School of Business
Economics and Law
GÖTEBORG UNIVERSITY

Measuring Value Creation in M&As

- A comparison between related and unrelated firms

Master Thesis in Industrial and Financial Management

Authors:
Viktor Brage
Gustaf Eckerstöm

Tutor:
Stefan Sjögren

Acknowledgements

For their valuable contributions to this thesis, the authors would like to extend their gratitude to Ricard Radomski, Carl Eckerström and Stefan Sjögren at Göteborg University

Abstract

The global mergers & acquisitions (M&A) market is immense. In 2007, M&A volume reached an unprecedented value of $4,500 billion globally. One major concern for M&A activity, however, is whether the transaction creates value or not. Previous studies show that approximately 60-80 percent of all M&As fail to create value. As a result, much effort has been put into investigating sources of value creation in M&A contexts. Many studies single out firm relatedness as an important factor, i.e. the extent to which merging firms share similarities. While plentiful research has been conducted on the subject of firm relatedness in the context of value creation, it has failed to produce consistent results.

This study aims to extend previous research on firm relatedness by introducing the role of intellectual capital in value creation processes pertaining to M&A activity. More specifically, the study theorizes that through the ability to pool two sets of intellectual capital with divergent configurations, unrelated M&As should be expected to create greater value than related ones. This is tested by calculating pre- and post-consummation values of intellectual capital for a sample of 15 related and 15 unrelated M&As. Cumulative abnormal returns are also calculated as a measure of each deals' value creation potential according to market expectations.

The findings of this study suggest that the unrelated M&As consistently seem to outperform related ones in terms of gains to the value of intellectual capital and in terms of market expectations. However, the statistical significance of the findings is insufficient for valid conclusions to be drawn. We argue that further research should be made in order to investigate if statistical significance can be achieved.

Table of Contents

1. Introduction

1.1 Background

The number of mergers and acquisitions (M&A) has over the past quarter of a century expanded greatly. After being just a U.S. business phenomenon, it has grown to be a global occurrence. This was especially evident during the large M&A wave which took place in the late 1990s and early 2000s, where the transaction volumes in Europe now were comparable to those in the U.S. Other markets, like the Asian economies have during this period also seen a lot of M&A activity (Gaughan, 2005). Statistics on global M&A activity show that the last large investment wave took place between 2005 and 2008, reaching an unprecedented global M&A volume of about 4.500 billion dollars in 2007[1].

1.1.1 Definition and Merger Motives

A merger is defined as the combination of two or more firms where the assets and liabilities of the selling firm(s) are absorbed by the buying firm. The merger acts as a fusion between the buying firm, which retains its original identity, and the selling firm(s). An acquisition instead refers to a purchase of an asset which can be a plant, a division or an entire firm (Sherman and Hart, 2005). Mergers and acquisitions have since the 1990s become popular among firms as a way to expand and pursue corporate goals (Gaughan, 2005). Earlier merger waves were mainly carried through with a focus on restructuring and on core and related business. Later waves have focused on strengthening the firms' competitiveness through achieving economies of scale and scope and market power (Hitt, Harrison and Ireland, 2001). According to Krishnamurti (2007) acquisitions makes it possible for companies to grow or enter new lines of business. Sherman and Hart (2005) mention a number of key reasons for engaging in M&As; First of all, it is an efficient way to enter a new market, expand the product line or increase distribution reach. Second, acquiring a firm makes it possible to obtain their "knowledge workers" apart from products and intellectual property. Third, M&As may be motivated by the need to transform the firm's corporate identity. Fourth, it offers an opportunity to spread the risk and cost associated with developing new technology. Fifth, firms may reach the conclusion that they need to expand their current product or service line in order to handle seasonal and cyclical market trends. Lastly, through an M&A a firm is able to acquire brand loyalty and customer relationship which would have been more expensive to build.

1.1.2 Value Creation and Merger Direction

A majority of studies in diversification literature has explored relationships between value creation and diversification in the context of M&A activity. Many studies focus on the direction of the diversification, and put emphasis on what implications it has on M&A performance. The direction of diversification is commonly referred to as relatedness, describing to what extent merging entities are related (Park, 2002). In essence, related M&As are comprised by two firms that are related on many levels, e.g. production, distribution or markets, whereas unrelated M&As represent a consolidation of essentially unrelated firms (Park, 2002; Lubatkin, 1987). Despite the growing amount of M&A transactions, few of them produce the desired or expected benefits for the acquiring firm (Hitt, Harrison and Ireland, 2001). Previous research by Dyer, Kale and Singh (2004); Marks and Mirvis (2001) show that approximately 60-80% of all M&As fail to create value. According to Sherman and Hart (2005), veteran buyers know that the real value from an M&A does not come from machinery and inventory but from long standing customer and other strategic

[1] http://online.wsj.com/mdc/public/page/2_3105-WWmergers-Q12009.html

relationships conveyed with the deal. This reflects the idea of synergy which often is projected to be created via the transaction and live up to its key premise *"the whole will be greater than the sum of its parts"* (Sherman and Hart, 2005). Even though few M&As produce the desired success, the market seems strong. Some of the M&A transactions do also create significant returns for the acquiring firm and thus confirm that acquisitions can be a profitable strategy for both the firms and its shareholders (Hitt, Harrison and Ireland, 2001).

1.1.3 Value Creation Sources

A wealth of studies and research papers has centred on uncovering and explaining the different sources of value that stem from M&A activity. Seth (1990) argues that putting firms' productive resources to optimal use under current environmental restraints and opportunities are central to the process of value creation. In an acquisition context the basis for value creation is, hence, the combination of the merging firms' resources and the situational opportunities and constraints. According to Goold and Campbell (1998), the ability of two or more firms being able to generate greater value as a single entity rather than separately is often referred to as synergy. Goold and Campbell (1998) find that M&A synergies usually take one of six forms:

- ✓ Shared Know-How
- ✓ Shared Tangible Resources
- ✓ Pooled Negotiating Power
- ✓ Coordinated Strategies
- ✓ Vertical Integration
- ✓ Combined Business Creation

The first form, shared know-how, concerns benefits pertaining to the sharing of knowledge and skills. According to Goold and Campbell, the fact that many firms place focus on leveraging core competencies reflect that synergistic effects can be achieved by simply exposing one set of people to another that do things differently. Another form of synergy effect can be achieved by the pooling of tangible resources. By doing so, economies of scale can be attained and duplicate efforts are eliminated. The possibility to gain leverage over suppliers through pooling of negotiating power is a third form of synergy that Goold and Campbell find and further claim that pooled negotiating power can lead to dramatic gains. Further, the ability to apportion markets among units may, among others, trim down inter-unit competition. Hence, it is possibly advantageous for merging firms to align strategies of two or more of its business units. Synergy effects achieved through vertical integration stems from the ability to reduce inventory costs, improve market access and increase capacity utilization. Vertical integration is a particularly important source of synergy for firms within process industries. The final form of synergy found by Goold and Campbell concerns the area of business creation. By the establishment of internal joint ventures or the combination of know-how from different units within the firm the creation of new businesses can be facilitated. With regard to concern for corporate regeneration this type of synergy is emphasized by many firms. (Goold and Campbell, 1998)

1.1.4 Intellectual Capital

Previous quote, regarding the key premise of synergies, alleviates the notion that there exists a value in the gap between a firm's book value and market value. That gap reflects an invisible value omitted from the financial statements which has drawn much research attention (Lev and Zarowin, 1999; Lev, 2001; Lev and Radhakrishnan. Furthermore, Lev (2001) show that, over the period of 1977-2001, an increase from 1 to 5 in market-to-book value have taken place; meaning that about 80% of the firms' market value is not reflected in their financial statements. According to Edvinsson and Malone (1997), the difference between

firms' market value and book value can be referred to as the firms' intellectual capital. Intellectual capital is becoming widely accepted as an important asset from which sustainable advantage and superior financial performance can be created (Barney, 1991). Intellectual capital consists of three types of capital; namely human, structural and customer. Customer capital refers to customer goodwill and brand value. Infrastructure or processes which are unique to the firm or differentiated from the competition is called structural capital. Finally, human capital consists of the value of the firms' individuals capable of creating and renewing market value. Human capital often takes up the most significant proportion of the intellectual capital (Newman, 2002).

