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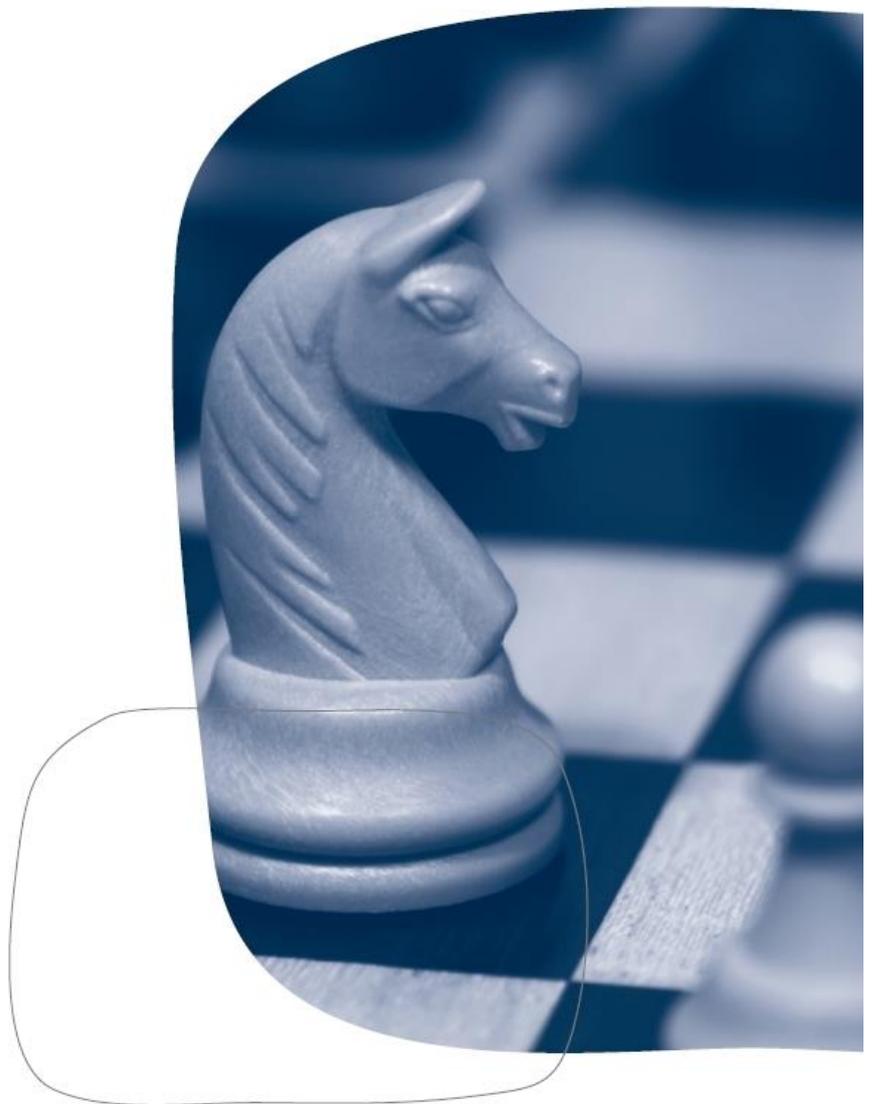


# Let's stay in touch:

## The carve-out option for conglomerates

### M&A Research Centre – MARC

September 2017



## **MARC – Mergers & Acquisitions Research Centre**

MARC is the Mergers and Acquisitions Research Centre at Cass Business School, City, University of London – the first research centre at a major business school to pursue focussed leading-edge research into the global mergers and acquisitions industry.

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# Overview

Whether a conglomerate is an efficient model for a business has been a question for the markets for many years. And it's not just a question of conglomerates being potentially undervalued because they have units whose value is not recognised in the share price. It's also about whether they are actually run more inefficiently than pure-play entities.

The question of whether a conglomerate is an efficient organisational structure for the purpose of efficient allocation of scarce capital has engaged scholars since the 1980s, triggered by the increasing trend among diversified firms to sell-off many of their component businesses.

