

PHD IN MANAGEMENT

XXIV CYCLE

THESIS

**DIVESTITURES AS RETRENCHMENT STRATEGIES:
A CORPORATE GOVERNANCE PERSPECTIVE**

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INTRODUCTION

Generally, strategic management literature has always been considering growth strategies as main means to organizational change and development (Lubatkin and O'Neill, 1988; Bowman and Singh, 1993; Capron et al., 1998; Capron and Mitchell, 1999; Karim et al., 2000), being mainly committed to portray restructuring ones as a reaction to strategic mistakes or a change to earlier decisions. In particular, it is meant as the refocusing (Markides, 1992), down scoping (Hitt et al., 1994) and patching (Eisenhardt and Brown, 1999; Siggelkow, 2002) process of firms.

The increased foreign competition and the effects of the financial and economic crisis have raised pressure on managers to improve the performance of their organizations. To keep pace with the ever growing complexity and uncertainty, resources have to be applied properly in the context of market environment to be valuable (Duhaime and Grant, 1996). As the deal firms are expected to restructure their business portfolios to cope in the challenging markets. In this context, divestiture emerges as valuable strategy for building shareholder wealth (Moschieri and Mair, 2008; Moschieri and Mair, 2011). This is a tool to propel firms change process through the redeployment and disposal of resources as well by the uprooting of underperforming ones (Capron et al., 2001). Actually, the global divestiture activity has been relatively resilient during the past recent years. The volume and value of divestiture transactions have been increasing till the end of 2009 to reach the peak of 12.000 transactions, experiencing a global increase of 15% compared to 2005 (source Thomson Financials).

Despite a relatively sound understanding of the antecedents and outcomes of divestiture activity is gradually arising (Brauer, 2006; Lee and Madhavan, 2010), some very basic questions remain unanswered concerning whether and how parent ties with divested unit are related to value creation. Once selected what to divest, casting it for a

value-enhancing disposition poses a variety of strategic challenges. Specifically, the newly established governance structure might create both risks and opportunities, especially having concern the divestiture mode chosen.

Therefore, the present project offers a valuable contribution to literature on divestiture, deepening the understanding of the relation between divestiture mode choice and value creation. Moreover, it sheds light on a neglected issue of corporate governance enhancing its potential value as signal.

Specifically, the sweeping research question of this project is: *How do corporate governance mechanisms affect divestiture performance?* To answer this question three essays are presented, each addressing a specific aspect of the compelling issue.

The first essay is organized on an introduction to detailing the research question, followed by an analytical literature review and a compelling research agenda. The two subsequent essays are instead structured similarly: after an introductory paragraph defining the research question, the significant literature is reviewed, followed by a description of the data and methodology used, an exhibition of the empirical results and their interpretation, and a summarizing conclusion.

The first essay examines the theoretical perspectives and research findings on divestiture mode choice to draw the current state of knowledge and outline a set of issue for further research on the topic. Even if scholars have analyzed the relationship between corporate divestiture and subsequent firm performance, fragmented findings persist as referred to the divestiture mode chosen. Divestiture entails a wide range of corporate restructuring activities: spin offs, sell offs and equity carve outs. This essay provides a key insight on research on divestiture mode alternatives to identify common threads and gaps, and to propose some patterns for future studies illustrating the possible range of questions that should be asked. To achieve this aim the following

research question will be address: *What is acquired and what should be acquired in literature on the relationship between divestiture mode choice and value creation?*

The second essay explores the relationship between board characteristics of a divested unit and wealth creation. It offers support to demonstrate that the subjectivity of board characteristics might affect firm market valuation. Deeming the board of directors as a compelling signalling device satisfies two key criteria. First, the board composition is observable; second, it's a difficult and costly signal to replicate. Specifically, the essay presents the results of an empirical study of the impact of overlapping directors on underpricing of divested firms. Overlapping directors are meant as those ones employed also by the parent firm at the time the divestiture operation is undergone. It is further proposed that board structure is not uniform in its effects on the underpricing of divested firms, but rather varies across the percentage of overlapping directors as well as the capital stake divested by parent firm on the stock market. Examining the effects of board structure in a divestiture context lets us to capture the capital market predictions to the viability of overlapping directors, thus answering to the following research questions: *How do overlapping directors affect the underpricing of divested firm? How does the percentage of capital divested by the parent firm moderate this effect?*

The third essay employs a corporate governance perspective to examine interlinks between board of directors composition and parent stock market reaction to equity carve out announcement. Uncertainty regarding subsequent parent strategies and lack of codified interrelation data between parent and subsidiary present market investors with equivocal guidance about parent gains. The essay questions whether the presence of overlapping directors provides investors with a stronger and clearer outlook about parent strategic venue. Even if the signalling firm already has a market track record, investors' valuation might be affected by the presence of overlapping directors in the

carved out subsidiary board. To investigate this topic, the essay addresses the following research question: *How do overlapping directors affect to divesting firm value creation?*

A concluding paragraph summarises and comments the findings, identifies recurring themes, and highlights venues for future research.

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ESSAY 1

How Is Divestiture Mode Choice Related To Value Creation?

A Review and Research Agenda

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ABSTRACT

Several studies have examined the relationship between corporate divestiture and subsequent firm performance, however fragmented findings persist as referred to the divestiture mode chosen. Divestiture entails a wide range of corporate restructuring activities: spin offs, sell offs and equity carve outs. Herein, we examine the theoretical perspectives and research findings on divestiture mode choice to trace out the current state of knowledge on the topic and draft a meaningful agenda for future works. Actually, we point some patterns for further research meant to illustrate the possible range of questions that should be asked.

Keywords: divestiture, corporate restructuring, firm performance, spin off, sell off, equity carve out.

INTRODUCTION

Substantial changes and turbulences in business environments are affecting dramatically the way firms compete. Critical argument is that resources have to be applied properly in the context of market environment to be valuable (Grant, 1991). To keep pace with the evolving environment firms need to renovate their resources in the face of the inertial forces (Henderson and Cockburn, 1994; Makadok and Walker, 2000; Teece, 2007; Capron, Dussauge and Mitchell, 1998). Specifically, they have to scrape up new resources (Caves, 1982; Teece, 1982), uproot the underperforming (Capron et al., 2001) and ease the remaining ones towards new business applications (Penrose, 1959).

Generally, strategic management literature has always been considering growth strategies as main means to organizational change and development (Lubatkin and O'Neill, 1988; Bowman and Singh, 1993; Capron et al., 1998; Capron and Mitchell, 1999; Karim et al., 2000), being mainly committed to portray divestitures as a reaction to strategic mistakes or a change to earlier decisions. Yet, scholars have recently gauged that divestiture operations represent a keystone in firm value creation (Bergh, 1995; Bergh et al., 2008; Brauer, 2006; Moschieri and Mair, 2008) propelling change process such as redeployment and disposal of resources. As a matter of fact, divestitures can be no longer deemed as a sign of failure, but rather a tool to create and preserve shareholders' wealth (Montgomery et al., 1984; Kyimaz, 2003).

A significant amount of academic works has been written about divestiture. Previous empirical studies have been mostly focused on performance implications whether divestitures are reflections of the economic cycle (Garvin, 1983; Duhaime and Grant, 1984; Aron, 1991; Ito, 1995), a means to reverse previous strategic decisions (Markides, 1992; Hoskisson et al.), or proactive strategic options (McGahan and Villalonga, 2003).

However, despite the increasing interest devoted to divestitures in both academic and managerial journals, little is still known about the way firms ought to take their divestiture decisions to further the performance. Specifically, no explicit guidance has been provided about how the choice among alternative methods of corporate divestiture is related to value. Some attention has been paid to structural requisites of organizations as remedies to causal ambiguity to justify divestiture mode choice (Cording et al., 2008). Others drawing on organizational learning have studied whether a firm's experience with a particular mode improves its ability to manage that mode (Zollo and Singh, 2004; Anand and Khanna, 2000; Mayer and Argyres, 2004).

Our main challenge is to review existing research on divestiture mode alternatives to identify common threads and gaps, and to propose some ideas and avenues for future studies. Departing from this kind of insights, the present study takes under proper concern that divestiture modes differ over firm value creation. Thus far, scholars have mainly considered that divestiture performance problems arise from underestimated implementation difficulties, rather than from selection mistakes (Jacobides and Billinger, 2006). Yet, selection capability differs from implementation capability. Divestiture entails a wide range of corporate restructuring activities: spin offs, sell offs and equity carve outs. Even if these strategies serve similar objectives, they differ in their ability to cope with the characteristics of the firms involved and in their strategic implications (Rosenkopf and Nerkar, 2001; Menon and Pfeffer, 2003). Making the right choice of divestiture mode has an important impact on the subsequent ability of the firm to deploy effectively its skills to meet rent-achieving goals, especially for the tie opportunities acknowledged. To deepen our understanding on this topic, the following research question will be address: *What is acquired and what should be acquired in literature on the relationship between divestiture mode choice and value creation?*

Assuming that firms recognize opportunities and risks shaping their foresights, we want to contribute to the understanding of how divestiture mode choice adds value through its staggering effect on strategic performance outcomes. We aim to demonstrate that “one-fits-all” approach of firm divestitures turns out inappropriate and counter-productive. Moreover, this study might help to plot out more effectively than hitherto some of the strategic tools firms should employ to succeed in the long run.

We have developed an analytical review for systematically evaluate the current state of knowledge on this topic and draft a meaningful agenda for future research. We summarise the findings of the major published studies to reveal the patterns of theoretical arguments.

REVIEW

Divestitures, meant as firms reconfigurations of business portfolios via spin offs, sell offs and equity carve outs, are expensive, visible and risky actions. A growing attention has been paid to these events since now considered as an important complement on the menu of corporate strategy actions. Despite the increasing number of studies there is scant consensus among scholars as to whether divestitures represent effectively value-enhancing tools (Lee and Madhavan, 2010). In today’s competitive environment, managers must continually “recreate” their firms, propelling change process such as redeployment and disposal of resources to draw new capabilities. The starting point for such changes is dynamic leadership. However, even the best and brightest among us need to choose modes of change that suit a particular context, and then manage the change process in a way that suits these modes. Therefore, an explanation for such mix results on divestitures performance might be due to the misleading boundaries of the

construct employed. As mentioned previously, divestiture entails a number of types of events that differently modify the firms' lines of business and their configurations. Actually, even if pursuing similar objectives, they lead different strategic implications that in turn might affect the events outcomes. Addressing this aspect, it could well be stated that a deeper consideration of the performance implications of different types of divestitures should be given.

A quite clear taxonomy of the three main types of divestitures is provided by the literature: spin offs, sell offs and equity carve outs. In each of these modes, the parent undergoes an operation for different reason and in search of different objectives and therefore maintains a specific relationship with the divested unit. Specifically, a sell off involves the disposal by the selling firm of subsidiaries, divisions or other combination of fixed assets in exchange for cash. The sold assets are absorbed by the acquiring firm and become part of it (Rosenfeld, 1984). A spin off represents a pro-rata distribution of shares of a subsidiary to the shareholders of the parent firm in order to constitute a separate and tradable firm, thus no cash transaction takes place (Ito and Rose, 1994). An equity carve out is experienced when a firm divests a business division issuing a portion of its equity shares to the market as an independent company (Schipper and Smith, 1986).