1.2 Problem Discussion

Previous research show that approximately 60-80% of all M&As fail to create value (Dyer, Kale and Singh 2004; Marks and Mirvis 2001). Much research has therefore focused on investigating why some of these transactions create value and why some do not. Most empirical investigations have identified the firms' strategic fit as the most important variable (Chatterjee et.al. 1983). These studies usually hypothesize that the more core technologies are related, the tighter the strategic fit which in turn creates more value for the acquiring firms' shareholders (Lubatkin, 1983). The concept of strategic fit that Lubatkin (1983) presents is based on earlier so called diversification contingency frameworks where the value creation from a M&A is dependent on how well the merging firms achieve a strategic fit between their separate competitive strengths and their markets' growth rate (e.g. Rumelt, 1974; Christensen, Berg and Salter, 1976). Overall, the traditional view of the relatedness between the merging firms focuses on the similarity of their operations (e.g. Shelton, 1988; Singh and Montgomery, 1987; Montgomery and Hariharan, 1991). Strategic unrelatedness on the other hand is often viewed as less valuable or even dysfunctional (Shanley and Correa, 1992). Even though several research articles try to explain the success or failure of M&As on basis of the strategic fit or relatedness between the merging firms, the findings are inconsistent. Previous articles find that similarities between the merging firms are more likely to create value than when complementarity (unrelatedness) exists (e.g. Datta, Pinches and Narayanan, 1992; Shelton, 1988; Singh and Montgomery, 1987). Some argue, however, that greater value creation comes from a complementary relationship between the merging firms (Harrison et al., 1991; Hitt et al., 1998; Larsson and Finkelstein, 1999). This is further supported by Lubatkin (1987) who contrary to what he had hypothesized find that the value creation effect was not greater for related firms. Furthermore, Seth (1990a) finds that there exist no significant differences in the value creation effect of these types of M&As and advises researchers to be cautious when making assumptions regarding related M&As superiority.

Most of the research articles that have been written on the value creation effect of M&As have also tried to identify where that value comes from. According to Salter and Weinhold (1979); Singh and Montgomery (1987), certain merger synergies predominately appear in related M&As; namely economies of scale, economies of scope and market power. They claim that these benefits are the sources for a greater value creation in related M&As compared to unrelated. Few articles mention synergies that are unique for unrelated M&As but according to Higgins and Schall (1975) cheaper access to capital, enhanced income stability and a lower bankruptcy risk are among those. It is apparent that little research has been made on synergies created in unrelated M&As. This is further supported by

Seth (1990b) who states that unrelated M&As create synergies but the trick is to better understand where those synergies come from. Larsson and Finkelstein (1999) have reached a similar conclusion in claiming that traditional conceptualization of relatedness partly fails in capturing complementary synergies that may be present throughout the value chain. Furthermore, they claim that the reason for the mixed results in previous research on M&A value creation is the lack of consideration for the effects of complementarity between the merging firms. Based on the varying research results on value creation in related and unrelated mergers, one can first of all argue that more research is needed to further shed some light on the value creation effect in unrelated M&As. Furthermore, it seems relevant to further investigate and discuss how value can be created in unrelated M&As.

As stated previously, market-to-book values among firms have increased, leaving about 80% of the firms market value unrepresented in the balance sheet.
According to Daniel and Titman (2001) investors react appropriately to information about tangible assets and can therefore also be expected to value these assets appropriately thus making the question of relatedness or unrelatedness and value creation for tangible assets in M&As less interesting. Instead, the value above the balance sheet is more difficult to estimate but by understanding where that value comes from it might be possible to better understand the value creation sources in unrelated M&As. According to Seth (1990a), different sources of value creation exist in different types of M&As, stating that the created value essentially depends on the combination of merging firms rather than considered separately. With regards to the potential value creation sources in unrelated M&As, Lubatkin (1987) states that investors might evaluate M&As more on certain characteristics other than on the relatedness with products and markets. These may include: the quality of human capital acquired, the replacement of acquired assets and the competitive position of the acquired business. Qualitative studies by Hitt et al. (1993) show that certain synergistic complementarities like different products, market access or knowhow that enhance one another are success factors in M&As. These types of intellectual capital are according to Arikan (2002) necessary for firms' competitive success. This is further supported by Cheng, Chen and Hwang (2005) who find that intellectual capital is increasingly recognized as a key strategic asset in terms of achieving competitive advantage. According to Hermans and Kauranen (2005), value creation in a firm arises from the combination of intellectual capital. Therefore, the value creation in M&As can be argued to arise from the combination of intellectual capital, more specifically the different components the merging firms possess. Regarding the creation of synergies, Goold and Cambell (1998) claim that synergistic effects in firms can be achieved simply by exposing one set of people to another dissimilar set. Regarding the strategic fit concept, related M&As should possess similar know-how while unrelated M&As should possess dissimilar know-how. Based on the previous statement by Goold and Cambell (1998) regarding synergistic effects in a firm, the dissimilar know how in unrelated mergers may be a source of value creation. Therefore, since it is already stated that it is the combination of intellectual capital that create value in firms, (Hermans and Kauranen, 2005), unrelated merging firms might be able to create greater synergies than related through the combination of intellectual capital. The theory is that unrelated M&As will create a greater value due to the combination of the dissimilar configurations of intellectual capital the firms possess. Unrelated M&A thus create a broader pool of intellectual capital compared to related firms which then may give rise to greater synergistic effects and create more

value for the shareholders. The connection between intellectual capital and value creation in M&As has been paid little attention in previous research. Therefore, it might be valid to investigate the value creation in unrelated mergers from the perspective of intellectual capital and its effects on potential synergy realizations.

1.3 Aim

Research on the relatedness and value creation of firms involved in a merger and acquisition have failed to produce consistent results using the relatedness between firms as a starting point for their hypotheses. Since research on the value creation for unrelated firms is limited, the aim of this study is contribute to that research. Furthermore, we seek to introduce a concept that has been given little attention in previous M&A research; intellectual capital. We argue that the increasing gap between firms' market and book value justifies the need for this research which may lead to a better understanding for firms' invisible value among managers and investors. Therefore, this study will investigate intellectual capitals' contingent value in unrelated M&As and possibly provide evidence for the theory regarding unrelated merging firms ability to create greater value than related firms. The primary aim for this thesis is therefore to contribute to previous research by investigating the following question (Q1): *Do unrelated M&As create more shareholder value than related M&As do?*

In summary, through this thesis we seek to extend previous research on value creation in M&As by focusing on the merging firms' unrelatedness and introducing the concept of intellectual capital. In doing so, we might be able to shed some light on the conflicting results on related and unrelated firms' superiority in mergers and acquisitions.

2. Method

2.1 Research Design

The study conducted in this thesis is entirely quantitative. The methodology is constructed in a manner that facilitates a comparative analysis; comparative in the sense that it entails both comparisons of pre- and post-merger performance and comparisons of performance of related and unrelated M&As. Hence, it can be classified as an event study methodology (e.g. Seth, 1990). M&A related data was acquired from Bloomberg Anywhere's Mergers & Acquisitions database and firm specific data was obtained from Datastream. The final sample consisted of 15 related and 15 unrelated M&A transactions for which cumulative abnormal returns to shareholders, 2 year pre-announcement date value of intellectual capital and 2 year post-consummation value of intellectual capital was calculated. The results of the calculations were subsequently tested for statistical significance. The following sections will describe the collection, selection and analysis process for the used data. Finally, a section will discuss potential validity and reliability issues of the methodology.

2.2 Data Collection / Selection

The data selection process consisted of three main steps. The first step entailed selecting an initial event sample under certain constraints. Further, in the second step the initial sample was condensed into a smaller preliminary sample of representative M&A transactions. Finally, based on availability of relevant deal- and firm specific financial data, the preliminary sample was reduced into a final sample of 15 related and 15 unrelated acquisitions (altogether 30 events). The sample size might raise concerns with regard to external validity (Eriksson and Wiedersheim-Paul, 2001). We do, however, find support in Hitt et al. (1998) (24 events) and Datta et al. (1992) (41 events) that utilize samples of similar size while attaining results of high statistical significance.