Many corporate finance scholars have argued that the internal capital markets operated by diversified firms allocate capital inefficiently, deviating from the principle of investing in the most efficient segments of their businesses.

So, what are a conglomerate's CEO's options?

- Spin-off: Distribute shares in a subsidiary to your own shareholders
- Sell-off: Sell a subsidiary (either full IPO or trade sale)
- Carve-out: IPO a minority stake in a subsidiary

Of the three options, the first two give up influence on the spun-off business. You are effectively telling the market that either you cannot allocate capital efficiently or that you do not think the market will give you credit for the value while you still have influence, assuming, of course, that the reason for the sale is not just a simple change in corporate strategy leading to the sale of a non-core business. But through these options you and your shareholders will get the greatest

freedom in terms of the ability to redeploy capital.

We also know that the carve-out is rarely a permanent solution. Only 8% of carve-outs continue to exist as parent-controlled public companies after five years, that is, where the parent owns more than 50% of shares. Nearly 40% are ultimately acquired by third parties, and an additional 31% see the parent stake reduced to less than 25%.

So, for carve-outs we need to consider:

1. Will it improve your capital efficiency?
2. What is it that will make the difference?
3. Where will it lead eventually?

This report answers these three questions and comes up with the following answers:

1. Unlike spin-offs or sell offs, carve-outs improve investment efficiency
2. Internal (board structure, etc.) and external (outside monitoring and analysis) changes in governance drive the difference
3. Should it go well, you may well end up buying the floated stake back (this is not a tautological statement: we are not talking about just identifying hidden value, but rather how the carve-out itself can improve profitability in ways not possible within the existing corporate structure).

So, should you perceive issues around capital allocation in your business, do consider the carve-out option even though it will mean real change and more external pressures. But be aware you may well be employing your spun-off colleagues again in the very near future!

And, numerous studies have shown, carve-outs are often well received by the market, providing a significant share price return upon announcement of between 1-2%.

# What we knew (or thought we knew)

The growth of the conglomerate structure, although now seemingly out of favour, did have a sound theoretical basis. The conglomerate head office functions as a capital market, playing the allocating role through the internal capital market (ICM). Such a market could be seen to have information advantage over investors in the conventional external capital market in being able to assess the strategic and value creation potential of the different portfolio businesses using internally generated information that is not accessible to external investors. Moreover, this information advantage allows the conglomerate to pick potential winners and allocate capital to the highest valued investment opportunities, thereby maximising the returns to the conglomerate's shareholders.

This benign view of the efficiency of the ICM was challenged by several scholars who identified a range of impediments to the putative efficiency of the ICM.

## *Conglomerate reorganisation*

The trend towards conglomerate reorganisation was attributed to the realisation of the failure of the capital allocation function of the conglomerate firms which undermined the financial rationale for the structure. Berger and Ofek<sup>1</sup> provided empirical evidence that the stock market valuation of conglomerate firms in the US was significantly less than the sum of the values that could be assigned to the component businesses of those conglomerates. Their methodology involved estimating the value of each component business by comparison with the valuation of an independent, stand-alone single-segment firm with valuation based on the assumption that such a pure-play was a reliable proxy for the conglomerate's component segment.

Several explanations have been offered for this undervaluation phenomenon<sup>2</sup>. Among them is that conglomerates have failed in their ICM role

and do not always allocate capital to the highest valued portfolio businesses. Complexity of the conglomerate business portfolio, complexity of the administrative structure, internal politics of the capital allocation process, agency conflicts between the top managers and divisional managers and between the top management and the shareholders are some of the factors that have been examined as sources of dysfunctionality of the ICM<sup>3</sup>. A corollary to this argument is that any restructuring of the conglomerate portfolio which results in greater focus should improve the efficiency of the ICM. One should therefore observe a significant improvement in the investment efficiency of the parent following such re-focusing.

Many other studies have empirically tested for the inefficiency of pre-restructuring parent ICM using data from the post-restructuring parent and its offspring such as the spun-off business (see, for example, Ahn and Denis, 2004<sup>4</sup>). These reported significant improvement in investment efficiency of parent firms.