Divestiture explanations

Generally speaking, scholars suggest that firms decide to divest for either corrective or proactive reasons. Corrective divestitures are intended to recover previous strategic mistakes (Hitt et al., 1996; Porter, 1987), to reduce diversification refocusing on core businesses (Hoskisson et al., 1994; Markides, 1992; Seth et al., 1993), to react to increased industry competitions (Aron, 1991), to eliminate negative synergies (Linn and

Rozeff, 1985; Rosenfeld, 1984) or to deal with organizational issue such as bad governance (Hoskisson et al., 1994). The purpose of proactive divestiture is to restructure the company's business portfolio (Bowman et al., 1999; Hitt et al., 1996) by splitting, transferring or exiting businesses to adapt to arising market opportunities (Eisenardht et al., 1999). This reconfiguration process is aimed at designing a more efficient governance form (Seward et al., 1996), improving performance and profitability (Haynes et al., 2002; Mitchell, 1994; Woo et al., 1992), reducing high levels of debt (Allen and McConnell, 1998), getting better contracts from regulators (Woo et al., 1992), and improving corporate innovativeness and entrepreneurship (Cassman and Ueda, 2004).

However, these objectives are not mutually exclusive and limited to just one specific divestiture mode. For this reason literature has partially neglected the simultaneous comparison among divestiture mode options. Since the alternative methods of divestiture structurally differ, factors that determine the choice of divestiture are likely to influence the value of the deal, thus the net benefits of the transaction will depend on the method chosen. Understanding the motivations for selecting a specific type of transaction might allow scholars to begin to identify the source of the gains that result. Actually, companies follow logic when they engage in a divestiture operation. We believe it is important to recognize the different reasons for which a company decides to divest in order to deepen our understanding of their performance implications. Therefore, we propose an analytical review, which groups divestiture modes literature according to the logic pursued. In this categorization divestiture mode choice can be motivated either by financial or strategy logics. This filing tries to link corporate strategy and financial valuation and helps to account for some unexplored venues behind divestiture mode choice. A starting point for our review is to determine whether the variables that scholars have identified as influencing the divestiture value creation

are also been stated as capable of differentiating between the divestiture options. Thus, from time to time additional variables will be introduced that also have been considered able to differentiate between modes choice.

Financial logic

Since sell offs generate liquid assets from a sale and spin offs do not, firms in financial distress should be more likely to sell off assets. Steiner (1997) compares firms that sell off assets with firms that do not divest. He reports that the higher the level of long-term debt to total assets, the higher the probability of a sell off. Afshar et al. (1992) and Lasfer et al. (1996) suggest that firms in financial distress experience a positive market reaction when divesting a bundle of assets and event abnormal returns are positively related to the divesting firm's degree of leverage. Specifically, Brown et al. (1994) show that financially distressed sellers generate higher stock returns than financially healthy ones. One way to deal with financial distress is to generate cash through the sale to repay debt. Sichernman and Pettway (1987) state that as financially distressed firms have more limited access to capital markets, the divestiture provides a less expensive source of funding to be used in the pursuit of other projects and therefore results in abnormal gains. This reasoning has been confirmed also by Lang et al. (1995) arguments finding that the stock price reaction is positive for sellers that are expected to use the proceed from sell off to pay down debt, but negative for sellers which are expected to retain the proceeds within the firm. The rationale is that shareholders anticipate that management may use funds not subject to the controls of the financial markets in order to invest in wasteful projects. Afshar et al. (1992) find that announcement mitigating uncertainties regarding aspects of the operation result in higher abnormal returns for seller in the event day. Indeed, Datta et al.'s (2003) work

shows that a high level of private lender monitoring plays a crucial role in explaining seller's stock return since divesting firms are less likely to misallocate funds and destroy value. However, support for the financial theories of sell off gains is weakened by findings of no relationship between pre-divestiture financial distress and observed returns (Miles and Rosenfeld, 1983; Desai and Jain, 1999). Therefore, the Nixon et al.'s (2000) deduction that firm with higher level of financial leverage might have a higher incentive to undergo a sell off than a spin off seems less compelling. Actually, Johnson et al. (1996) find that firms engaging in spin offs are more highly levered than industry rivals. Firms with risky debt might be induced to reject positive net present value projects since their benefits can accrue existing bondholders too, leaving less value to the shareholders. Hite and Owers (1983) link this rationale to the bondholders wealth expropriation hypothesis since the spin off is structured in a manner that investments opportunities can be undertaken with benefits accruing the equity holders. However, Schipper and Smith (1983) as well as Dittmar (2000) state that bond returns are not significantly different from zero at the announcement. Only Parrino (1997) in the Marriott spin off case study finds that the operation reduced the collateral on the parent firm existing debt, as well as the bondholders' claims on the business cash flows. The main aim was to enable the company to fully exploit value creating growth opportunities in the management business by reducing capital constraint. Specifically, John (1993) referring to coinsurance arguments on investment incentives states that the value creation associated to a spin off results from the combined effects of changes in agency costs and tax shields since benefit from the effects of a flexible allocation of debt across technologies. Also equity carve outs accomplish the financial need since the offerings generate cash for the parent firm through a public sale of equity that has a claim only to the carve out's unit cash flows. Thus, as asset sell offs these can be viewed as mechanisms of raising funds for a parent firm that is not willing to bypass the

monitoring intrinsic to a public securities offerings (Slovin et al., 1995). Indeed, Lang et al. (1995) report positive share price effects for parent firms that do not retain proceeds of an asset sale, confirming that agency concerns represent a factor in sell offs. For equity carve outs Allen and McConnell (1998) suggest that managers being reluctant to carve out subsidiaries ascribing high value to control over assets, will undergo the operation only when the firm is capital constraint, and they also state that announcements period returns are higher in average when the parent firm uses the proceeds to repay debt. Fu (2002) finds additional support in the form of abnormal returns being significantly greater when proceeds are paid out to creditors or shareholders, rather than retained for investment purposes. This seems to give support to the presence of agency concerns. However, Nanda's (1991) main conjuncture is that by conducting equity carve out, a firm not only reveals information about the value of the subsidiary, but also about its own value. In his model, parent firms choosing equity carve outs tend to be undervalued by the market. Thus, according to a financial rationale it will prefer to issue subsidiary stock instead of undergo a seasoned offering. Slovin et al. (1995) operationalise this conjecture by assuming that if parent firms choosing an equity carve out are undervalued, rival firms in the parent industry should show positive abnormal return when the parent firm announces the deal, whereas rival firms in the subsidiary industry should show negative abnormal returns. They find empirical evidence for the latter but not for the former. Also Hulburt et al. (2002) find a negative price reaction to equity carve out announcement of companies in the parent's industry, which directly contradicts the suggested hypothesis.

Strategic logic

The desire to refocus the firm can be accomplished with either sell offs, spin offs or equity carve outs. All divestiture types can reduce diseconomies of diversity or inefficient size since they let to eliminate negative synergies between the divesting firm operations and the divested unit (Schipper and Smith, 1986). Specifically, both Markides and Bergh (1992) and John and Ofek (1995) state that sell offs enable the corporation to focus on businesses in which it has a competitive advantage and remove assets which interfere with other operations, lead to more efficient allocation of management time. Alexander et al.'s (1984) arguments suggest that the decision to sell unprofitable division is associated with value enhancement for the selling firm. Empirical evidence has been found in Denning (1988) and Cho and Cohen's (1997) works confirming that if an underperforming unit drives the poor performance of the firm, its subsequent disposal results in a positive parent share price reaction. Steiner (1997) finds that sell offs are negatively related to corporate performance prior to the operation. Spin offs typically follow period of strong market performance as asserted by Jain (1985) and Miles and Rosenfeld (1983) that report positive excess return prior to the spin off announcement. This would suggest that the probability of a spin off relative to a sell off might be higher when the operating performance margin is higher. An additional explanation is offered by Begh et al. (2008). They state that firms divesting assets in their secondary businesses or firms with higher levels of diversification are likely to choose sell offs, as compared to spin offs, since the value of the businesses is relatively transparent to the market and because sell offs are best in simulate auctions that enhancing competitive bidding forces to reallocate the assets to their most efficient and productive uses. On the other hand, firms divesting assets in primary business lines or with low level of diversification are likely to incur higher information asymmetry problems between insiders and outsiders about the true value of the unit. Therefore,

such firms may prefer spin offs to mitigate information asymmetry concerns. In their work they empirically show that these choices mediate the relationship between corporate restructuring activities and financial performance. However, Cusatis et al. (1994) argue that the inability of the market to evaluate conglomerate structure with unrelated business favour a spin off over a sell off because current shareholders receive the increased value from the reduced asymmetry after the spin off. Current shareholders would not receive the benefits from the sale of an undervalued asset. Indeed, Ito and Rose (1994) demonstrate that spin offs can create value since parents benefit from maintaining the entrepreneurship of a small firm all the while taking advantage of the availability of the assets of larger firms. Parhankangas and Arenius (2003) alert that even if a strong intra-organisational relationship is essential for the renewal and development of the competences in spun off firms, sharing a too intense relationship is beneficial to a limit over which embeddedness starts. However, even if considering this aspect, spin offs represent valuable and flexible tools to survive in highly competitive environment. Ito (1995) states that their attitude to create wealth is enhanced under conditions of homogeneous society, informal contracts, stable shareholders since under these conditions the separation of the organizations lets to benefit from economies of scope even if the diversification process is not led within a single firm. Miles and Rosenfeld (1983) state a positive relationship between the spun off unit relative size and its wealth effects. Indeed, Chemmanur and Yan (2004) state that the magnitude of the positive effect of the market value at the announcement increases in line with the size of the division divested as a fraction of the joint firms. Miles and Rosenfeld (1983) analyze 55 operations demonstrating that major spin offs have a greater effect on the shareholder wealth enhancement due to the increase of the value of future growth opportunities. Also Hite and Owers's study (1983), as well as by Krishnaswami and Subramaniam's one (1999) confirmed the phenomenon according to which the wealth

effects are larger when the portion of assets divested is higher. Along this vein, both Daley et al. (1997) and Krishnaswami and Subramaniam (1999) question whether spin offs aimed to increase the industry focus of the parent firm are characterized by higher stock market gains than the other ones. Recalling transaction costs arguments Ito (1995) confirms these results suggesting that the positive effects are stronger when the parent is low technology but owns a higher technology division. Yet, Rose and Ito (2005) employing an evolutionary approach come to different results demonstrating that subsidiary operating in the same industry as the parent tends to underperform the latter one. However, Desai and Jain (1999) offer a deeper analysis based on three alternative measures of relatedness in order to achieve evidence in line with the previous results: the abnormal returns for the focus-increasing spin offs are higher than those for the non-focusing ones. In order to move forward their results, they observe the long-term performance of the divested divisions after the operations. The refocusing rationale is confirmed since the abnormal returns for multiple years holding periods are significant given focusing increasing deals. Along this vein, Woo et al. (1992) examined 51 voluntary deals focusing on performance of divested units finding no change in pre and post deal performance, but observing that performance gains of related subsidiaries exceed those of unrelated ones following divestitures. This reasoning recalls some information asymmetry concerns. Since external capital markets suffer from lack of information compared to firm management, a misvaluation of it might easily occur increasing the wealth effects associated to the spin off announcement (Krishnaswami and Subramaniam, 1999). Also Habib et al. (1997) offer a model in order to study the existing relation between information asymmetry and spin off performance. In particular they state that the greater availability of information associated to the subsidiary securities exchanged on the market makes the price system more efficient increasing the summed value of the parent firm and of its spun off subsidiary. Parrino