The original event sample was obtained from Bloomberg Anywhere's Mergers & Acquisitions database. Several constraints were applied on the initial sample, where some pertained to data availability issues and some were actively applied in order to accommodate event comparability and reliability. The initial constraints were the following: (1) The involved firms are publicly traded on a major American exchange (Cross-border M&As are excluded), (2) the deal's announcement date falls between 1997-05-19 and 2006-05-19, (3), deal status is completed, and (4) nature of bid is set as friendly. The time span constraint was applied for two main reasons. Firstly, the database was limited in the sense that data on M&A activity before 1997 was unavailable. Secondly, since we aim to measure synergy realization, a period of minimum two years after acquisition consummation is adjudged to be sufficient to obtain reliable measurements of long-term value creation (Sudarsanam and Mahate, 2006). Cosh and Guest, 2001) find that the nature of a bid (hostile vs. friendly) affects abnormal returns to shareholders. We therefore seek to eliminate comparability issues by attaining a sample of M&As where the nature of the bid is homogenous. Consequently, a friendly bid constraint was applied on our initial event sample.

The initial event sample consisted of 1764 mergers and acquisitions. This sample was subsequently subject to several constraints. The first one concerned the type of deal, where we excluded all divestment-type transactions. After filtering out divestments, approximately 50% of the initial sample remained. Another major constraint was made with regard to the size of the merging firms. In order to make certain that the target had a sufficient impact on the merged firm we eliminated all transactions were the book value of the

acquirer's assets outsized that of the target's with a factor of more than ten (Hitt et al., 1998). The condensed sample was subsequently subject to a selection process with regard to the relatedness of the merging firms. In order to determine whether an M&A transaction should be classified as unrelated or related we used Standard Industry Classification (SIC) codes (e.g. Larsson and Finkelstein, 1999; Swaminathan, Murshed and Holland, 2008) initially. For an M&A to be classified as related in this thesis, the first four digits of the merging firms' SIC codes (major industry group, industry group, and industry) need to be identical. For unrelated M&As, the first digit of the merging firms' SIC codes need to differ. Consequently, for an M&A transaction to be classified as unrelated, the merging firms' primary operations need to be divergent. In effect, this constraint, along with the size-related constraint, substantially diminished the preliminary event sample which after this stage consisted of some 40 related and 40 unrelated M&A transactions. In order to eliminate disturbance effects, we sought to ensure that no firms included in the 40/40 sample had engaged in any other M&A activity during a period of two years preceding the announcement date of the relevant transaction and the three year period following it. Also, we needed to ensure that relevant financial data was available for all firms included in the sample. Furthermore, we attempted to strengthen comparability between the samples of related and unrelated acquisitions by including transactions of similar size in both samples. After having applied all of the previously mentioned constraints, we attained a final sample of 15 related and 15 unrelated M&A transactions. Financial data and historical stock quotes were all obtained from Datastream. Collecting data from external statistics providers such as Datastream might raise concerns regarding reliability. Collecting all firm specific data from official sources, however, would be very time consuming. Further, since we sought to obtain both book values and stock quotes, we found it favourable to obtain all data from the same source, rather than collecting book values and stock quotes from different sources.

2.3 Data Analysis

The collected data was subsequently analyzed from two perspectives, namely value creation expectation and actual value created in terms of growth in the value of intellectual capital. Cumulative abnormal returns to shareholders in acquiring and target firms served as a measure of the market's value creation expectations for any given M&A transaction. Realized value creation was subsequently measured by the absolute increase in the value of merged firms' intellectual capital.

2.4 Abnormal Returns to Shareholders

Many studies use abnormal returns to shareholders as the primary measure of value creation in M&A contexts (e.g. Singh and Montgomery, 1987; Datta, Pinches and Narayanan, 1992). Whereas some studies only consider abnormal returns to shareholders during a 30-some day post-announcement date period (e.g. Seth, 1990), other attempt to measure value creation within extended time frames (e.g. Gregory, 1997). We attempt to alleviate this problem by measuring both short-term value creation and long-term value creation in terms of value gains to firms' intellectual capital.

We choose to use abnormal returns as an indicator of the market's assessment of a merger's value creation potential (e.g. Swaminathan, Murshed and Holland, 2008), and hence interpret it as a measure of the merger's synergy potential according to market expectations. The abnormal returns were estimated using the market model (e.g. Shelton, 1988; Seth, 1990):

$$\boldsymbol{R_{jt} = \alpha_j + \beta_j R_{mt} + \varepsilon_{jt}}$$

where:

$\boldsymbol{R_{jt}}$ = rate of return on stock *j* over period *t*, *t* = 1 day;

$\boldsymbol{R_{mt}}$ = rate of return market portfolio over period *t*;

$\boldsymbol{\alpha_j}$ = $E(R_{jt})$ - β_jx $E(R_{mt})$;

$\boldsymbol{\beta_j}$ = $\text{cov}(R_{jt}, R_{mt})/var(R_{mt})$;

$\boldsymbol{\varepsilon_{jt}}$ = disturbance term of security *j* in period *t*, $E(\boldsymbol{\varepsilon_{jt}}) = 0$

For each merger, α_j and $\beta_j$were estimated for both acquiring and target firms for a period of 250 trading days ending 3 months prior to the merger's announcement date. The disturbance term ε_{jt} was set to zero in accordance with expectations stated by the market model (e.g. Shelton, 1988; Seth, 1990). The Capital Asset Pricing Model was used for calculations of $E(R_{jt})$ for each stock. The risk free rate was set to 2 percent and the S&P500 index was used as the market portfolio since it includes stocks trading on different exchanges. Abnormal return was subsequently calculated for both acquiring and target firms for each day within a post-announcement window consisting of 23 trading days (announcement date + 22 days) by subtracting the benchmark returns provided by the market model from actual returns (Leemakdej, 1998). Since we are interested in examining the market's assessment of the value creation potential of the merged entities we consequently calculated cumulative abnormal returns (CAR) accruing to both acquiring and target firms (e.g. Swaminathan, Murshed and Holland, 2008). This was attained by weighing the abnormal returns accumulated separately by acquiring and target firms by the proportion of their market value of equity relative to the combined equity of the merging firms during the post-announcement window (e.g. Swaminathan, Murshed and Holland, 2008).

2.5 Intellectual Capital

Previous studies have argued that configurations of previously separated intellectual capital generate market value to firms (e.g. Youndt, Snell, Dean and Lepak, 1996). Hermans and Kauranen (2005) claim that value is created by the interaction between the inherent elements of firms' intellectual capital and, hence, provides a link to firm relatedness in M&A contexts. In this thesis, we seek to investigate value creation in related and unrelated M&As by measuring increases in merged entities' intellectual capital. We choose to define intellectual capital as the difference between firms' market value and book value of equity (e.g. Edvinsson and Malone, 1997) and calculate it as the absolute gap following Chang, Chen and Lai (2006). By calculating absolutes, we also bypass possible issues pertaining to differences in asset pooling methodologies between M&A transactions.

Following Chang, Chen and Lai's (2006) methodology we initially calculated a benchmark value on merged firms' intellectual capital over a 2 year period preceding the announcement date. The benchmark value was subsequently compared with the actual value of merged entities' intellectual capital measured over a 2 year period following acquisition consummation. The difference between the pre- announcement date value and the actual post--consummation date value illustrates the growth in value of the merged firms' intellectual capital and, hence, value creation. The following formula was used to calculate benchmark values of intellectual capital:

$$\boldsymbol{IC_{ij}} = \sum^{n} \frac{\boldsymbol{MV_{it} - BV_{it}}}{n} + \frac{\boldsymbol{MV_{jt} - BV_{jt}}}{n}$$

where:

$\boldsymbol{IC_{ij}}$ = benchmark intellectual capital for merged firms *i* and *j*;

$\boldsymbol{MV_{it}}$ = market value of equity for firm *i* over period *t*;

$\boldsymbol{BV_{it}}$ = book value of equity for firm *i* over period *t*;

$\boldsymbol{MV_{jt}}$ = market value of equity for firm *j* over period *t*;

$\boldsymbol{BV_{jt}}$ = book value of equity for firm *j* over period *t*;

$\boldsymbol{n}$ = number of observations

While Chang, Chen and Lai (2006) uses a 3 year period we settled for a 2 year period mainly because of data availability concerns. A period of 2 years should however be sufficient since it has been used in previous studies (e.g. Gregory, 1997). Intellectual capital values were calculated separately for acquiring and target firms for each day within this period. Market values of equity were available on day-to-day basis and, hence, produced daily variations in the value of intellectual capital.