## *Questioning the improvements*

However, Colak and Whited<sup>5</sup> (hereafter, 'C&W') more recently examined whether spin-offs and sell-offs really lead to improvements in the functioning of the internal capital markets of conglomerates. The authors posit that the decisions to restructure and to improve the ICM are decisions linked to the efficiency of the corporate prior to the event and that any assessment of the impact of restructuring on ICM efficiency should address the self-selection bias. With this methodological refinement, C&W reported no improvement in the ICM following spin-offs and sell-offs when compared to a matched control sample. However, they did not address carve-outs...

<sup>1</sup> Berger, P.G. and Ofek, E, Journal of Financial Economics, 1995

<sup>2</sup> Milgrom, P. and Roberts, J. Perspectives on Positive Political Economy, 1990

<sup>3</sup> Scharfstein, D.S. and Stein, J.C. Journal of Finance, 2000

<sup>4</sup> Ahn, S. and Denis, D.J. Journal of Financial Economics, 2004

<sup>5</sup> Colak, G. and Whited, T.M. The Review of Financial Studies, 2007

## *The link to M&A*

Carve-outs enable the parent to establish the offspring's value in a more transparent manner, namely, by reducing the information gap that may exist between company insiders and the capital market participants (i.e., the company outsiders). In other words, the equity carve-out makes it possible for investors to gain a better understanding of the operations of the carved-out subsidiary<sup>6</sup>. One reason for the increased transparency is the fact that the carve-out is associated with the release of information about the offspring through the filing of different regulatory forms such as registration statements, 10-Ks, proxy statements and annual reports.

## *The best of both worlds?*

At the same time the carved-out entity can still enjoy most of the synergistic benefits arising from joint operation with the parent company. Thus, the parent can unlock hidden value and at the same time reap the potential benefits of preserving the ICM, thereby increasing the combined value of the parent. The hidden value is expected to be more transparently reflected in the stock price of the offspring because of the likely boost in the number of analysts following it and the enhanced quality of the information that is disseminated about the business segment as well as the parent. In addition, the carve-out allows the different business segments of the parent to be valued by analysts who have developed expertise in their respective industries, consistent with the evidence that both the number and the specialisation of analysts are improved following carve-outs.

## *Governance improvements*

Moreover, carve-out as a mechanism for restructuring a given diversified business has management incentive-related advantages<sup>7</sup>. Post-carve out, the offspring management can be rewarded in its own stock, thereby

enhancing management-stockholder alignment. In addition, there is some evidence that the adoption of segment-based incentive plans could exert a positive influence on the quality of employees that either the offspring or the parent can hire<sup>8</sup>. Such incentive alignment enhances both the offspring's and parent's valuation.

With the separate listing of the offspring, which nevertheless remains within the majority ownership and control of the parent, the financing and investment cash flows between the two entities are more transparent and more rigorously monitored by analysts and investors. This enhances the quality of investment decision processes within the diversified parent and allows the parent to focus on its core business, thereby boosting the efficiency of its ICM. This opportunity for enhanced transparency and monitoring of the ICM, while essentially preserving its scope, differentiates a carve-out from a spin-off or a sell-off.

## *Both parent and offspring can benefit*

Moreover, since the restructuring is motivated by the need to improve the allocative efficiency of the ICM, and poor corporate governance is a possible source of such inefficiency, governance structures of the parent and the offspring are expected to change as a result of the carve-out. Such structural changes are both internal and external to the firms and include changes to the board (its size and independence) and level of analyst following.

In addition, because of the potential decrease in information asymmetry and improved management incentive plans following carve-outs, we expect that the quality of corporate governance of both parent and offspring would improve following the restructuring event. The augmented corporate governance characteristics of the parent company are likely to drive the observed improvement in the efficiency of the ICM.