(1997) demonstrates through the analysis of the Marriott spin off the accrued ability of the capital markets to assess the true value of the firm by improving the quality of the financial information available to investors. Scholars have demonstrated that the effect is even stronger when referred to equity carve outs context. Schipper and Smith (1986) and Vijh (2002) state that as the information availability regarding the subsidiary firm's performance increases, investors are more inclined to invest into the new pure-play stock. Since the separate financial statements and publicly traded equity can improve the ability of investors to gather information (Gilson et al., 2001), the divested unit, trading as a public company, will receive direct scrutiny by analysts and potential investors, reducing the asymmetric information concerning its value. Specifically, Schipper and Smith (1986) are the first to analyse the effect of equity carve out announcement. As main explanation they suggest that the operating efficiency is likely to increase as a result of business restructuring and more incentive-oriented contracts for subsidiary firm managers. This introduces another issue that has caught scholars' interest in the divestiture framework: a corporate governance concern. A negative relation between the percentage of ownership by officers and directors and the probability of a sell off has been stated by Steiner's (1997) work. Since sell offs provide the potential for discretionary cash, managers with a low percentage of ownership may prefer them to other divestiture alternatives. Actually, spin off and equity carve outs seem to represent ideal tools to solve agency matters. Chemmanur and Yan (2004) state that the parent's threat of losing formal control of the spun off unit motivates it to work harder at managing the firm. This effect is even stronger for firms operating in industries with high degree of takeover activity, or characterized by rapid technological changes. In line with this rationale, Aron (1991) asserts that even only the possibility of a future spin off improves current incentives for managers. Specifically, referring to equity carve outs he suggests that once the market valuation of the unit is separated

from the parent ones, managerial compensation can be provided in accordance with movements in the market value of the unit. Moreover, the fact that the unit is publicly-traded might makes it a more viable take-over candidate if it does not perform as well as expected, which may motivate its managers to perform well as a means of avoiding take-over attempts. However, these arguments include the tacit premise that the subsidiaries remain public. Klein et al. (1991) find that public listing is a temporary situation for the divisions since most become non-listed or lose the relationship with the parent by other events after the carve outs. They conclude that these represent a series of corporate restructuring and Hulburt (2003) states that also investors seem partially able to anticipate the second event: equity carve out announcement followed by an eventual takeover of the divested subsidiary by a third party produce higher abnormal returns than announcement not followed by a takeover. Indeed, considering their nature as temporary arrangements Perotti and Rossetto (2007) state that they represent real options that allow the parent firm to profit from the resolution of uncertainty. Uncertainty in the subsidiary's industry and the foreseen synergies between the parent and the divested unit, make one-sided actions such as sell offs unattractive. These arguments are further deepened by Damaraju (2008). Since the full value of the business unit may not be realized under conditions of uncertainty, by choosing spin offs or equity carve outs, parent firms may benefit from the access to valuable information in the subsidiary industries' and adjust the divestiture strategy as additional information arrives. According to the situation evolution, the subsidiary can be further divested at a better price, or brought back into the parent's fold more easily as opposed to sell offs. However, in any cases again the parent firm will have the possibility to choose a course of action that best fits its strategic requirements. Viewed this way, choosing to perform spin offs or equity carve outs, instead of complete sales, creates more value with increasing uncertainty in a subsidiary's environment.

RESEARCH AGENDA

According to Pearsall (2002), an agenda is “a list of matters to be addressed.” As such, this agenda is intended as a list of matters associated to the relationship between mode of divestiture and value creation that would appear to warrant investigation through empirical research. The increasing emphasis on the value creation implications of divestiture mode choice brings out a rather bright side of a decision that has been typically taken for granted. The main limitation of an agenda that even if based on a comprehensive and systematic review of the literature, it is a personal view. Others may consider the issues more or less important and may wish to add to the agenda.

Dess et al. (2003) suggest there is an important need for future research to show how firms develop effective structures. The main contribution of previous analyses is to provide some evidence on how divestitures of business units vary in terms of their strategic implications and, as such, can represent the expression of different strategic objectives of divesting firms. Our contribution points to some avenues for further research not meant to be exhaustive, but to illustrate the possible range of questions that one might ask. An answer to these questions, in our opinion, not only adds to the empirical canon but also suggests theoretical departures from how we are viewing the modes of divestiture. Our review shows that not only investing, but also divesting might represent a right decision to achieve economic growth. Comparing the different ways of divestiture settings, their advantages and drawbacks, several reasons seem to motivate the firm choice among the different corporate unbundling strategies. A lot depends on their exact form, given that the types differ in their mechanisms, effects and legal implications.

Although scholars have identified many divestiture antecedents, it still remains unclear how these factors might jointly affect the divestiture mode choice. We realize

that empirical research is reductionist by design, so we are not surprised that many individual factors that affect divestiture behaviour have been isolated. We suggest that the field might benefit from developing a deeper understanding of the relative importance of, and contingency conditions associated with, those drivers. Scholars have partially neglected the specific actions and incentive forces managers have to deal with during the divestiture process. Some may be better than others at developing and managing newly established relationships among corporate elements to achieve a competitive advantage. This consideration raises compelling issues from a corporate governance perspective. A key resource for firms is represented by the idiosyncratic knowledge possessed by managers, especially in the case of opportunity recognition (Castanias and Helfat, 2001). Work has been done to present managers as rational utility maximizing beings (Paton and Wilson, 2001). In reality they have incomplete knowledge with which to generate subjective interpretations about the organization. These could be mold through corporate governance systems willing to boost management perception of opportunities. Up to now, studies have mainly tended to focus on managerial perception of competition, and it would seem reasonable to assume that an equally reach vein of research findings remains to be investigated regarding managerial perception of inter-firm relationship. Since methods of divestiture provide different organizational arrangements, it seems noteworthy to deepen research on this overlooked aspect.

Even if divestitures are often treated as independent events, most are actually a component of a broader restructuring strategy, which is likely to require significant sequential organizational events (Otsubo, 2009). Following this argument, the performance implications of a single divestiture are dependent on that divestiture's position within the restructuring sequence. Thus, accounting for divestiture strategy as a long-time process rather than a "one-shot game", can reveal potential gains associated

to different divestiture modes that are often overlooked when examining single events. Specifically, we encourage future research to explore how divestiture modes might differently foster effective broader restructuring strategies. In short there is much to learn about divestiture implementation, having concern how the single mode resolves, transfers and manages the resources of the detached entities, which underscores the need for greater focus on post deal management in general.

We also see value in more fully examining the influence of governance mechanisms on divestiture mode decision. A simplifying assumption underlying the agency theory perspective is that shareholders hold homogeneous profit maximization interests. Also assumed is that large shareholders fulfil external monitoring roles and, furthermore may initiate activist measures to discipline ineffective management (Shleifer and Vishny, 1997). However, evidence demonstrates that large shareholders often seek opportunistic interests and can have heterogeneous objectives, which may not align with the goals of others (Claessens, et al., 2002; La Porta, et al., 2000). Moreover, powerful and active minority shareholders have emerged in recent years, such as rapidly growing hedge funds or activist investors, who often seek to pressure managers into specific transactions that hold benefit for them yet, arguably, are not always in the best interests of the broader shareholder base (Anabtawi, 2006). Although executives and other stakeholders like investment firms increasingly make tradeoffs between divestiture mode choices, we know little about how these tradeoffs as value creation vehicles are managed or staged. For instance, they might decide to take a business public to find a more strategic buyer or instead to “tee up” subsequent transactions by increasing the visibility. Surprisingly, beyond a very general understanding (Reuer and Shen, 2003), rarely do we see these topics linked in academic studies.

Although empirical evidence demonstrates that environmental determinants such as market attractiveness are less important predictors of divestiture decisions than firm

level factors such as financial performance or corporate strategy (Dixit and Chintagunta, 2007), researchers should not cease to deeper their influence on divestiture mode. Indeed, no study investigates the question on whether and how different levels of market attractiveness influence the choice among divestiture types. Future studies could use more elaborate measure for investigating the impact of environmental factors on the divestiture mode value creation. Along this vein, two additional points of critique should be voiced: how legal attributes across geographies can affect divestiture mode attitude to create value. Even if assuming the causality between divestiture mode choice and value creation, it cannot be ruled out yet with certainty whether exogenous factors as legal ones concurrently influences both phenomena.

We also recommend that researches focus on deepening our knowledge of several outcomes of interest. Indeed, little is known about how divestiture modes affect rival firms in the market. Specifically, we know little of the long-term consequences of divestiture mode for other firms in the industry. For example, sell offs might lead to industry consolidation and reduced commitment to and from existing customers of sold division, which in turn might create growth opportunities for the others. Therefore, the field could benefit from research that uncovers when and how divestiture modes create market opportunities for, and alter capabilities of, remaining firms.

Another issue concerns organizational resources and relates to the firm ownership of these properties. Traditional thinking has implicitly accepted that a firm owns the resources on which bases its strategy. However, in practise that has not always been the case, with some organization exerting the control over such properties not claiming a strong direct ownership over them (Dyer and Singh, 1998). Yet, few studies have examined how paired-firm resources characteristics can drive divesting entity decision. Through a dyadic approach future research should question how resource similarity and complementary might influence divestiture mode attitude to create value. Along this

vein, more work is also needed to evaluate intangibles resources. Specifically, the method applied to value the human capital inside an organization is still unclear. Future research should determine how to value tacit knowledge, skills and competencies held by the divested unit. Since divestiture modes account for different post-deal relationship with the parent firm, a better understanding of this critical issue might affect firms' decisions among divestiture options. Moreover, from this perspective, another important topic for future research is the role of conduits. These are meant as mechanisms through which experience flows from one party to another. Several studies have examined indirect learning through such conduits (Beckman & Haunschild, 2002; Westphal et al., 2001). Most of these have focused on the role that board interlocks play, which typically entails that the focal firm learns from firms in other industries, since rivals in the same industry, for self-explanatory reasons, tend not to have board interlocks. An interesting question for future research, therefore, may be how alternative divestiture modes let the establishment of conduits for tapping into the experience of other firms in the same industry.

In sum, although there are many influences on divestiture decisions and outcomes, we still have to clearly determine the relative importance of each of these factors on divestiture mode alternatives. Moreover, there is much to learn regarding under what condition particular factors have greater effects than others. Although there is merit in continuing to search for factors that drive divestiture activity, or lead to superior performance, we argue that it is also important to more deeply assess the merits according to alternative divestiture modes.