The post-consummation values of intellectual capital were then calculated using essentially the same formula as for benchmark values. The difference was that instead of two firms, the post-consummation values were naturally calculated for only one firm; the merged entity. Finally, the difference between benchmark- and post- consummation values were calculated and expressed in both absolute numbers and as percentage changes, thus providing figures for value gains in intellectual capital. When calculating the percentage change in intellectual capital, the differences in size between the firms is eliminated.

A point of concern in this methodology pertains to the absence of instruments to adjust for market fluctuations when calculating benchmark- and post-consummation values for intellectual capital. This can potentially affect the reliability of findings negatively. However, the fact that the measurements span over a time period of 2 years may have an alleviating effect since market fluctuations tend to even out in a long-term perspective.

2.6 Statistical Testing

The empirical findings of this thesis, i.e. cumulative abnormal returns to shareholders, absolute change in value of intellectual capital and percentage change in value of intellectual capital were all tested for statistical significance. Findings expressed in absolute numbers were tested with a paired standard student-t test. Findings expressed as percentage changes were tested with a heteroskedastic t-test. Additionally, means and standard deviations were calculated for all found values. (Tsay, 2005)

3. Theoretical Framework

Extensive literature can be found on implications of M&A activity. This section of the thesis aims to provide a partial survey of this literature, though particularly focused on three main areas. The first area concerns value creation following M&A activity. The second area presents recent empirical findings concerning relationships between created value and the degree to which merging firms' characteristics are related, i.e. the roles of relatedness and unrelatedness. The third area covers the role of intellectual capital and presents empirical findings on its value creation capabilities.

3.1 Value Creation in the Context of Related and Unrelated M&As

Datta, Pinches and Narayanan (1991) conclude that there are a select set of factors that explain a considerably large proportion of wealth gains (i.e. created value) related to M&A activity. The type of the acquisition is one of those factors. In relevant literature, the type of acquisition is generally categorized as related or unrelated, referring to firms' field of operations and core competencies. In both related and unrelated acquisitions the transfer of core skills is a predominant source of synergistic benefits and, hence, value. Studies published before Datta et al., however, claim that synergistic benefits lead to the highest levels of value creation in related acquisitions rather than unrelated (e.g. Salter and Weinhold, 1979; Singh and Montgomery, 1987). This claim is based on the reasoning that merger-related benefits in the form of economies of scale, economies of scope and market power economies are predominantly apparent in related acquisitions. However, other studies hypothesize that there are several factors that support unrelated acquisitions in terms of value creation. Steiner (1975) argues that unrelated acquisitions result in cheaper access to capital. Further factors in favour of unrelated acquisitions include enhanced income stability and lower bankruptcy risk (Higgins and Schall, 1975, Seth, 1990).

In a context of firm-relatedness, Seth (1990) attempts to explain the sources of value creation in M&As. Seth embarks from the notion that the combination of specific characteristics of merging entities creates value under different circumstances. He finds that there are five principal value maximizing explanations for M&A activity. They are found within areas of:

- ✓ Market Power
- ✓ Economies of Scale
- ✓ Economies of Scope
- ✓ Coinsurance
- ✓ Financial Diversification

The ability to which a market participant is able to control the price, quantity or nature of the products sold is referred to as market power, and generates extra-normal profits. Increased opportunities for collusion may also create revenue side effects. Seth (1990) claims that market power is an empirically supported source of value creation in related, horizontal mergers, referring to Eckbo (1983) and Stillman (1983).

Benefits arising from economies of scale are generally achieved in areas of purchasing or inventory management and stem from the ability to use common materials or components for a wide array of products. Economies of scale are, by their nature, available to related- and not unrelated M&As. Also economies of scope are generally accepted to be a source of value creation in related M&As. However, for economies of scope Seth (1990) argues that the case is much less "clear-cut" for unrelated M&As with regard to the unrelated nature of the products being brought together.

Coinsurance is a pure financial rationale applied for unrelated M&As. This source of

value creation stems from the notion that merging entities with imperfectly correlated earnings streams will achieve lower levels of bankruptcy risk (Seth, 1990; Higgins and Schall, 1975). Higgins and Schall (1975) find that the imperfect earnings correlation results in a higher expected cash flow to lenders which, in turn, lead to a higher debt capacity and increased leverage of the merged entity. Consequently, the "coinsurance" source of value is created by increased cash flows as a result of tax subsidies rather than the reduction of risk. According to Seth (1990), plentiful empirical evidence supports the "coinsurance effect" in unrelated M&As (e.g. Choi and Philippatos, 1983; Shrieves and Pashley, 1984).

The fifth explanation for value creation that Seth (1990) finds concerns financial diversification and relates to risk. He finds that value created through financial diversification is predominantly apparent in unrelated M&As. The source of value stems from unrelated M&As' ability to reduce the variance of its returns and, hence, level out the risk of its operations.

Through a replication analysis of some 40 studies (including the ones mentioned above) concerning factors that influence value creation in M&A activity Datta, Pinches and Narayanan (1991) find that related acquisitions tend to outperform unrelated ones in terms of created stockholder value. However, the difference in created value between the two types of acquisitions is smaller than the inherent differences between other factors (e.g. type of payment). Nonetheless, they conclude that merging entities that share similarities are likely to create greater value.

Contradictory to the findings of Datta, Pinches and Narayanan (1991); Salter and Weinhold (1979); Singh and Montgomery (1987), others find that complementarity, rather than similarity, is more likely to create the greatest value in an M&A context. Larsson and Finkelstein (1999) claim that researchers studying M&As tend to consider only partial explanations of them. To accommodate this problem, Larsson and Finkelstein develop a conceptual framework that spans across several academic areas of interest. The framework attempts to integrate theories from areas of finance, economics, strategy, organization theory and human resources management. Larsson and Finkelstein (1999) find that organizational integration is the most important factor concerning synergy realization. Further, they find that M&As that are reliant on gains from combining similar marketing operations and production tends to elicit more internal employee resistance than M&As focused on achieving benefits of complementarity. Hence, the merging of unrelated entities are less likely to encounter organizational integration difficulties and, consequently, more likely to achieve synergy realization. The research by Larsson and Finkelstein represent a departure from traditional methods for measuring value creation in M&A contexts. Within the field of economics and finance academia value creation is usually constrained by a lack of focus on internal dynamics. On basis of that opinion, Larsson and Finkelstein (1999) construct a tool for measuring synergy realization including no less than eleven items. Those items include realized benefits from purchasing, production, marketing, market power, administration, vertical economies, new market access, cross-selling, transfer of current know-how and creation of new know-how which all fall under the M&A related synergy forms found by Seth (1990); Lubatkin (1983); Goold and Campbell (1998).

In the vein of Larsson and Finkelstein's study, others have attempted to explain the value creation aspects of M&As on basis of the relatedness of merging entities. The studies often differ in two critical areas. The first area concern how value creation is measured. Whereas e.g. Larsson and Finkelstein (1999)

develop an integrative framework, others use different outputs as the dependant variable. The other critical area concerns how similarity and complementarity between merging entities is defined. Shelton (1988) uses wealth effects in the form of abnormal returns to stockholders as the dependent variable when measuring M&A performance. The abnormal returns are estimated using the, so called, market model (Shelton, 1988; Dodd, 1980). Concerning definition of similarity and complementarity, Shelton (1988) uses a system of strategically classifying acquisitions. Within this system, whether an M&A is to be classified as related or unrelated is dependent on two factors: products and customers. For a merger or acquisition to be classified as related, merging entities need to produce similar products for a similar set of customers. Consequently, for a merger or acquisition to be classified as unrelated, the merging entities need to produce dissimilar products to different sets of customers. Shelton (1988) finds that acquisitions that are classified as related create the greatest value. That is also found to be the case for merging entities with similar products but dissimilar sets of customers since it permits expansion into new markets (Ibid.). While introducing the role of strategic fit and a method for classifying M&As, Shelton's (1988) findings are opposed by later studies (e.g. Larsson and Finkelstein (1999).

