.04 (**)	0.02	-0.01	-0.01
l) log_marketCap	0.28	-1.61 (*)	0.01	-0.01	0.03	-0.39	0.01	-0.02	0.00	0.01	-0.01
m) log_assets	-0.26	2.96 (***)	0.02	0.02	-0.02	0.83	-0.05	0.05	0.01	-0.01	0.02
n) log_sales	0.68 (**)	-0.14	0.00	0.04	0.01	-0.24	0.00	0.02	-0.02	-0.01	-0.01
o) log_employees	0.07	-0.73	-0.04 (*)	-0.03	-0.03	0.12	0.01	-0.02	0.01	0.00	-0.01
p) log_volatility	-0.34	2.15	0.08	0.03	0.10 (*)	-0.76	-0.09 (*)	0.07	0.01	0.01	0.01
q) log_top1	0.08	-0.64	-0.05	-0.08 (**)	-0.02	0.04	0.02	-0.01	-0.01	0.00	0.03 (*)
r) log_top3	-0.13	-0.85	-0.01	-0.05	-0.05	0.48	0.05	-0.01	-0.02	-0.02	0.00
s) log_top6	0.20	0.99	-0.01	0.07	0.07	-0.09	-0.10	0.02	0.05	0.02	0.01
t) log_age	0.20	-0.20	-0.03	-0.01	-0.03	0.37	0.01	-0.03 (**)	0.02	0.00	0.01
u) log_ipo	0.42 (**)	-0.77	0.01	0.00	0.01	0.03	0.00	0.00	-0.01	0.00	-0.01
_constant	-5.65	-3.65	0.70 (***)	0.06	0.72 (***)	-5.41 (*)	1.13 (***)	-0.30 (*)	0.15	0.03	0.26 (**)
Prob > F	0.00	0.00	0.00	0.07	0.02	0.03 Prob > chi2	0.00	0.00	0.24	0.89	0.02
R2	0.61	0.23	0.31	0.18	0.21	0.15 Pseudo R2	0.30	0.34	0.15	0.08	0.19
Adj R2	0.56	0.12	0.22	0.07	0.10	n.a.	0.20	0.25	0.03	-0.05	0.09

Significance level: (***) = 99%, (**) = 95%, (*) = 90%

Variable definitions DV: Variable definitions DV: 1) Size of Board, 2) Frequency of board meetings, 3) Proportion independent members, 4) Proportion independent of owners, 5) Proportion independent of mgmt, 6) CEO member of board, 7) Fixed pay in relation to total pay, 8) STI in relation to total pay, 9) Pensions in relation to total pay, 10) LTIP in relation to total pay and 11) CEO ownership stake

Variable definitions IV: a) Growth/Mature, b) Mature, c) Mature/Stagnant, d) Stagnant, e) Raw materials, manufacturing, f) Construction, real estate, g) Wholesale, transportation, h) Information, communication, i) Other service sector, j) log Tobin's Q (2011), k) log EV / EBITDA (2011), l) log Market Capitalisation (2011), m) log Total assets (2011), n) log Net Sales (2011), o) log Number of employees, p) log Equity price volatility last 360 days, q) log Holdings largest shareholder, r) log Holdings three largest shareholders, s) log Holdings six largest shareholders, t) log Age and u) log Years since IPO

H2. Regressions, full model, using Dickinson's methodology (2011)