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ESSAY 2

Overlapping Directors and Underpricing of Divested Firms

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ABSTRACT

This paper explores whether and how governance linkages between parent firms and divested units may affect unit underpricing. Focusing on board of directors composition it offers support to demonstrate that the subjectivity of board characteristics might affect the underpricing of divested firm. Applying information economy arguments, it presents sound results of an empirical study of the impact of overlapping directors on underpricing of divested firm. We further propose that board structure is not uniform in its effects on the underpricing of divested firms, but rather varies across the percentage of capital stake divested by parent firm on the stock market. Results are grounded on data collected from 141 US equity carve outs and suggest that overlapping directors have a positive effect on underpricing of divested firms. However, an opposite selective response of investors for divested firms with a high proportion of overlapping directors is observed.

Keywords: divestiture, equity carve out, corporate governance, overlapping directors, underpricing.

INTRODUCTION

While tradition wisdom claims that companies experience divestiture to let go independent unit, evidence seems to suggest the opposite (Semadeni and Cannella, 2011; Moschieri and Mair, 2011). Withal, the attractiveness of the observed parent retained relationship with divested unit as research object is largely due to their twofold implications: the creation of newly independent firms that strive on the market with their own identities to which parents have delegated authority still keeping contractual relationships (Moschieri, 2011). Surprisingly, even if it's far-back that studies have strongly stated that association with parent firms affects divested units performance (Ito and Rose, 1994), only recently an early effort has been made to understand how the post-deal governance linkage with parent firms can affect the units' valuation (Semademi and Cannella, 2011).

Building on the general axiom that corporate actions are not performed in isolation, scholars have generally touted the benefits of linkages for organizations (Burt, 1992; Podolny and Baron, 1997). However, linkages don't necessarily lead to positive outcomes since the effects of ties might vary upon the situation (Benassi and Gargiulo, 1999). Understanding whether, how and what factors might influence the effects of linkages for divested unit is an important undertaking, helping to grasp how to better cast the operation varying market conditions.

This study aims to address this issue reconciling the previously mentioned corporate evidence: parent firm formally divests a unit keeping a governance linkage with it. The ideal room to develop our predictions entails divestiture operations through which a unit is hived off to sell a minority stake on the stock exchange. These operations are generally identified in the finance literature as equity carve outs.

The governance linkage is established through a majority of share holding. However, this might be even stronger for the presence of overlapping directors. We define overlapping directors as those ones employed by the parent firm at the time the divestiture is undergone (Baysinger and Butler, 1985; Cashen, 2008).

Agreement exists among scholars on the directors' ability to affect a firm operating performance through their actions and activities (Pfeffer and Salancik, 1978). Studies have stated that the characteristics of directors affecting the organizational legitimacy influence the market performance too (Certo, 2003).

Specifically, a number of governance related signals have demonstrated to affect firm value reducing the magnitude of underpricing (McBain and Krause, 1989; Mikkelsen et al., 1997). This represents the unretained wealth for the initial shareholders who sell their equity due to information asymmetry (Certo et al., 2001; Daily et al., 2003) and agency concerns (Beatty and Zajac, 1994) arising with new investors. However, in the debate about the aforementioned relationships no study has still questioned whether and to what extent the presence of overlapping directors can affect the foreseen effects. To achieve this aim the following research questions will be addressed: *How do overlapping directors affect divestiture underpricing? How does the percentage of capital divested by the parent firm moderate this effect?*

Indeed, for divested firms a particular effect is determined by the new board structure required. Being endogenous by nature to the parent divestiture strategy, the board structure might entail equivocal signals on the viability of the established governance linkage to markets. These might foresee positive as well as negative effects: on the one hand, the presence of overlapping directors signals the organizational legitimacy (Certo et al., 2001) of the divested firm to the market, affecting the perception of investors on its worthy value. On the other hand, the perception of potential cross-subsidization is higher. In particular, since parent firm and public

investors might have incongruent goals, with the occurrence of overlapping directors minority owners' interests might be disregarded (Dharwadkar et al., 2000; Young et al., 2008).

Zooming out this study, we propose that board structure is not uniform in its effects on the underpricing of divested firms, but rather varies across the percentage of overlapping directors as well as the capital stake divested by parent firm on the stock market. Together, these two dimensions form the grounding of our exploration into the subjectivity of directors' characteristics and market valuation. Recalling Samademi and Cannella's (2011) arguments we employ the percentage of capital stake divested as moderator of overlapping directors' effects. Our argument is that the signalling potential of overlapping directors will be moderated by the stake of capital divested by the parent such that the information flow associated to the signal will matter more or less under specific conditions. To deepen these considerations the following research question will be addressed: *How does the percentage of capital divested by the parent firm moderate the foreseen relationship between overlapping directors and divestiture underpricing?*

This paper aims to contribute to previous research in several ways. First, giving support to emerging model that associate the overall value creation of divestiture to its casting. Since the parent firm can plan out the divested unit's governance structure to frame the parent-unit linkage, it plays a central role in the divested unit performance. Second, providing a contribution to information economy research in gaining an understanding of how market investors incorporate nonfinancial information in their decision making process. Specifically, it offers support to demonstrate that the subjectivity of directors' characteristics might affect the firm market legitimization. Third, suggesting that magnitude of overlapping directors affects board propensity to engage in suboptimal cross-subsidization. Actually, it sheds light on a neglected agency issue identifying conditions in which the monitoring commitment of directors might fail

to create or even destroy wealth for the divested firm recognizing support to operational transaction intended to favour the parent firm.

BACKGROUND AND THEORETICAL FRAMEWORK

A noteworthy attention has been paid thus far by scholars to divestiture operations as events and thus far a general thrust has strongly stated that a link with the parent affects divested firm performance (Ito and Rose, 1994). However, little is still known about how characteristics of the newly established linkages between the parent and divested firm might affect the operation performance (Moschieri and Mair, 2011).

Studies have brought to attention that increasingly often business segments are separated from the parent company and a minority stake is remised to the new investors (Semadeni and Cannella, 2011). The parent company thus retains control over the subsidiary, while simultaneously creating more transparency for capital markets, restructuring its investment portfolio and creating the option to either reintegrate or completely sell off subsidiary at a later stage. Although similarities with initial public offerings, these divestiture operations, defined in the finance literature as equity carve outs are fundamentally different with respect to the stage of the firms' life cycle and the level of information available to investors. Firms that were once part of publicly traded firms are involved, thus since information are continually supplied to the capital markets, there exists less information asymmetry concerns to justify the underpricing in early trading.

The underpricing is measured as the difference between the per share offer price and the closing price on the first day of trading, expressed as a percentage of the offer price

(Ritter, 1987; Ritter and Welch, 2002). This “represents both wealth creation for first-day investors [...] and unretained wealth for the initial shareholders” (Certo et al., 2001). Basic assumption is that the likelihood of underpricing is higher for issuing firms that face greater ex ante uncertainty about the quality of the offering (Rock, 1986). Indeed, one of the main issues for firms undergoing a listing is the resolution of information asymmetry problems. Since issuing firms are more informed about their effective value (Keasey and Short, 1997), the challenge is to demonstrate it so that the initial owners may maximize the price at which they can sell the shares.

As already stated, in the listing of divested divisions investors have more information about the unit going public: before the divestiture, being completely controlled by the parent its financial statements were consolidated in the parent balance sheet. Even after the divestiture, it still generally files consolidated financial statements since the parent does not relinquish control of the subsidiary keeping a majority of its total outstanding shares. However, as argued by Hogan and Olson (2006), a residual information asymmetry concern remains.

Consistent with signalling theory, in order to communicate high quality, listing divisions may seek mechanisms to allow participants in the transaction to effectively utilize the signal. Specifically, high-quality applicants are willing to prove their value employing signals fulfilling two important criteria: the signal has to be observable and costly to imitate (Ross, 1977). Recently a growing attention has started to be paid specifically to board of directors (Certo et al., 2001; Filatotchev and Bishop, 2002; Certo, 2003; Cohen and Dean, 2005). “Boards structures represent important nonfinancial information that investors consider when making investment decisions” (Certo, 2003). Deeming the board of directors as a compelling signalling device satisfies the two mentioned key criteria. Firstly, the board composition is observable

and known in advance of the actual offering because the information is reported in the prospectus disclosed before the listing. Secondly, the board composition may also represent a difficult and costly signal to replicate.

In a divestiture context, the potential signalling effects associated to the board of composition might be not so foreseeable due the detached nature of the newly listed firm. Thus far, a specific factor in investors' assessment of divested firm's quality has been neglected: the presence of overlapping directors, meant as those ones employed also by the parent firm at the time the divestiture is undergone (Baysinger and Butler, 1985; Cashen, 2008). We know that board of directors can be structured in different ways. In a divestiture this represents the means through which the balance between two parent key objectives might be obtained. On the one hand to maintain a strategic relation with the parent firm, on the other hand to create a strategically independent unit (Rose and Ito, 2005). Since boards of directors with different overlapping structures will signal to the capital market different motives and incentives, it is reasonable to assume that these will affect the underpricing of the divested firm.

Board legitimacy is crucial for the divested firm as it seeks to present itself as a stand-alone public traded entity. Underpricing represents money "left on the table" for the first day buyers. Firm owners have a great incentive to demonstrate the high quality of their firm, since they will not be able to recoup this transfer of wealth through subsequent market operations. Legitimacy through overlapping directors helps the divested firm to overcome information asymmetry problems that will deter investors. The symbolic role of an overlapping board structure may be particularly valuable in a divesting context affecting the perception of potential investors. The divested firms' association with their corporate parents decreases their liabilities of market newness (Certo, 2003). The relationship established between the parent and the divested firm

represents a means through which the former is perceived as an endorsement buffer in the independent venturing experience. Strategic management scholars are now recognizing that directors can play a strategic role in investors' decision making process (Filatotchev and Bishop, 2002). Indeed, recent research suggests that directors' experience might represent an additional factor in their evaluation of firm quality (Certo et al., 2001). Recalling a resource base view approach, overlapping directors understand better the business they have been previously governing than others, and might provide the divested firm with a great number of outside links that will enhance the perception of market legitimization by investors. In addition, a strong connection between the two entities provides confirmation to the rest of the market of the value and worth of the newly listed firm. As stated by Mizruchi (1996) "by appointing individuals with ties to other important organizations, the firm signals to potential investors that it is a legitimate enterprise worthy of support". This seems even more compelling when the sponsoring entity is the parent one.

While overlapping directors may be an important signal of firm value for the divested firm, the relationship between overlapping intensity, as indicated by the percentage of overlapping directors, and performance may be non-linear. There is a general agreement on that an intense relationship between the parent and the divested firm is beneficial to a limit, beyond which over-embeddedness can have a detrimental effect (Krishnaswami and Subramaniam, 1999; Parhankangas and Arenius, 2003). A potential for conflicts of interest and litigation arises over interpretation of fiduciary norms that apply to a governance structure, where directors have two constituencies. Since parent firm and market investors might have incongruent goals, overlapping directors might be induced to disregard the interests of minority owners (Dharwadkar et al., 2000; Young et al., 2008). The existing parent-subsidiary relationship determines incentives and channels for opportunistic behaviours through intercompany transactions.