Whereas Shelton (1988) uses abnormal returns to stockholders as the value creation measurement and a strategically classifying system for determining the similarity and complementarity of merging entities, Hitt, Harrison, Ireland and Best (1998) take on a different approach. They instead use industry adjusted return on assets as the dependent value creation measurement. Complementarity and similarity is determined by industry adjusted R&D intensity. Hitt et al. (1998) do, however, also undertake a more qualitative approach to analyzing the configuration of merging entities' assets. Findings suggest that resource complementarities are of greater importance than product/market relatedness in terms of value creation Hitt, Harrison, Ireland and Best, 1998).

3.2 Value Creation and Intellectual Capital

Several studies have focused on explaining the relationship between intellectual capital and firms' value and financial performance (e.g. Chang et al., 2006; Cohen and Kaimenakis, 2007; Chen et al., 2005). Few studies, however, place emphasis on the role of intellectual capital in an M&A context. Studies on intellectual capital tend to bring focus from a variety of theoretical schools, ranging from human resources and organization strategy to finance.

According to Youndt, Subramaniam and Snell (2004) there is a consensus within strategic human resources literature that combinations and configurations of previously separated human capital generate market value to firms (Youndt, Snell, Dean and Lepak, 1996). Stemming from human resources literature, there is no mention, however, about what implications that consensus might have on firms' M&A activity and the roles of relatedness and unrelatedness between merging entities.

Cheng, Chen and Hwang (2005) find that intellectual capital is increasingly recognized as a key strategic asset in terms of achieving competitive advantage. Further, they provide empirical evidence which suggests that investors value firms with high intellectual capital efficiency higher than firms with lower levels. Additionally, firms with high intellectual capital efficiency yield greater revenue growth and profitability in both current and future time periods (Cheng, Chen and Hwang, 2005).

Ghosh and Wu (2007) aim to investigate whether intellectual capital is considered in firm valuation contexts or not. They embark

from the notion that capital markets can accommodate information on intellectual capital (referring to Lev and Sougiannis, 1996) and that financial analysts compensate for insufficient financial statements by taking notice of such information (e.g. R&D to sales). The findings of Ghosh and Wu (2007) suggest that measures of intellectual capital, i.e. both market-to-book ratio and Tobin's Q are significant explanatory variables of firm value. Chang, Chen and Lai (2006) investigate the relationship between firms' levels of intellectual capital and wealth gains in the context of strategic alliances. Wealth gains are measured as abnormal returns to stockholders. Chang, Chen and Lai (2006) argue that high levels of intellectual capital (in the form of e.g. quality personnel) can facilitate transfer of inter-firm knowledge in many ways. This ability enhances firms' ability to achieve and sustain competitive advantages and improves financial performance. Even though Chang, Chen and Lai (2006) only consider absolute levels of intellectual capital in their study, they discuss the possible implications strategic fit may have on wealth effects. Among others, they highlight the complementarity of firms' resources as an important factor. In conclusion, they find that firms with higher levels of intellectual capital receive higher wealth gains when engaging in strategic undertakings with other firms without possible complementarity effects taken into account (Chang, Chen and Lai, 2006).

The matter of complementarity concerning intellectual capital is also discussed by Hermans and Kauranen (2005). They argue that value is not created by intellectual capital alone but rather by the interaction of its components; human, structural and relational capital. Hermans and Kauranen (2005) find that empirical co-variation between the components of intellectual capital explain two thirds of the variance in anticipated future sales. Hence, the configuration of intellectual capital is suggested to play an imperative role in the process of value creation.

3.3 Hypotheses

Based on previous research we believe that different configurations of intellectual capital in related and unrelated merging firms will affect the value creation that stems from the M&A. It has already been addressed, in this thesis, as to why an M&A between unrelated firms may produce greater value than a related M&A. Therefore, our hypotheses are:

H0: Unrelatedness between merging firms will not create greater value than relatedness.

H1: Unrelatedness between merging firms will create greater value than relatedness.

4. Empirical Findings

The empirical findings section is divided into two parts; one which displays the calculations on intellectual capital (IC) and one which displays the calculations on cumulative abnormal returns (CAR.

4.1 Intellectual Capital

Figure 1 displays the intellectual capital (IC) value in absolute terms for the unrelated mergers, two years prior to the merger announcement (benchmark) and two years after the consummation date (post-consummation), and the difference between the two (IC-difference). The IC-difference refers to the gain or loss in intellectual capital from each M&A transaction. Five of the transactions have had a negative change in their intellectual capital value while the rest is positive.

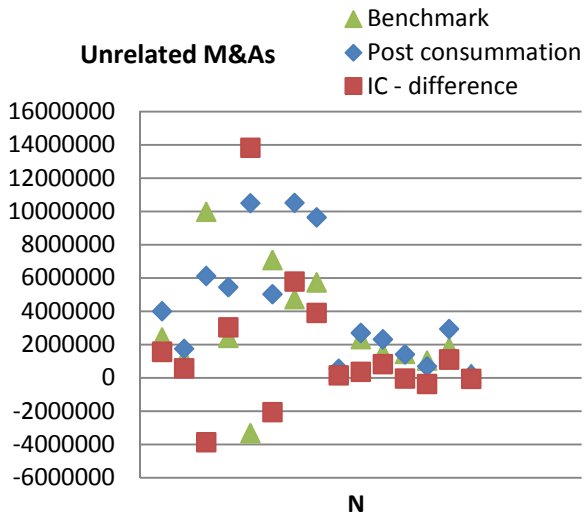

Figure 1. Average absolute value of intellectual capital (IC) for 15 unrelated M&As. Differences in IC-value indicates an increased or decreased value from the M&A transaction.

Furthermore, a paired T-test was conducted between the benchmark and the post consummation for each of the 15 unrelated M&As, see table 1. The test show that the sample is not statistically significant ($p > 0.05$).

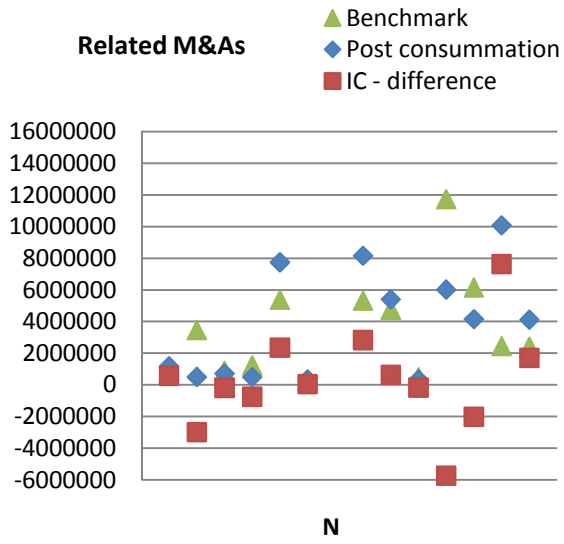

Figure 2. Average absolute value of intellectual capital (IC) for 15 related M&As. Differences in IC-value indicates an increased or decreased value from the M&A transaction.

Figure 2 displays the intellectual capital (IC) value in absolute terms for the related mergers, two years prior to the merger announcement (benchmark) and two years after the consummation date (post-consummation), and the difference between the two (IC-difference). Due to the large size of two of the M&A transactions, these values have been excluded from the figure in order to avoid having a distorted figure. The IC-difference of these two values is negative; -33,324,155 and -83,031,810. As many as eight transactions therefore show a negative effect while seven are positive.

Student-t tests

	Unrelated M&As	Related M&As	Unrelated vs. Related
Paired T-test	**0,069**	**0,11**	
Heteroskedastic T-test			**0,074**

Table 1. Paired student-t tests for 15 unrelated and 15 related M&As. Heteroskedastic t-test for the absolute values of the unrelated and related firms.

The paired T-test for this population also show a non-significant result (p>0.05) with a p-value of **0.11**, see table 1. Lastly, a heteroskedastic T-test was conducted to investigate the possible significance between the two samples. It was conducted on the firms' absolute values. The result shows a p-value of 0,074 which provides evidence for a lack of statistical significance (p<0,05) between the two populations.