<sup>6</sup> Desai, C.A., Klock, M.S. and Mansi, S.A. *Journal of Banking and Finance*, 2011

<sup>7</sup> Holstrom, B. and Tirole, J. *The Journal of Political Economy*, 1993

<sup>8</sup> Kumar, R. and Sopariwala, P.R. *The Journal of Finance and Quantitative Analysis*, 1992

## Our findings

First, we look at whether investment efficiency is improved by carve out. The results shown in Figure 2 below provide consistent evidence that carve-outs can increase the level of investment efficiency of the ICM in conglomerate firms. This supports our *a priori* expectation that carve-outs present an effective mechanism by exposing the given carved-out segment to greater stock market scrutiny, imposing greater transparency on the functioning of parent's own ICM and improving the quality of corporate governance of the parent and offspring. The fact that parents are better able to allocate capital across different business segments following carve-outs also suggests that the pre-restructuring parent was suffering from inefficiency of the ICM.

### *What is driving the improvement?*

If we just consider what changes do take place in a carve-out, then we find that the analyst coverage of both parent and offspring firms increases significantly following the carve-out. We also find that carve-outs lead to improvements in some internal governance characteristics of parent firms such as greater board independence, smaller board size and CEO compensation based on stronger stock-based incentives. Our findings then indicate that the observed improvements in investment efficiency of parent firms are driven by the positive changes in the internal and external governance characteristics in these firms.

Figure 3 shows the results from the analysis. We note that there was insufficient information for some of the companies in the matched control sample. As a result, we could not include all measures of internal and external corporate governance quality in our regression model (Specifically, we had to exclude the following variables: 'Change in Shares of Institutional Investors', 'Change in CEO Tenure', and 'Change in Analyst Forecast Error'). Overall, the results presented in the

figure confirm the robustness of our findings and show that the improvements in corporate governance characteristics are significantly related to the change in investment efficiency and valuation following carve-outs. Specifically, our analysis shows that greater board independence, lower board size, separation of the roles of CEO and chairman as well as higher non-cash CEO compensation are all significantly related to the change in relative value added. In addition, greater analyst coverage and higher non-cash CEO compensation are significantly related to changes in excess value.

### *What is the end-game?*

Finally, inspired by the literature which shows that carve-outs tend to be a temporary organisational form, we examined the change in allocational efficiency and valuation of the parent company within the five sub-groups described in the appendix section. Our analysis (Figure 4 below) shows that in the sub-group of carve-outs which are followed by re-acquisition of full control of the subsidiary, the parent firms tend to experience the most significant improvements in investment efficiency and valuation (in terms of consistency of positive outcome, regardless of the measure used). Note the corporate action may take place beyond the analytical measurement horizon used here. These results are consistent with the analysis in Cai and Vijh<sup>9</sup> who show that companies with higher valuation are more likely to become acquirers. We interpret these findings as evidence that the observed positive changes in the parent firm following the initial carve-out event present the parent with a stronger capability to buy back the offspring since they make it easier for the parent to obtain financing for the acquisition either in the form of equity or debt.

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<sup>9</sup> Cai, J. and Vijh, A.M. The Journal of Finance, 2007

Figure 2: Change in investment efficiency and firm value post carve-out

Event	Relative Investment Ratio		Relative Value Added		Excess Value	
	2 yrs	3 yrs	2 yrs	3 yrs	2 yrs	3 yrs
Carve-out	Positive moderate	Positive very weak	Positive strong	Positive moderate	Positive moderate	Negative very weak

Source Cass Business School

Figure 3: Difference-in-difference analysis of the effect of changes in corporate governance characteristics following carve-out on investment efficiency and valuation of the parent.

	Change in Relative Investment Ratio	Change in Relative Value Added	Change in Excess Value
Change in Analyst Coverage	Positive very weak	Positive very weak	<b>Positive strong</b>
Change in Board Indep.	Negative very weak	<b>Positive strong</b>	Negative very weak
Change in Board Size	Positive very weak	<b>Negative strong</b>	Positive very weak
Chairman/CEO identical	Positive very weak	<b>Negative strong</b>	<b>Negative strong</b>
CEO Comp. (Non-cash)	Negative very weak	<b>Positive strong</b>	<b>Positive strong</b>
CEO Comp. (Cash)	Negative very weak	Positive very weak	<b>Positive strong</b>
Observations	93	93	93