Parent might benefit from wealth transfer through operational transactions that produce an on going diversion of cash flows or assets (Atanasov et al., 2010). Operational transactions are meant as business dealings between the parent and the divested firm that are not conducted on an arms-length basis and are intended to favour the parent firm. Overlapping directors, pursuing parent interest, might prefer to improve the wealth at the aggregate level at the expense of the divested firm interest. Given the lack of effective control by market forces or legal statuses, the ability to pursue expropriating activities is greater in presence of a higher percentage of overlapping directors. In practice legal standards are sufficiently lenient, indefinite or unenforceable to allow the parent considerable latitude in its subsidiary dealings (Slovin and Sushka, 1997). The market entrusts the greater concrete potential of cross-subsidization that might lead to detrimental inefficiencies for the divested firm due to the greater relative voting weight associated to overlapping directors. Being aware of the risks that corporate decisions reflect judgments about maximizing total firms value, market investors will price the new stocks to lower valuations (Bruton et al., 2010), or otherwise stated they will lead to a higher underpricing. Therefore, we argue that the presence of overlapping directors represents an important signalling factor that can reduce or amplify information asymmetry concerns, and as a consequence can affect the underpricing of the divested firm.

Hypothesis 1: *There is a U-shaped relationship between the percentage of overlapping directors and the underpricing of the divested firm*

The arguments presented above on the effect of overlapping directors endorsement on divested firm success take on that the foreseen effect is uniform at all times. However, this might not always be the case. As explained, the presence of overlapping directors affects the market investors' expectation on the value of the new firm at the time of the listing. Since this kind of ties reduces the uncertainty concerning the value

of the divested firm, the strength of the signal provided will vary depending upon post listing differences in parental divestiture. Specifically, in addition to the direct effect that the percentage of overlapping directors has on underpricing, we suggest that the effect is moderated by the percentage of capital stake divested by the parent firm. In other words, the percentage of capital divested by the parent sends a signal to investors about the divested firm value at the time of its listing (Semademi and Cannella, 2011). Market investors know that parent firm has private information about the strengths and prospects of the divested firm. Therefore, the parent will not wish to sell a great ownership stake to the market since it could yield returns when the retained ownership will be ultimately appreciated.

Hypothesis 2: *The percentage of capital divested by parent firm negatively moderates the U-shaped relationship between the percentage of overlapping directors and the underpricing of the divested firm.*

METHODS

Data and sample selection

The ideal room to test our predictions entails divestiture operations through which a unit is hived off to sell a minority stake on the stock exchange. These operations are generally identified in the finance literature as equity carve outs (Nanda, 1991). We follow Hand and Skantz (1999) to extract these operations, labelled in the finance literature as equity carve outs, from Thomson Financial's Security Data Company (SDC) database. After excluding unit offers, right issues, close-end funds among which REIT, partnerships, foreign issuers, ADRs, and financial institutions (SIC code 6000 – 6999), our search yielded 416 completed carve outs offered between 1996 and 2009. We then exclude misclassifications where parents sold 100% of their holdings in the

subsidiaries, issues where the parent and the subsidiary are identical, tracking offers, and firms whose parent firms are not publicly traded or not traded on the US stock markets. Our final sample consists of 141 equity carve outs.

Offer characteristics such as offer size, filing date, offer date, the fraction of the subsidiary owned by its parent prior to and after the listing are from SDC. Stock prices and coverage in the COMPUSTAT database is used to report financial characteristics of the firms. To ensure that the data are accurate and provide ownership figures for firms missing information from SDC, we consult proxy statements and prospectuses. We also examine SEC 10-K forms, prospectuses and proxy statements of both the parent firm and the subsidiary collected through EDGAR database to determine ECO and parent board of directors composition.

Dependent variable

We use underpricing as performance indicator of divested firms. When a firm is underpriced, it experiences high initial returns. Accordingly, *Underpricing* is obtained by the offer price and the closing price of the first day of public trading for each firm's stock. The *Underpricing* is calculated as: $(P_1 - P_0) / P_0$, where P_1 equals the closing price on the first day of trading and P_0 represents the initial offer price of the firm's stock (Certo et al., 2001). The offer and closing price data were collected from the prospectus filings and from Thomson Reuters Datastream database.

Independent variable

Overlapping directors has been measured as the proportion of overlapping directors to the parent firm. These are classified as having parent firm overlap if they are

employed also by the parent firm at the time the divestiture is undergone (Baysinger and Butler, 1985; Cashen, 2008). The variable *Board_Overlap* is expressed as a ratio of overlapping directors to total board directors.

A second key variable in the analysis measures the percentage of capital listed by the parent firm. It has been calculated as the difference between the parent initial stake of ownership in the division and the post divestiture retained one as indicated in the prospectus for each firm. Therefore, the variable *Ownership_listed* represents the percentage of ownership divested by the parent through the divestiture.

Control variables

To account for other systematic determinants of a new firm's market valuation, several control variables have been included in our regression models. These variables comprise divested firm size (*Size*), divested firm profitability (*ROI*), parent retained equity (*Post_Ownership*), divested firm relatedness (*Relatedness*), divested firm risk (*Risk*), divested firm leverage (*Leverage*). A full set of year dummy variables have been considered to control for time effects.

First, we accounted for the possible effects of the divested firm size and profitability based on the reported relationship with listing market valuation (Megginson and Weiss, 1991; Mikkelsen et al., 1997). These have been measured as the logarithm of the divested firm total assets and subsidiary return on investments at the year prior to the deals severally.

We controlled for parental retained equity since parent firm might have information that is unavailable to outsiders concerning the true value of the divested firm. Relevant changes in parent ownership can therefore signal divested firm performance potential.

Post_Ownership is measured as the percentage of equity retained by the parent firm, as reported in the prospectus (Hogan and Olson, 2006).

Relatedness is included since information asymmetry concerns might be stronger for firms unrelated to the parent (Chemmanur and Paeglis, 2001). *Relatedness* is computed comparing the divested firm primary business and the parent core business (at the 2-digit SIC level), and is represented by a dummy variable, coded 1 for related units and 0 for unrelated units (Bergh, 1995).

Anecdotal evidence suggests the risk level of the divested firm business may also affect the market valuation. Therefore, a high-technology dummy variable is equal to one if the firm is from the information technology and software sectors. Loughran and Ritter (2004) and Cliff et al. (2004) categorize firms with the following SIC codes as high-tech firms: 2833, 2834, 2835, 2836, 3571, 3572, 3575, 3577, 3578, 3661, 3663, 3669, 3674, 3812, 3823, 3825, 3826, 2827, 3829, 3841, 3845, 4812, 4813, 4899, 7370, 7371, 7372, 7373, 7374, 7375, 7377, 7378, 7379.

We also used a control for divested firm leverage since a large pre-listing leverage serves as a credible signal of firm's quality because debt (with the threat of bankruptcy) imposes a hard budget constraint on managers, limits management control over firm's cash flows (Ross, 1977; Heinkel and Zechner, 1990). *Leverage* is computed as long-term debt over market value of equity (Su, 2004).

RESULTS

The descriptive statistics and correlations of variables used in this study are reported in Table 1. In terms of the general characteristics of firms in our sample the average

firm size and profitability clearly indicate that our firms are relatively small and performing. A high level of leveraged is shown on average and approximately 50% of the sample undergoing the listing process results related to the parent core business, with firms from the information technology sector accounting for 30 per cent of the sample. With regard to governance structure, the average percentage of equity retained by the parent firm is 53 per cent, which is consistent with results reported in other studies (Pojezny et al., 2006), and the average percentage of ownership listed is 30 per cent. In terms of board composition, our analysis shows that overlapping directors on average represent 21 per cent of the total board members. Finally, according to Table 1, the average level of underpricing is 3 percent, which result in line with previous findings (Benveniste et al., 2008). None of the correlation coefficients raises potential problems of multi-collinearity.

--- INSERT TABLE 1 ABOUT HERE ---

The results of our regression analyses are reported in Table 2. Model 1 of Table 2 reports the control variables for the IPO valuation estimates. Firm profitability is negatively associated with market valuation, while the relatedness with parent core business is positively associated to it. The baseline model explains 19% of the variance. The independent variable was added in Model 2 to test whether there was a significant effect on divested firm underpricing. The coefficient was positive and statistically significant ($p < 0.001$). Model 3 investigates whether the overlapping directors have a U-shaped effect on divested firm underpricing. The explained variance increases to 40%. Results are consistent with our hypothesis 1. Specifically, both overlapping coefficients are considered with the linear effect being negative and statistically significant ($p <$

0.05) and the quadratic effect being positive and statistically significant ($p < 0.001$) confirming our predictions. The effects remain stable across the remaining specifications. In Model 4 the interactions between the overlapping directors and the percentage of capital divested by the parent have been added to test hypothesis 2. The model explains 60% of the variance. The estimation shows that the interaction with the linear term of overlapping directors is positive and statistically significant ($p < 0.01$). The interaction with the quadratic term is negative and statistically significant ($p < 0.01$). This result lends support to our predictions.

--- INSERT TABLE 2 ABOUT HERE ---

The interaction results have been depicted in Figure 1¹. Figure 1 shows that the overall shape of the curve changes with the level of capital divested by the parent given the significance of the interaction term with the quadratic effect. Because of the quadratic interaction, the curves are not parallel. Indeed, since the interaction involves not only first order terms, the curves are not identical in shape. Specifically, for any level of overlapping directors, the curve with lower percentage of ownership listed is mildly more concave upward compared the mean one. A gentle convexity is instead observed for high level of ownership listed. This shows that the quadratic relationship between overlapping directors and divested firm underpricing varies in form as a function of the value of the percentage of capital divested by the parent.

--- INSERT FIGURE 1 ABOUT HERE ---

¹ High and low were defined as 1 standard deviation above and below the mean value of the percentage of capital divested by the parent

DISCUSSION AND CONCLUSION

The present study examines the relationship between divested firm underpricing and wealth and states that the wealth assessment during the first day of trading is a function of the board of directors composition. The observed effect might be explained through several finance literature's theoretical arguments on underpricing (Baron, 1982; Rock, 1986). Actually, it is inferred that information asymmetry concern of market investors represents a root cause of the tested relationship between board composition and underpricing in that the market will attach different value to overlapping directors. The rationale of such effect is supported by the argument that market investors suffer from a bias against risk and don't appreciate initial offerings of firms with an opaque value (Prasad et al., 1995). To support the discussion it is necessary to consider the possible effect of overlapping directors to the firm capacity to create wealth. It seems plausible that positive legitimization effects will accrue to divested firms with overlapping directors. Actually, such effects portend the possibility of future wealth creation by the firm. Ironically, while capital markets show an initial favour for overlapping directors, above a certain level of overlap they become skeptical about the directors capacity to add value to the firm. This is because a high probability of expropriation detrimental for minority shareholders is foreseen due to a multi agency concern that arises on the directors.