Intellectual Capital

	Change in IC, %	
	Related	Unrelated
	-81,066%	64,514%
	99,036%	49,398%
	-85,725%	-38,676%
	-20,366%	125,839%
	-60,589%	415,837%
	43,569%	-29,030%
	19,658%	122,160%
	-80,255%	68,017%
	53,091%	42,235%
	13,506%	15,810%
	-33,680%	55,704%
	-48,716%	-2,210%
	-32,623%	-34,523%
	309,910%	60,6583%
	70,671%	-22,073%
Mean	**11,095%**	**59,577%**
Stdv	**0,977428696**	**1,078592576**

Table 2. Percentage change in intellectual capital for the 15 related and the 15 unrelated M&As, mean values and standard deviations.

The percentage change between the M&As benchmark value and the post consummation for both unrelated and related M&As is calculated to eliminate the differences in size between the firms, it is displayed in table 2. The mean value for the two populations and their standard deviations is also displayed. Unrelated M&As have a considerably higher mean value than related M&As which can also be seen in figure 3. The figure plots the percentage change for the related and unrelated M&As, according to their size, in order to provide a better view of the relationship between them.

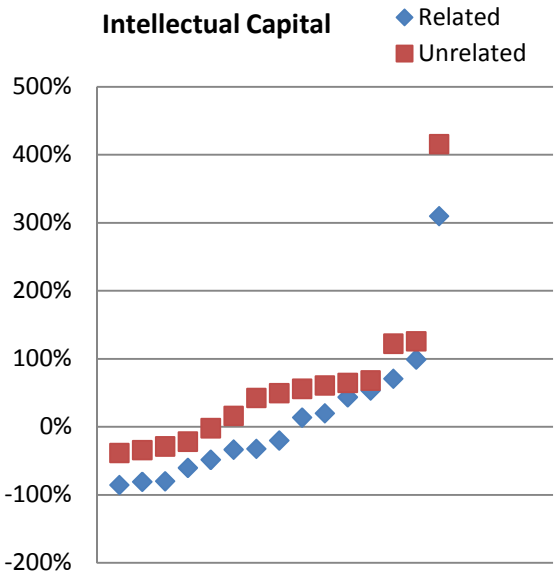

Figure 3. Percentage change in intellectual capital for the 15 related and the 15 unrelated M&As, organized by size for each two samples.

Figure 3 shows that unrelated M&As percentage change overall is higher than for related. Apart from the mean value, the standard deviations within the two populations are also displayed in table 2. For both the unrelated and related M&As, the standard deviations are close to one which indicates that the results may fluctuate a great deal.

4.2 Cumulative Abnormal Return

Table 3 displays the cumulative abnormal returns for the unrelated and related M&As. It also shows the results from the calculated mean values, standard deviations and heteroskedastic T-test for the two populations. As seen in table 3, the mean value is negative for the related M&As while the unrelated M&As have a positive mean value. Also, the standard deviation was measured to estimate the fluctuations in the population. The standard deviation is of similar size for both the related and unrelated M&As. Finally the population was tested for statistical significance with a negative result (p>0,05) since the p-value is 0.092.

Cumulative Abnormal Returns

	CAR	
	Related	Unrelated
	-15,1%	-31,4%
	-19,9%	-1,9%
	-20,0%	19,4%
	9,2%	-13,8%
	-17,8%	48,5%
	24,2%	3,9%
	-14,4%	27,0%
	-32,6%	10,5%
	-19,7%	-19,2%
	15,6%	-1,1%
	22,0%	1,8%
	-11,7%	4,3%
	-24,6%	-7,0%
	16,4%	5,0%
	0,2%	7,2%
Mean	**-5,9%**	**3,5%**
Stdv	**18,1%**	**18,4%**
T-test	**0,092**	

Table 3. Cumulative Abnormal Returns (CARs) for the 15 related and the 15 unrelated M&As, also mean values, standard deviations and heteroskedastic T-test.

Figure 4 shows the relationship between the unrelated and related CARs, organized after size. It indicates a pattern between the investigated M&As where the CARs are overall higher for the unrelated firms in the population.

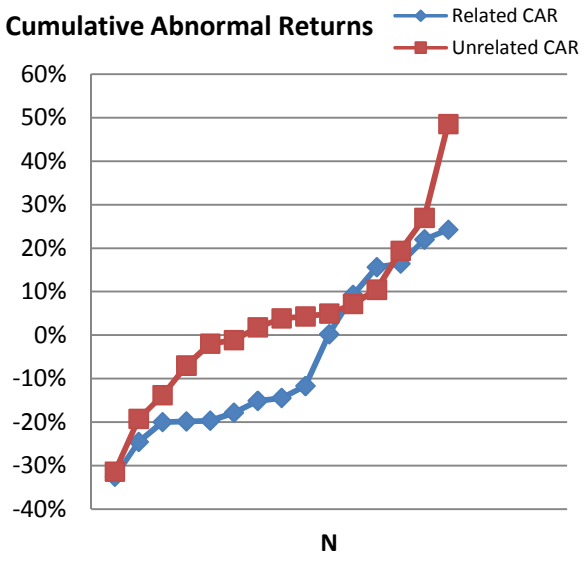

Figure 4. Cumulative Abnormal Returns (CARs) for the 15 related and the 15 unrelated M&As, organized by size for each two samples.

Lastly, figure 5 plots the CARs and IC values together for both unrelated and related M&As. It shows how the two variables correlate within the two merger alternatives. The results reflect a low correlation between CAR and IC for both related and unrelated firms. This can be interpreted from the lack of vertical variations within both samples. The majority of the values can be found on a horizontal plane thus indicating a low correlation between the two variables.

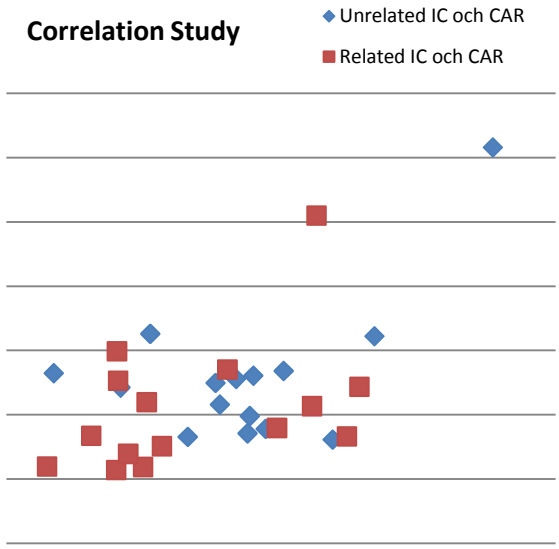

Figure 5. Correlation study between the percentage change in intellectual capital and the cumulative abnormal stock return for the 15 unrelated and the 15 related M&As.

5. Discussion

The discussion section is divided into two parts. The first part analyzes the empirical findings in order to, first of all determine if the hypotheses should be accepted or rejected and second of all how stronger credibility can be achieved. Part two summarizes the implications of the findings on a more general level.

5.1 Hypotheses Outcome and Analysis

Since it is hypothesized that unrelated mergers will create more value than related do, the data will be analyzed with this in mind. As mentioned in the methodology, two types of calculation were conducted on the chosen samples. These are displayed in the empirical findings together with statistical tests on its usefulness. The market-to-book valuation measures the change in absolute value of intellectual capital for the merged entity, thus displaying whether or not synergistic effects have been achieved. The results vary for both unrelated and related mergers, as can be seen from the IC-differences in figure 1 and 2. However, when organizing the percentage change in intellectual capital for the unrelated and related mergers after size, a pattern emerges (see figure 3). The pattern indicates that unrelated mergers experience greater synergistic effects than related mergers. Unsurprisingly, the mean value for the sample is also considerably higher for unrelated mergers. By looking solely at these values it would appear that the null hypothesis should be rejected. However, the credibility of the data must be taken into account.