Full model IV \ DV	1) size_bod	2) frequency	3) pr_ind_ind	4) pr_ind_own	5) pr_ind_mgmt	6) (logit) ceo_member of board	7) fix_tot	8) var_tot	9) pens_tot	10) ltip_tot	11) ceo_own
a) DI_1	0.34	-1.13	-0.04	0.01	-0.10	1.92	0.02	0.04	-0.06	0.00	0.01
b) DI_2	0.27	-1.00	-0.13 (*)	-0.08	-0.09	2.18 (*)	-0.01	0.00	0.00	0.01	0.00
c) DI_34	0.35	-0.47	-0.07	0.04	-0.04	1.08	-0.13 (*)	0.11 (*)	0.02	0.00	-0.03
d) ind_1	0.08	1.48	-0.07	0.01	0.04	0.73	-0.02	0.02	0.01	-0.01	-0.03
e) ind_2	(omitted)	(omitted)	-0.06	(omitted)	(omitted)	-0.84	0.01	-0.04	0.04	-0.02	(omitted)
f) ind_3	0.04	1.13	-0.05	0.05	0.02	0.23	0.01	-0.03	0.03	-0.01	-0.02
g) ind_4	0.20	3.91 (**)	0.07	0.14 (*)	0.11 (*)	0.29	-0.09 (**)	0.09 (**)	0.00	-0.01	-0.03
h) ind_5	0.52	3.95 (**)	(omitted)	0.09	0.12	(omitted)	(omitted)	(omitted)	(omitted)	0.00	-0.04
i) log_tobin	-0.71	2.02	0.04	0.01	0.00	0.25	-0.09 (**)	0.10 (**)	0.00	0.00	0.02
j) log_evebitda	0.12	0.07	-0.05	-0.04	0.00	0.37	0.03	-0.05 (**)	0.02	-0.01	-0.01
k) log_marketCap	0.38	-1.61 (*)	0.03	0.02	0.03	-0.65	0.00	0.00	-0.01	0.01	-0.02
l) log_assets	-0.35	2.93 (*)	-0.02	-0.02	-0.02	1.05	-0.05	0.03	0.03	0.00	0.03
m) log_sales	0.63 (**)	-0.12	0.00	0.04	0.00	-0.22	0.02	0.02	-0.03	-0.01	-0.01
n) log_employees	0.13	-0.77	-0.03	-0.02	-0.02	0.10	0.00	-0.01	0.01	0.00	-0.01
o) log_volatility	-0.24	1.78	0.07	0.02	0.08	-0.71	-0.08 (*)	0.08 (*)	-0.01	0.01	0.01
p) log_top1	0.03	-0.80	-0.04	-0.08 (**)	-0.02	0.14	0.03	-0.01	-0.02	0.00	0.03 (**)
q) log_top3	0.03	-0.56	-0.01	-0.03	-0.04	0.05	0.02	0.00	-0.01	-0.02	-0.01
r) log_top6	0.08	0.95	-0.02	0.05	0.06	0.14	-0.08	0.01	0.05	0.02	0.02
s) log_age	0.31 (**)	-0.06	-0.02	0.01	-0.03	0.08	-0.01	-0.02	0.03 (*)	0.00	0.00
t) log_ipo	0.41 (**)	-0.75	0.01	0.00	0.01	0.06	0.00	0.00	0.00	0.00	-0.01
_constant	-5.49 (**)	-2.55	0.81	0.17	0.82 (***)	-7.83 (**)	1.13 (***)	-0.31 (*)	0.17	0.01	0.24 (*)
Prob > F	0.00	0.00	0.00	0.05	0.03	0.01 Prob > chi2	0.00	0.00	0.07	0.86	0.02
R2	0.61	0.22	0.32	0.18	0.19	0.15 Pseudo R2	0.31	0.35	0.17	0.08	0.18
Adj R2	0.56	0.12	0.23	0.07	0.08	n.a.	0.22	0.26	0.06	-0.04	0.08

Significance level: (***) = 99%, (**) = 95%, (*) = 90%

Variable definitions DV: Variable definitions DV: 1) Size of Board, 2) Frequency of board meetings, 3) Proportion independent members, 4) Proportion independent of owners, 5) Proportion independent of mgmt, 6) CEO member of board, 7) Fixed pay in relatino to total pay, 8) STI in relation to total pay, 9) Pensions in relation to total pay, 10) LTIP in relation to total pay and 11) CEO ownership stake

Variable definitions IV: a) Growth b) Mature, c) Mature d) Combined shake-out and decline (due to few observations in decline) d) Rawmaterials, manufacturing, e) Construction, real estate, f) Wholesale, transportation, g) Information, communication, h) Other service sector, i) log Tobin's Q (2011), j) log EV / EBITDA (2011), k) log Market Capitalisation (2011), l) log Total assets (2011), m) log Net Sales (2011), n) log Number of employees, o) log Equity price volatility last 360 days, p) log Holdings largest shareholder, q) log Holdings three largest shareholders, r) log Holdings six largest shareholders, s) log Age and t) log Years since IPO