Source: Cass Business School

Figure 4: Change in investment efficiency and firm value per final outcome Sub-sample following the carve-out

Events	Relative Investment Ratio		Relative Value Added		Excess Value	
	2 yrs	3 yrs	2 yrs	3 yrs	2 yrs	3 yrs
Spin-off (A)	Positive very weak	Positive weak	Positive very weak	Positive moderate	Negative very weak	Negative moderate
Sell-off (B)	Positive very weak	Positive very weak	Positive moderate	Positive moderate	Negative very weak	Negative very weak
Re-acquisition (C)	Positive weak	Positive moderate	<b>Positive strong</b>	<b>Positive strong</b>	Positive moderate	Positive moderate
SEO (D)	Positive moderate	Positive very weak	Positive weak	Positive very weak	<b>Positive strong</b>	Positive very weak
Retention (E)	<b>Positive strong</b>	Positive moderate	Positive moderate	<b>Positive strong</b>	Positive very weak	Positive very weak

Source: Cass Business School

## The carve-out

A carve-out is the initial sale by a corporation of common stock in one of its business units. The initial public offering generally involves less than the entire amount of the stock in the unit so the parent company retains an equity stake in the subsidiary, and indeed often involves retention of a controlling stake.

**Case Study** Phillip Morris's 2001 equity carve-out of a portion of its ownership in subsidiary Kraft Foods resulted in what at that time was the second largest initial public offering in U.S. history at \$8.7 billion.

Demand for the Kraft issue was strong enough to allow the managers, Credit Suisse First Boston and Salomon Smith Barney, to increase the issue price to \$31 per share from an earlier estimate of \$27 to \$30. Kraft, owner of well-known products including Maxwell House coffee, Post cereals, and Planters peanuts, was wholly owned by Phillip Morris prior to the IPO. Subsequent to the carve-out, Phillip Morris held slightly less than 50% of Kraft's class A common stock but controlled nearly all of the firm's voting shares. Proceeds from the stock issue were to be used to reduce Kraft's immense debt, which was incurred when the company in late 2000 purchased Nabisco Holdings for nearly \$20 billion.

Below we show a sample of other carve-outs:

Figure 1: Sample equity carve-outs in the US and Europe

Year	Parent (country)	Subsidiary carved out	% of Equity in IPO	IPO raises (\$m)
2015	Credit Agricole (France)	Amundi	20	1,600
2015	Bayer AG (Germany)	Covestro	31	1,600
2006	Halliburton (US)	KBR	17	473
2006	Agilent Technologies (US)	Verigy	15	128
2005	Thyssen-Bornemisza (NL)	HIS, Inc	25	232
2005	AMD and Fujitsu (US & Japan)	Spansion Inc	33	470
2004	Titan International (US)	Titan Europe	60	40
2000	Siemens AG (Germany)	Infineon Technologies	29	11,709
2000	ZFS (Switzerland)	PSP Swiss Property	52	278
1999	Bayer AG (Germany)	Agfa-Gevaert	50	1,782

Source: Cass Business School

## Conclusions and implications

**B**y accounting for the problem of self-selection bias we demonstrate that the improvement of the internal capital market is a result of the refocusing activity itself. In particular, our results show that investment efficiency is significantly enhanced following carve-outs and that these results are not driven by any inherent characteristics associated with companies which choose to perform a carve-out but by the carve-out itself.

### *Real change, not just valuation transparency*

Importantly, we also demonstrate that the improvement in investment efficiency of parent firms is linked to increased capital market scrutiny and board independence as well as reduced board size in these companies following carve-outs. Our analysis shows that the enhanced allocative efficiency is further related to the fact that CEOs of the parent firms have stronger incentives to act in the best interest of shareholders since their compensation contracts are geared more towards non-cash and equity-based compensation following carve-outs.