A couple of significance test were carried through together with calculating the standard deviation within the different samples. First of all, the paired T-test conducted on the benchmark value and the post-consummation value for the unrelated and related M&As, see table 1, shows that no statistical significance is attained for either sample. With p-values of 0.07 and 0.11 respectively, the findings do not fall within a confidence interval of 95% (used by e.g. Datta, Pinches and Narayanan, 1991; Swaminathan, Murshed and Holland, 2008). Hence, the null hypothesis cannot be rejected and our findings cannot be considered to provide confirmation on the hypothesized (H1) superior value creation ability of unrelated M&As. Second, the heteroskedastic T-test, conducted on the absolute value difference in intellectual capital for the unrelated and related M&As, display a p-value of 0.074, see table 1. This might be expected since the variables used to calculate percentage change did not show any significance. On the other hand, it is possible to again argue that statistical significance might be achieved by using a larger sample. Finally, the standard deviations for the percentage change in intellectual capital and for the unrelated and related M&As are close to one. Since the standard deviation in this case represents percentage, a deviation that large provides evidence for the difficulty to reliably estimate the value creation effects in M&As; both unrelated and related. These large variations in value creation among the merging firms might help explain why the findings from previous research have been so inconsistent. Overall, the findings from the calculations on intellectual capital show a pattern indicating a higher value creation in unrelated M&As. However, due to the lack of statistical significance, no valid conclusions may be drawn. By expanding the original sample or by introducing one or several independent variables for regression analysis, significance might have been achieved.

Apart from investigating the firms' intellectual capital, cumulative abnormal returns (CAR) where calculated. These are expected to show the markets anticipations for the M&As synergy potential. The CAR calculations for the unrelated and related M&As show a pattern which indicates that the market

anticipate a higher synergy potential in unrelated M&As, see table 3 and figure 4. The mean values for the two samples, as seen in table 3, differ considerably in favor of unrelated mergers. The unrelated M&As mean value is positive while the mean value of the related M&As is negative. In order to rule out the effect of randomness, a heteroskedastic T-test was conducted for the two samples. Similar to the calculations on change in the value of intellectual capital, the two CAR samples lack significance. The standard deviations for the two samples are, similar to the standard deviations in intellectual capital, quite large which further suggest that there are large differences between M&A deals, unrelated or related.

Lastly, a correlation study was made to investigate the markets' ability to anticipate synergy effects for unrelated and related M&As. As seen in figure 5, no considerable correlation exists in either case. These results indicate that the market cannot anticipate future synergistic effects which thus provide further evidence for the inconclusive results of this study. Therefore, in anticipating synergies, CAR seems to be unsuccessful. On the other hand, further investigation on the time span in which synergies are to be realized may produce a different result.

By weighing the findings on intellectual capital change together with the findings on CAR, it can be concluded that no significant evidence exist for either merger types' superiority. The thesis' null hypothesis can consequently not be rejected and the H1 hypothesis cannot be verified. Despite the lack of significance, intellectual capital change and CAR values displayed in figure 3 and 4 provide indications that unrelated mergers may create more value than related. We argue that those findings are enough to justify further research.

5.2 General Discussion

Due to the lack of statistical significance displayed by our findings, it is not possible to attempt to neither confirm nor reject previous findings on unrelated M&As' superiority in terms of value creation. Although failing to fall within a confidence interval of above 95%, the thesis' findings provide an intriguing link to the role of intellectual capital in M&A contexts. We originally hypothesized that unrelated M&As would create greater value on basis of the pooling of divergent configurations of intellectual capital (following e.g. Goold and Campbell, 1998; Youndt, Snell, Dean and Lepak, 1996). The findings of this study, i.e. that unrelated M&As seem to create greater value for the shareholders, suggests that, albeit lacking statistical significance, the null hypothesis needs to be tested further. Our findings, combined with those of Hermans and Kauranen (2005) provide a possible springboard for future research. Hermans and Kauranen (2005) provide evidence that the configuration of the inherent components of a firm's intellectual capital create firm value. Consequently, it would be interesting to extend their conceptual framework into an M&A context, thus involving more than one firm. A methodology that constructs a model in which firms' configuration of intellectual capital can be used as an independent variable could possibly test the relationship between value creation and intellectual capital adequately.

6. Conclusion

The primary findings of this thesis suggest that unrelated M&As create more value than related M&As do. Due to a lack of statistical significance, however, valid conclusions cannot be drawn on unrelated M&A's value creation superiority.

The aim of this thesis was to empirically test whether unrelated M&As create greater value than related ones. We argue that unrelated

M&As ability to create greater value lies in the ability to pool previously separated sets of intellectual capital with divergent configurations, an ability that theoretically cannot be associated with related M&As. Data was obtained primarily from two databases from which a final sample consisting of 15 related and 15 unrelated M&A transactions was selected. Three main calculations were subsequently made for the firms in each sample, namely; (1) cumulative abnormal returns to shareholders (CAR), (2) benchmark values of intellectual capital, and (3) post-consummation values of intellectual capital. A firm-size weighted CAR was computed for each M&A transaction and was interpreted as the deal's value creation potential according to market expectations. The benchmark values of intellectual capital were also calculated for each deal and consisted of mean values of the difference between market- and book values of equity over a 2-year period preceding announcement dates. Post-consummation values for intellectual capital were subsequently computed in a similar manner but for a time period of 2 years following the consummation date of each M&A transaction. Finally, the difference between benchmark- and post-consummation values of intellectual capital served as a measure of the value creation achieved by each M&A deal.

The initial findings suggest that unrelated M&As indeed do create the greatest value. However, due to a lack of statistical significance, valid conclusions may not be drawn. Hence, the null hypothesis cannot be rejected. Although failing to provide statistically significant results on whether unrelated M&As create greater value than related ones, we argue that the findings of this study are enough to warrant further research. By using a larger sample or by introducing an independent variable for regression analysis, significance may be achieved. Additionally, it also provides incentives to further research the value creating role of intellectual capital in M&A contexts. This is highlighted by the fact that the growth in value of intellectual capital for firms in unrelated M&As consistently outperformed that of firms in related M&As in this study.

References

Arikan, A.M. (2002), "Does it Pay Off to Capture Intangible Assets Through Mergers and Acquisitions?", *Academy of Management Proceeding*, pR1-R6.

Chang, S-C., Chen, S-S., and Lai, J-H. (2006), "The Effect of Alliance Experience and Intellectual Capital on the Value Creation of International Strategic Alliances", *Omega 36*, pp. 298-316.

Chatterjee, S., Lubatkin, M., H., Schweiger, D., M. and Weber, Y. (1992), "Cultural Differences and Shareholder Value in Related Mergers: Linking Equity and Human Capital", *Strategic Management Journal*, Jun., Vol. 13 No. 5, pp. 319-334.

Chen, M-C., Cheng, S-J., and Hwang, Y. (2005), "An Empirical Investigation of the Relationship Between Intellectual Capital and Firms' Market Value and Financial Performance", *Journal of Intellectual Capital*, Vol. 6, No. 2, pp. 159-176

Choi, D., and Philippatos, G., C. (1983), "An Examination of Merger Synergism", *Journal of Financial Research*, 6(3), pp. 239-256

Cohen, S., and Kaimenakis, N. (2007), "Intellectual Capital and Corporate Performance in Knowledge-Intensive SMEs", *Learning Organization*, Vol. 14, Issue 3, pp. 241-262

Cosh, A., and Guest, P. (2001), "The Long-run Performance of Hostile Takeovers: UK Evidence", *ESRC Centre for Business Research, University of Cambridge*, Working Paper No. 215

Christensen, C., R., Berg, N., A., and Salter, M., S. (1976), "Policy Formulation", 7th edition, Richard D. Irwin, Homewood, IL.

Daniel, K., Titman, S. (2001), "Market reactions to tangible and intangible information", *Journal of Finance*, Aug., Vol. 61, Issue 4., pp. 1605-1643.

Datta, D. K. (1991), "Organizational Fit and Acquisition Performance: Effects of Post-Acquisition Integration", *Strategic Management Journal*, Vol. 12, No. 4, pp. 281-297

Datta, D. K., Pinches, G. E., and Narayanan, V. K. (1992), "Factors Influencing Wealth Creation from Mergers and Acquisitions: A Meta-Analysis", *Strategic Management Journal*, Vol. 13, No. 1, pp. 67-84

Dodd, P. (1980), "Merger Proposals, Management Discretion and Stockholder Wealth", *Journal of Financial Economics*, Vol. 8, pp. 105-137

Dyer, J., H., Kale, P., and Singh, H. (2004), "When to Ally & When to Acquire," *Harvard Business Review*, 82 (July–August), pp. 108–115.