The observations mentioned above collectively suggest that board characteristics in a divested firm represent a neglected area of research. Our analysis gives support to the belief that the market investors' valuation is partially a function of the perceived legitimization of the governance arrangements. It suggests that the first day investors' perceive the firm quality employing nonfinancial information. The current study demonstrates that directors might affect wealth creation in a way that has been wholly

overlooked before. Specifically, a high proportion of overlapping directors reduces the legitimization advantages to the extent of underpricing of the share issue. Our findings are consistent with the notion that up to a certain level this governance factor may be strategically used to attract the market investors during the initial floatation. However, at high level it entails the risk that investors' selectivity of board characteristics perceives the strong link with the parent firm as a means through which detrimental cross-subsidizations are assured. Our results also suggest that an increasing percentage of divested capital by parent firm blunts the signalling effect of overlapping directors on the underpricing of divested firm. These findings are consistent with information asymmetry arguments according to which a parent will divest a lower stake if it expects the divested firm performance to increase having information not publicly known. By doing so, it will obtain a premium if the divested firm stock will appreciate subsequent to the operation.

The preceding findings should be esteemed in light of some noteworthy limitations. First, the possibility to generalize this study on the likely performance implications of board composition is limited and should be made with caution. This is because we operationalized the unretained wealth as underpricing, that is a highly context-specific performance variable. Moreover, the underpricing was assessed over a one-day period, reckoned appropriate for IPO considerations (Bruton and Prasad, 1997), but no inference can be made for long-term wealth effects from such initial observed returns. Second, we examined market sorting only for US divested firms. Our results may not be extended to all contexts. Further research is needed to determine whether market evaluations based on secondary qualitative indicators is equally efficacious across countries. We expect corporate governance attributes will be valuable signals, and that they are even more valuable when underlying economic indicators are poorly understood. Finally, another charming area for future research might involve the

exploration of the potential wealth-related implications of other board variables, such as demographic characteristics.

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TABLE 1**Sample descriptive statistics and correlation matrix²**

	Mean	SD	Min	Max	1.	2.	3.	4.	5	6.	7.	8.	9.
1. Underpricing	0.03	0.02	-0.04	0.08	1.00								
2. Board_Overlap	0.21	0.19	0.00	0.80	0.36*	1.00							
3. Ownership_listed	0.30	0.21	0.07	0.83	0.52*	0.15	1.00						
4. Relatedness	0.52	0.50	0.00	1.00	0.22*	0.40*	0.19*	1.00					
5. ROI	0.08	0.04	-0.07	0.29	-0.20*	0.04	-0.09	-0.06	1.00				
6. Post_Ownership	0.53	0.19	0.06	0.86	-0.07	0.08	-0.45*	-0.04	0.12	1.00			
7. Leverage	115.99	65.80	0.94	416.51	0.08	-0.13	0.09	-0.01	0.01	-0.07	1.00		
8. Size	12.95	2.38	5.07	18.58	0.06	0.04	0.01	-0.09	0.04	0.05	0.16	1.00	
9. Risk	0.31	0.46	0.00	1.00	-0.06	-0.11	0.06	-0.27*	0.01	0.06	0.05	-0.01	1.00

²* (p<.05); n=141

TABLE 2

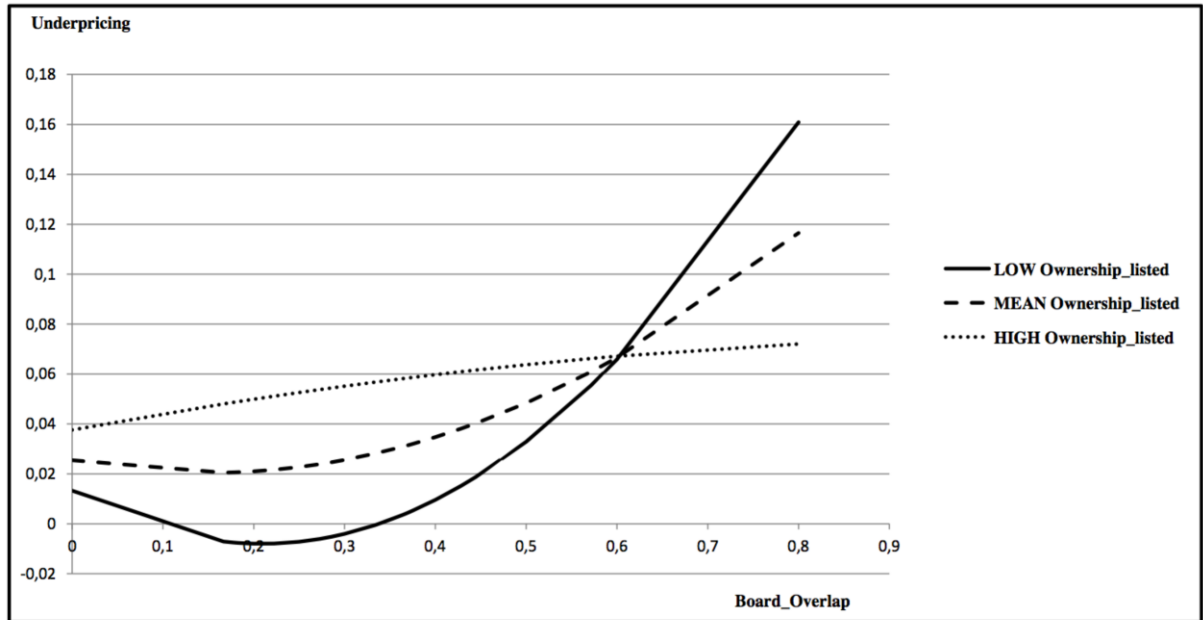
	Model 1	Model 2	Model 3	Model 4
Underpricing	OLS	OLS	OLS	OLS
Board_Overlap		0.05*** (0.01)	-0.05* (0.02)	-0.16*** (0.04)
Board_Overlap^Sqrd			0.21*** (0.05)	0.39*** (0.09)
Ownership_listed				0.04** (0.01)
Board_Overlap* Ownership_listed				0.33** (0.11)
Board_Overlap^Sqrd* Ownership_listed				-0.64** (0.23)
Relatedness	0.01* (0.00)	0.00 (0.00)	0.00 (0.00)	-0.00 (0.00)
ROI	-0.12** (0.05)	-0.12** (0.04)	-0.09* (0.04)	-0.07* (0.03)
Post_Ownership	-0.00 (0.01)	-0.00 (0.01)	-0.00 (0.00)	0.03** (0.01)
Leverage	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
Size	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	-0.00 (0.00)
Risk	-0.00 (0.00)	-0.00 (0.00)	-0.00 (0.00)	-0.00 (0.00)
Year Dummies	Incl. ^a	Incl. ^a	Incl. ^a	Incl. ^a
Const	0.00 (0.02)	0.00 (0.01)	0.00 (0.01)	-0.01 (0.01)
Observations	141	141	141	141
R-Squared	0.19	0.29	0.40	0.60
F-statistic	1.56	2.57	3.78	7.31
Prob (F-statistic)	†	***	***	***

†p < 0.10, *p < 0.05, **p < 0.01, ***p < 0.001; standard errors in parentheses.

^a Dummy variables for year are included in the analysis but not shown to preserve space.

FIGURE 1

Underpricing and Overlapping Board Directors for different levels of Ownership Listed



ESSAY 3

Value Creation Through Equity Carve Outs: Board Composition Insights

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ABSTRACT

From a corporate governance perspective, this paper examines interlinks between board of directors composition and parent stock market reaction to equity carve out announcement. Uncertainty regarding subsequent parent strategies and lack of codified interrelation data between parent and subsidiary present market investors with equivocal guidance about parent gains. Using a sample of 141 US equity carve outs, we argue that the presence of overlapping directors provides investors with a stronger and clearer outlook about parent strategic venue. Results show that market investors reward those firms that grant clarification through board indicators.

Keywords: equity carve out, corporate governance, overlapping directors, event study.

INTRODUCTION

An equity carve out (ECO) is an event through which a parent firm makes a subsidiary go public by selling a part of its ownership in the subsidiary. Scholars, regarding at ECOs as corporate restructuring strategies, shows that carve outs bring a positive stock market reaction to the parent firm (Schipper and Smith, 1986). However compared to other divestiture modes (i.e. sell offs and spin offs) lower abnormal returns are observed (Vijh, 2002) and surprisingly, little is known as to what drives these differences.

Strictly speaking, ECOs may not be considered as “conventional” divestiture operations due to two main reasons. First, the parent firm usually retains the majority ownership in the subsidiary and establishes long-term financial and product-market relations with it (Boone, 2003). These links might affect the performance of the parent firm given the strong interrelation between the cash flows of the two entities. Second, evidence demonstrates that ECOs are transitory arrangements (Klein et al., 1991; Schipper and Smith, 1986): most parent evaluate in a later time the choice of whether to further divest, stop mid-way, or regain control over the business unit (Zingales, 1995; Perotti and Rossetto, 2007).

Underlying effect of these factors is that at the ECO announcement investors receive noisy information flows concerning the potential divestiture gains due to the perceived uncertainty associated to subsequent events (Desai and Savickas, 2010). Investors are less aware of the effective future gains for the parent associated to the announcement; therefore an information asymmetry concern rises (Otsubo, 2009).

Since scholars argue firms consider their governance arrangements as part of their corporate strategy (Moschieri, 2008), our study aims to question whether these might represent valuable signals to provide investors with a stronger and clearer outlook about

parent strategic future. Specifically, market investors critically view and value clarity of strategic direction (Filatotchev and Bishop, 2002). Overlapping board directors, meant as those ones employed also by the parent firm at the time the equity carve out is undergone (Baysinger and Butler, 1985; Cashen, 2009), may represent a superior signal providing a venue where strategic ambiguity may be reduced. To investigate this aspect, the present work will address the following research question: *How do overlapping directors affect to divesting firm value creation?*

In divestiture context, previous researches have implicitly viewed board of directors' contributions to wealth creation as mainly explaining the result of their involvement in the implementation process (Moschieri, 2006). The aim of this study is to extend the role of board of directors as a catalyst for parent wealth creation. We expect board composition to influence investors' perception of the firm divestiture gains acting as a valid signal of its guidance about the future, since investors when unable to discern economic disclosure of value, turn to more social indicators of it (Podonly, 1994).

The present research focusing on the relationship between stock market reaction to ECO announcement and its board composition contributes to the growing body of knowledge concerning the divestiture performance-related effects of governance arrangements (Moschieri and Mair, 2010). As detailed in subsequent sections there are sound reasons for assuming that the presence of overlapping board directors may affect parent stock market reaction to ECO announcement. Gaining a better understanding of the phenomenon is important because it would further delineate how parent-unit governance relationship grants the divesting company to value creation.