Eckbo, B. E. (1983), "Horizontal Mergers, Collusion and Stockholder Wealth", *Journal of Financial Economics*, pp. 241-273.

Edvinsson, L., and, Malone, M., S. (1997), "Intellectual Capital: Realizing Your Company's True Value by Finding Its Hidden Brainpower", Harper Business, New York, NY.

Eriksson, L. T., and Wiedersheim-Paul, F. (2001), "*Att Utreda Forska och Rapportera*", Liber AB.

Gaughan, P., A. (2005), "What Can Go Wrong and How to Prevent It**",** John Wiley & Sons, Incorporated

Ghosh, D., and Wu, A. (2007) "Intellectual Capital and Capital Markets: Additional Evidence", *Journal of Intellectual Capital*, Vol. 8 No. 2, 2007

Goold, M., and Campbell, A. (1998), "Desperately Seeking Synergy", *Harvard Business Review*, Vol. 76 Issue 5, pp. 131-143

Gregory, A. (1997), ”An Examination of the Long Run Performance of UK Acquiring Firms”, *Journal of Business, Finance and Accounting*, Vol. 44, pp. 971-1002

Hermans, R., and Kauranen, I. (2005) “Value Creation Potential of Intellectual Capital in Biotechnology - Empirical Evidence from Finland”, *R&D Management*, Vol. 35, No. 2, pp. 171-185

Higgins, R. C., and Schall, L., D. (1975) “Corporate Bankruptcy and Conglomerate Merger”, *Journal of Finance*, 30(1), pp. 93-113

Hitt, M. A., Harrison, J., S., Ireland, R., D., and Best, A. (1993), “Lifting the Veil of Success in Mergers and Acquisitions”, Paper presented at Annual Meeting of the Strategic Management Society, Chicago, IL., Available from the authors upon request

Hitt, M. A., Harrison, J. S, Ireland, R. D., and Best, A. (1998), “Attributes of Successful and Unsuccessful Acquisitions of US Firms”, *British Journal of Management*, Vol. 9, Issue 2, pp. 91-114

Hitt, M., A., Harrison, J., S., and Ireland, R., D. (2001), “Mergers and Acquisitions : A Guide to Creating Value for Stakeholders”, Oxford University Press, Incorporated

Hughes, A., Mueller, D. C., and Singh, A. (1980), “'Hypotheses About Mergers”, In Mueller, D. C. (ed.), The Determiniants and Effects of Mergers, Oelgeschlager, Gunn & Hain, Cambridge, MA, pp. 27-66

Larsson, R., and Finkelstein, S. (1999), “Integrating Strategic, Organizational, and Human Resource Perspectives on Mergers and Acquisitions: A Case Survey of Synergy Realization”, *Organization Science*, Vol. 10 Issue 1, pp. 1-26

Leemakdej, A. (1998), ”Measuring Abnormal Return of Infrequently Traded Stock in Event Study”, Working Paper, *Thammasat University, Bangkok*

Lepak, D. P. (1996), “Human Resource Management, Manufacturing Strategy, and Firm Performance”, *Academy of Management Journal*, Vol. 39, No. 4, pp. 836-866

Lev, B., and Sougiannis, T. (1996), “The Capitalization, Amortization, and Value Relevance of R&D”, *Journal of Accounting and Economics*, Vol. 21, pp. 107-138

Lev, B., and Zarowin, P. (1999), “The Boundaries of Financial Reporting and How to Extend Them”, *Journal of Accounting Research*, Vol. 37, pp. 353-85

Lev, B. (2001), “Intangibles: Management, and Reporting”, Brookings Institution Press, Washington, DC.

Lev, B., and, Radhakrishnan, S. (2003), “The Measurement of Firm-specific Organization Capital”,
NBER Working Paper, No. 9581, available at: www.nber.org/papers/w9581

Lubatkin, M. H. (1983), “Mergers and the Performance of the Acquiring Firm”, *Academy of Management Review*, Vol. 8, pp. 218-225

Lubatkin, M. H. (1987), “Merger Strategies and Stockholder Value”, *Strategic Management Journal*, Vol. 8, pp. 39-53

Marks, M., L., and Mirvis, P., H. (2001), “Making Mergers and Acquisitions Work: Strategic and Psychological Preparation,”*Academy of Management Executive*, Vol. 15, pp. 80–94

Montgomery, C., A., and Hariharan, S. (1991), “Diversified Expansion by Large Established Firms”, *Journal of Economic Behaviour and Organization*. Vol. 15, pp. 71-89

Newman, V. (2002), “Intellectual Capital: Trick or Treat?”, *Knowledge Management*, pp.24.

Park, C. (2002), "The Effects of Prior Performance on the Choice between Related and Unrelated Acquisitions: Implications for the Performance Consequences of Diversification Strategy", *Journal of Management Studies*, Vol. 39 Issue 7, pp. 1003-1019

Ramaswamy, K. (1997), "The Performance Impact of Strategic Similarity in Horizontal Mergers: Evidence from the U.S. Banking Industry," *Academy of Management Journal*, Vol. 40, pp. 697–716

Rienecker, L., and Stray Jørgensen, P. (2002), "Att Skriva en Bra Uppsats", Liber AB.

Rumelt, R. (1979), **"**Evaluation of Strategy: Theory and Models", in Schendel, D. and C. Hofer (eds), Strategic Management: A New View of Business Policy and Planning. Little, Brown, Boston, MA, pp. 196-212

Salter, M. S., and Weinhold, W. A. (1979), "Diversification through Acquisitions: Strategies for Creating Economic Value", *The Free Press*, New York

Seth, A. (1990a), "Value Creation in Acquisitions: A Re-Examination of Performance Issues", *Strategic Management Journal*, Vol. 11, No. 2, pp. 99-115

Seth, A. (1990b), "Sources of Value Creation in Acquisitions: An Empirical Investigation", *Strategic Management Journal*, Oct., Vol.11, No.6, pp. 431-446.

Shanley, M., T., and Correa, M., E. (1992), "Agreement Between Top Management Teams and Expectations for Post Acquisition Performance", *Strategic Management Journal*, Vol. 13, pp. 245-266

Shelton, L. (1988), "Strategic Business Fits and Corporate Acquisition: Empirical Evidence", *Strategic Management Journal*, pp. 279-288

Sherman, A., J., and Hart, M., A. (2005), "Mergers and Acquisitions from A to Z", 2nd Edition, AMACOM

Shrieves, R. E., and Pashley, M. M. (1984) "Evidence on the Association between Mergers and Capital Structure", *Financial Management*, pp. 39-48

Singh, H., and Montgomery, C. A. (1987), "Corporate Acquisition Strategies and Economic Performance", *Strategic Management Journal*, Vol. 8, pp. 377-386

Steiner, P. O. (1975), "Mergers", *University of Michigan Press*, Ann Arbor

Stillman, R. (1983), "Examining Antitrust Policy towards Horizontal Mergers", *Journal of Financial Economics*, 11(1-4), pp. 225-240

Sudarsanam, S., and Mahate, A., A. (2006), "Are Friendly Acquisitions Too Bad for Shareholders and Managers? Long-Term Value Creation and Top Management Turnover in Hostile and Friendly Acquirers", *British Journal of Management*, Vol. 17, pp. 7-30

Swaminathan, V., Murshed, M., and Hulland, J., (2008), "Value Creation Following Merger and Acquisition Announcements: The Role of Strategic Emphasis Alignment", *Journal of Marketing Research*, Feb., Vol. XLV, pp. 33-47

Tsay, R., S. (2005), "Analysis of Financial Time Series", Second Edition, John Wiley & Sons, Inc., New Jersey

Youndt, M. A., Subramaniam, M., and Snell, S. A. (2004), "Intellectual Capital Profiles: An Examination of Investments and Returns", *Journal of Management Studies*, Vol. 41, No. 2

Youndt, M. A., Snell, S. A., Dean, J. W., and Lepak, D., P. (1996), "Human Resource Management, Manufacturing Strategy, and Firm Performance", *Academy of Management Journal*, Vol. 39, No. 4, pp. 836-866