BACKGROUND AND THEORETICAL FRAMEWORK

An equity carve out is experienced when a firm divests a business division issuing a portion of its equity shares to the market as an independent company (Schipper and Smith, 1986). The sale of the subsidiary's stock in the IPO might consist of either claims previously owned by the parent, new issued shares or both. Management literature, wondering "how" the choice to divest through an equity carve out creates value, shows equity carve outs are complex operations with a number of possible factors driving the outcome of the transactions. Previous research has established that announcement of intended equity carve outs on average leads to positive abnormal returns. Two sets of explanations are offered, namely the divestiture gains hypothesis and the information asymmetry hypothesis.

According to the divestiture gains hypothesis, value arises because the business focus of both parent and subsidiary firm increases following the equity carve out, cash proceeds can be used to retire debt, the carved-out entity is able to finance its projects, managers' contracts can be designed more efficiently and investors are more inclined to invest into the new pure-play stock (Schipper and Smith, 1986; Aron, 1991; Vijh, 2002). According to the information asymmetry hypothesis, issuing share in the subsidiary firm signals an undervaluation of the larger parent firm assets and an overvaluation of the smaller subsidiary firm assets. Investors use this information and buy shares in the parent firm, leading to positive returns (Nanda, 1991; Slovin et al., 1995).

However, those explanations account for equity carve out as "one shot game" neglecting two pieces of evidence that don't let to consider it as a "conventional" divestiture operation. First, a strong parent–subsidiary relationship is preserved after a carve-out. This represents a way for parent to float only a stake of a subsidiary, while still retaining control over it (Schipper and Smith, 1986). Evidence suggests the parent

firm generally establishes long-term financial and product-market relations with the subsidiary. Literature argues that parent have the possibility to embezzle private benefits of control, since it might affect the outcome of intercompany transactions (Boone, 2003). These entail business dealings not conducted on an arms-length basis, as a means to manage wealth transfer between two entities. Generally speaking, the parent might acquire benefits without harming the minority owners; however, the advantages it stands to realize from self-dealing transactions are usually associated with the diversion of wealth to detriment of other investors. Actually, there might be factors in play that mitigate expropriation incentives. “If a parent intends to sell the subsidiary, it might attempt to improve, or prop, the subsidiary’s performance” (Atanassov et al., 2010). Therefore, propping might be preferable to expropriating accounting for divestiture as a long-time process.

This introduces the second piece of evidence. Most carve-out firms conduct secondary events that affect the parent-subsidiary relationships (Klein et al., 1991). Since the full value of a business unit may not be realized under conditions of uncertainty, by choosing equity carve outs, parent firms may benefit from the access to additional information in the subsidiary industries’ and adjust the divestiture strategy as information arrives. According to the situation evolution, the subsidiary can be further divested at a better price, or brought back into the parent’s fold more easily as opposed to sell offs. However, in any cases again the parent firm will have the possibility to choose a course of action that best fits its strategic requirements (Perotti and Rossetto, 2007; Damaraju, 2008). Otsubo (2009) finds evidence that stock market expects secondary events, and upon the announcement of equity carve outs it evaluates the gains from the combined events as a whole.

As a result, the information flow conveyed at the operation announcement provides market with a little guidance about the parent gain, which makes the effect of these less

informed investors on market stock reaction less pronounced. Indeed, an information asymmetry problem arises since investors are less aware of the effective divestiture gains, strictly depending on the subsequent series of actions. Therefore, investors have to face a greater information uncertainty when a carve out occurs, compared to the informational content generally associated to divestiture events.

Given the opaqueness and uncertain nature of their prior information set, market investors will perceive great news content in information flow inferred by additional signals. Indeed, uncertainty might be reduced if markets have access to alternative types of data (Spence, 1974), which help foresee the subsequent strategic actions. Thus, with high level of uncertainty market investors are likely to shift their attention from financial and operating data, which are not well understood, to secondary information sources. Corporate governance represents a type of secondary indicator that conveys to investors valuable information about not detected actions (Sanders and Boivie, 2004). Indeed, signalling theory suggests that firm characteristics contain information that reduces investors' uncertainty. Because investors will rely on signals that they perceive as credible and disregard those ones deemed suspicious, board of directors characteristics have started receiving a growing attention from the academic community as a signalling device being consistent with the two key criteria: observable in advance and difficult to imitate.

Much prior research argues that directors' characteristics may affect firm market legitimacy since investors turn to "social" indicators when unable to discern economic disclosure. In equity carve outs this assumption is more compelling entailing two interlinked issues. First, directors might be not independently affiliated with only one party of the operation: often, the divesting and the divested firms have some overlapping directors who at the same time seat in both boards. Second, overlapping and non-overlapping directors might have heterogeneous signalling effects providing a

clearer outlook about parent strategic plans. In strategic management research there is the recognition that directors play strategic roles in addition to the traditional control function, especially when firms face a high level of uncertainty (Pearce and Zahra, 1991). Overlapping directors reduce the strategic ambiguity associated to the operation shading light on its rationale. Their coinciding presence in both boards suggests to investors the planned objective of concerted strategic management. Since market investors critically view and value clarity of strategic directions, the presence of overlapping directors, as expression of the foreseen bundling management, might reduce investors' uncertainty and affect their reaction to the equity carve out announcement.

Hypothesis: *A positive relationship exists between the percentage of overlapping directors and stock market reaction to equity carve out announcement.*

METHODS

Data and sample selection

Testing our hypothesis, a working sample of equity carve outs is required. We follow Hand and Skantz (1999) to extract equity carve outs from Thomson Financial's Security Data Company (SDC) database. After excluding unit offers, right issues, close-end funds among which REIT, partnerships, foreign issuers, ADRs, and financial institutions (SIC code 6000 – 6999), our search yielded 416 completed carve out IPOs offered between 1996 and 2009. We then exclude misclassifications where parents sold 100% of their holdings in the subsidiaries, issues where the parent and the subsidiary

are identical, tracking offers, and firms whose parent firms are not publicly traded or not traded on the US stock markets. Our final sample consists of 141 equity carve outs.

Operation characteristics such as offer size, filing date, offer date, the fraction of the subsidiary owned by its parent prior to and after the equity carve out are from SDC. Stock prices and coverage in the COMPUSTAT database is used to report financial characteristics of the firms. To ensure that the data are accurate and provide ownership figures for firms missing information from SDC, we consult proxy statements and prospectuses. We also examine SEC 10-K forms, prospectuses and proxy statements of both the parent firm and the subsidiary collected through EDGAR database to determine ECO and parent board of directors composition.

Dependent variable

Event study methodology is considered as the dominant method for measuring the impact of equity carve outs on parent shareholder value (Schipper and Smith, 1986; Klein et al., 1991). As outlined by Brown and Warner (1985), cumulative abnormal returns are computed (CAR) as the returns over the event window minus the normal returns, which represent the expected returns if the event had not taken place (Campbell et al., 1997). To calculate CAR, we first obtained abnormal returns (AR) for firm j :

$$AR_{jt} = R_{jt} - E(R_{jt})$$

The expected returns, $E(R_{jt})$, are estimated by regressing the firm's returns to market index, corresponding to the MSCI index for each country to control for any country-specific effects on returns, for an estimation period of 200 days (-250 to -50) before the equity carve out announcement data (Fama et al., 1969; Warner et al., 1988). Next, the ARs are accumulated for all operations included in the sample.

The average cumulative abnormal returns to shareholders of parent firms are calculated having concerned different event windows. In particular, the average 2-day

cumulative abnormal return (-1; 0) is 2.01% and the average 3-day cumulative abnormal return (-1; +1) is 2.01%. These returns are positive and statistically significant, consistently with prior studies (Otsubo, 2009). Evidence of a positive announcement effect is found also on the 4-day (-2; 0), 5-day (-4; 0), 9-day (-4, +4) cumulative average abnormal returns for parent firms announcing equity carve outs.

Given these results, we employ in our analyses cumulative abnormal returns for two-day (-1; 0) and three-day (-1; +1) event windows. The choice has been made to capture the significant announcement effect, neglecting other potential baffling ones led in a longer event window (McWilliams and Siegel, 1997).

Independent variable

ECO board of director overlap is measured in two different ways. A dummy variable (*Overlap_Dummy*), coded 1 for overlapping board and 0 otherwise, represents the first one (Loderer, 2002). Proportion of overlapping directors to the parent firm is the second one. ECO board are classified as having parent firm overlap if directors are employed also by the parent firm at the time the equity carve out is undergone (Baysinger and Butler, 1985; Cashen, 2008). The variable *Board_Overlap* is expressed as a ratio of overlapping directors to total board directors. To report the presence of overlapping board member we manually conduct a dyadic cross-check between the prospectuses of the paired firms involved in the operation.

Control variables

To account for other systematic determinants of the stock market reaction to the equity carve out announcement, several control variables have been included in our regression models. These variables comprise firm size (*Size*), ECO relative size (*Relative_Size*), parent profitability (*ROI*), ECO profitability (*ECO_ROI*), parent

retained equity (*Post_Ownership*), ECO relatedness (*Relatedness*), firm risk (*Risk*), firm leverage (*Leverage*), market valuation (*M/B*). A full set of block-holder's identity variables is used to control for agency concerns, and year dummy variables are considered to control for time effects.

First, we account for the possible effects of firm size and the ECO relative size based on prior studies that have shown market reaction at the announcement of corporate restructuring deals is correlated with the relative dollar value of the entities involved (Allen and McConnell, 1998). *Size* is computed as the logarithm of firm total assets, whereas *Relative_Size* is measured by assets of the divested division divided by total assets of the parent, defined at the year prior to the event (Bergh, 1995; Chang and Singh, 1999).

Performance measures are included since ECO, as a mode of divestiture, has been mainly considered a means to recover corporate efficiency (Vihji, 2002). Parent and subsidiary return on investments at the year prior to the deal severally are employed.

We control for parental retained equity since strong governance mechanisms such as large block-holder ownership have been shown to influence favourably divestments enhancing monitoring efficacy (Bethel and Liebeskind, 1993; Hoskisson et al., 1994). *Post_Ownership* is measured as the percentage of equity retained by the parent firm, as reported in the prospectus (Hogan and Olson, 2006).

Relatedness is included since information asymmetry concerns might be stronger for firms unrelated to the parent (Chemmanur and Paeglis, 2001). *Relatedness* is computed comparing the ECO primary business and the parent core business (at the 2-digit SIC level), and is represented by a dummy variable, coded 1 for related units and 0 for unrelated units (Bergh, 1995).

Anecdotal evidence suggests the risk level of the parent business may also affect the market valuation. Therefore, a high-technology dummy variable is equal to one if the

firm is from the information technology and software sectors. Loughran and Ritter (2004) and Cliff and Denis (2004) categorize firms with the following SIC codes as high-tech firms: 2833, 2834, 2835, 2836, 3571, 3572, 3575, 3577, 3578, 3661, 3663, 3669, 3674, 3812, 3823, 3825, 3826, 2827, 3829, 3841, 3845, 4812, 4813, 4899, 7370, 7371, 7372, 7373, 7374, 7375, 7377, 7378, 7379.

We also use a control for parent leverage since ECOs have been studied as equity financing arrangements (Powers, 2003). Leverage is computed as long-term debt over market value of equity in the year of the eco and averaged with the 2 years immediately prior to it (Chang and Singh, 1999).

Finally, market valuation of the parent firm is considered since information asymmetry represents a central factor that might influence the stock market reaction (Schipper and Smith, 1986). M/B is computed as the price at the end of fiscal year multiplied by the total outstanding common stock (Villalonga, 2006).

RESULTS

The descriptive statistics and correlations of variables used in this study are displayed in Table 1. Parents sell an average of 47 percent of their ownership in carve out subsidiary, which is consistent with results reported in other studies (Pojezny et al., 2006). In terms of the general characteristics of firms in our sample the average firm size is quite large (\$9 billion in assets). At the time of carve outs, mean subsidiary total assets as a percentage of total parent assets are 16 percent. The parent average profitability is lower than the subsidiary's one. This clearly confirms that carve out subsidiaries are typically the high-profitability divisions of the parents (Powers, 2003). A high level of parent leverage is shown on average (133.08 percent) confirming the

financial tension of firms undergoing the operation. However, values ranged from 58.67 percent to 286.78 percent. Approximately 50 percent of the carved out sample results related to the parent core business, with firms from the information technology sector accounting for almost one-third of the sample. With regard to board of director composition, our analysis shows that almost 63 percent of our sample presents overlapping directors, which account on average 21 percent of the total board members. None of the correlation coefficients raises potential problems of multi-collinearity.

--- INSERT TABLE 1 ABOUT HERE ---

The results of our OLS estimation are displayed in Table 2. Model 1 of Table 2 reports the control variables effect on abnormal returns. It reveals that leverage coefficient is positive and statistically significant ($p < 0.001$) to stock market reaction. This finding is consistent with Allenn and McConnel (1998). Statistically significant coefficients ($p < 0.05$) are found for *Risk* and *ROI* variables too. The coefficient is positive for the former and negative for the latter, which is in line with previous studies (Chemmanur and Paeglis, 2001). The independent variable *Overlap_Dummy* is added in Model 2 to test whether there is a significant effect of overlapping directors' presence on stock market reaction. The coefficient is positive and statistically significant ($p < 0.001$), supporting our Hypothesis. In Model 3 *Board_Overlap* is introduced. The positive and statistically significant coefficient ($p < 0.001$) can be interpreted as an additional validation of our Hypothesis. It is worth noting that none of the control shares pertaining to different block-holder identities have a significant effect on the CAR. This lets us assume that market investors don't perceive specific agency concerns in equity carve outs due to the control exercised by block-holder categories.

--- INSERT TABLE 2 ABOUT HERE ---

DISCUSSION AND CONCLUSION

This study examines the relationship between equity carve outs and value creation, particularly with regard to whether equity carve out board composition possibly brings additional gains. Uncertainty regarding subsequent parent strategies, lack of codified interrelation data between parent and subsidiary present market investors with equivocal guidance about parent gains. Since market investors have to handle a greater information uncertainty when a carve out occurs, compared to the informational flows generally associated to alternative divestiture modes, board characteristics serve as a secondary indicator of subsequent strategic actions and thereby help market evaluation. The findings of this study demonstrate that within one highly uncertain context market reaction is positively associated with a particular directors' characteristic: overlapping. This governance aspect, visible to market investors', suggests that parent firm has provided endorsement as knowledgeable party. This seems to clarify the parent strategic directions as signal of bundling strategic outline between the two entities. Markets appear to reward those firms that grant such endorsements and clarifications as secondary subjective information indicators. Actually, previous studies generally suggest that endorsement effects from subjective indicators reduce the uncertainty associated with new firms and allow market investors to have more information from which to judge the venture (Chaterji, 2009; Higgins and Gulati, 2003). However, our results imply that these arguments might be referred not only to new and young firms. Even if the signalling firm already has a market track record, investors' valuation might

be affected by directors' affiliation in the carved out subsidiary. This is used as objective information to anticipate the expected parent gains from the equity carve out.

The findings of this study have several implications for theory and practice. Because uncertainty causes investors to discount valuation (Akerlof, 1970), a value enhancing strategy might not realize shareholders wealth accretion until information asymmetry is reduced. The findings suggest that parent firms can benefit by adopting some board attributes that reduce uncertainty. These contribute to corporate governance literature by demonstrating that directors' characteristics represent proxies that affect firm valuation before any objective effects have materialized.

The implications of our work for practise are also important. First, we believe the composition of board is strategically important for management practice. At its broadest sense, our study suggests that parent firms can benefit from directors links with the carved out units since purposeful selection of board members who can signal bundling strategic management is valuable to a firm.

There are several limitations of our findings. Even if consistent with theory, our evidence may not be considered conclusive. Institutional and social network theories would be consistent with our evidence regarding overlapping directors effects. However, we considered the logic we used helpful in this initial inquiry and we encourage future research employing other theoretical foundations. We suggest research may benefit from deepening our early focus on directors' overlapping to also consider other board characteristics, such as demographic variables. We hope our result will spur further analyses of additional board characteristics because even if ours is an important first step, it doesn't offer a complete understanding of the phenomenon.

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TABLE 1
Sample descriptive statistics and correlations¹

	Mean	SD	Min	Max	1.	2.	3.	4.	5	6.	7.	8.	9.	10.	11.
1. CAR (-1;0)	0.02	0.01	-0.03	0.07	1.00										
2. Board_Overlap	0.21	0.19	0.00	0.80	0.36	1.00									
3. Size	15.99	3.34	9.03	23.60	-0.17*	-0.04	1.00								
4. Post_Ownership	0.53	0.19	0.06	0.19	-0.04	0.08	0.02	1.00							
5. Relatedness	0.52	0.50	0.00	1.00	0.06	0.39	0.02	-0.04	1.00						
6. Relative_Size	0.16	0.18	0.00	0.81	0.09	-0.00	-0.06*	-0.12	-0.01	1.00					
7. Risk	0.31	0.46	0.00	1.00	0.08	-0.11	-0.09	0.06	-0.27*	0.15	1.00				
8. M/B	3.45	2.78	0.29	17.12	0.04	-0.07	-0.06	-0.06	-0.02	0.02	-0.13	1.00			
9. ROI_ECO	0.08	0.04	-0.07	0.29	0.12	0.04	-0.03	0.12	-0.06	-0.02	0.01	0.03	1.00		
10. ROI	0.06	0.06	-0.39	0.23	-0.21*	-0.18*	0.02	-0.01	0.06	0.01	0.08	0.10	-0.12	1.00	
11. Leverage	133.08	44.91	58.67	286.78	0.36*	0.16	0.03	0.05	0.16	0.08	-0.09	-0.04	-0.02	-0.08	1.00

¹ *(p < 0.05); n = 141

TABLE 2

	Model 1	Model 2	Model 3
CAR(-1;0)	OLS	OLS	OLS
Overlap_Dummy		0.01*** (0.00)	
Board_Overlap			0.03*** (0.01)
Size	-0.00 (0.00)	-0.00 (0.00)	-0.00 (0.00)
Post_Ownership	-0.01 (0.01)	-0.01 (0.00)	-0.01 (0.01)
Relatedness	0.00 (0.00)	-0.00 (0.01)	-0.00 (0.00)
Relative_Size	-0.01 (0.01)	-0.01 (0.01)	-0.01 (0.01)
Risk	0.01* (0.00)	0.01* (0.00)	0.01* (0.00)
M/B	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
ROI_ECO	0.01 (0.03)	0.00 (0.03)	-0.01 (0.03)
ROI	-0.04* (0.02)	-0.03 (0.02)	-0.03** (0.02)
Leverage	0.00*** (0.00)	0.00*** (0.00)	0.00*** (0.00)
Corporate	-0.00 (0.01)	-0.00 (0.01)	-0.00 (0.01)
Financial	-0.01 (0.03)	-0.00 (0.03)	-0.00 (0.03)
State	-0.06 (0.09)	-0.05 (0.08)	-0.04 (0.08)
Individual	0.01 (0.03)	0.00 (0.02)	0.00 (0.03)
Year Dummies	Incl. ^a	Incl. ^a	Incl. ^a
Const	0.01 (0.01)	0.01 (0.01)	0.01 (0.01)
Observations	141	141	141
R-Squared	0.38	0.46	0.46
F-statistic	2.76	3.58	3.51
Prob (F-statistic)	***	***	***

†p < 0.10, *p < 0.05, **p < 0.01, ***p < 0.001; standard errors in parentheses.

^a Dummy variables for year are included in the analysis but not shown to preserve space.

CONCLUSIONS AND FURTHER RESEARCH

This thesis aims to contribute to the literature that explores divestiture and its effects on performance. Scholars have under investigated the divesting process and how the structuring of divestiture itself concurs in explaining the divestiture performance (Bergh et al., 2008).

To fill this gap, this project provides a groundbreaking model that associate the overall value creation of divestiture operations with their casting, disaggregating the current knowledge on antecedents and outcomes. In doing so, it expands current explanations of divestiture performance, strengthening an emergent grounding that future studies may further to build a more complete understanding of divestiture activity.

Research on this topic has no explicitly investigated how the choice among divestiture methods is related to value. In an attempt to deepen this aspect, this dissertation offers a theoretical contribution enlightening that selection capability affects divestiture performance.

The right selection of divestiture method impacts the parent ability to deploy resources to achieve high yield objectives (Power, 2001; Chen and Guo, 2005). Spin offs, sell offs and equity carve outs pursue similar objectives, but at a closer look, they handle differently the characteristics of the firms involved.

These arguments are consistent with recent studies that have pointed up the importance of questioning on divestiture mode choice, in recognition that firms should not act as passive implementers of divestiture deals.

What specifically is emphasized it's the relevance of the potential link between the divested unit and the parent firm and the effects associated to the tightness of this relationship on performance (Moschieri and Mair, 2011). This depends on the post deal involvement of parent managers, on the effective creation of a newly independent firm

with an own identity and strategy, and on the development of a common sense of opportunity (Moschieri, 2011).

From a corporate strategy perspective, firms are called to face a variety of challenges choosing between integration and independence (Karim and Mitchell, 2000; Capron and Mitchell, 2009). Specifically, our evidence confirms that risks and opportunities arise from the newly established governance structure. This represents a signal used by market investors to evaluate the foreseen value creation associated to the operation.

This thesis should be esteemed in light of some noteworthy limitations. Most of them have been already highlighted in each essay. However, one requires some specific consideration and refers to the generalizability of our findings.

A sample of US equity carve outs has been used for our empirical analyses. This practise has been mandatory given the necessity to collect detailed information concerning the characteristics of the operations and the subsequent governance arrangements employed. Since accurate data are provided only for listed companies, equity carve outs have represented an ideal room for testing our conjunctures. Examining the possibilities for the application of our analyses on a sample of alternative divestiture modes opens new avenues for future research.

Another limitation of the presented empirical analysis resides on the lack of individual level data of board of directors composition. This has forced our inferences to a limited understanding of the factors that affect market perception of potential divestiture value creation. Future research should explore which other characteristics enable divestiture value creation signalling to market investors the wealth-related implications of this hybrid organization spawning. It is expected that such attributes will be valuable signals, especially if employed when underlying economic indicators cannot be easily observed and understood.

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