### *Next steps post carve-out*

Our findings on follow-up events and re-acquisition are probably not surprising since highly-valued companies are likely to be able to obtain financing for the re-acquisition of the carved-out subsidiary relatively more easily than their lower valued competitors. This augmented access to financing is twofold. First, the parent has the opportunity to use its highly valued stock as a currency in the re-acquisition. Second, the parent also has an enhanced ability to obtain debt financing from the capital

markets given the improvement in the value of its shares. In contrast, in the cases where the initial carve-out event results in a significant deterioration in the valuation of the parent (which tends to be the case for carve-outs followed by a spin-off) or does not result in any significant shifts in the valuation of the parent (the likely outcome for carve-outs followed by a sell-off), we are in situations where the company is effecting a 'clean break' from the offspring and either divesting or spinning-off the subsidiary.

As well as analysis to answer our three questions, a number of other variables were tested in a full multiple regression analysis, without providing outcomes that influenced our conclusions. For more details on our sample and sources please see the appendix to this report.

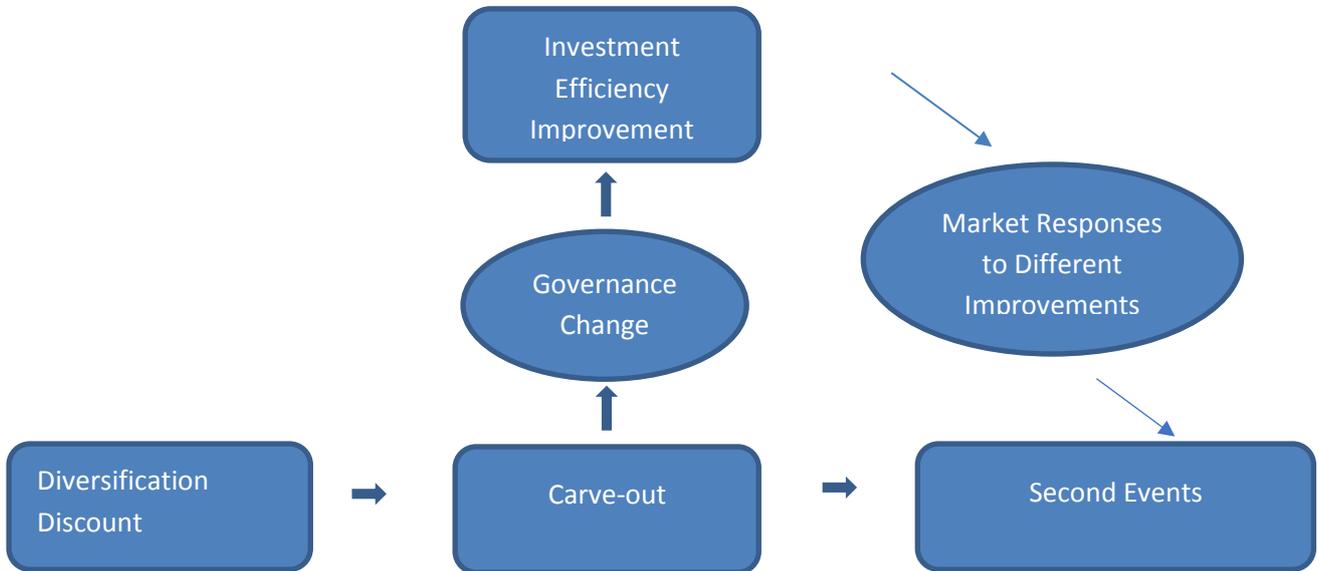
Figure 5 below summarises the corporate development from the recognition of a conglomerate problem to the impact the success or not of changes made will have on the next steps.

We believe our analysis carries important implications for the corporate managers who seek to improve the investment efficiency of their companies by demonstrating that carve-outs could be a more effective mechanism to restructure company operations when compared to spin-offs and sell-offs.

Figure 5: Conglomerate – carve-out – next event process

➡ = Direct actions

➡ = Secondary effects



Source: Cass Business School

# Appendix:

## *Sample/Methodology:*

We obtained the sample of carve-outs from the SDC Global New Issues Database. Our final sample of carve-outs consists of 354 completed transactions. In line with the sample selection criteria used in C&W, we obtain our sample of control companies from the most recent Compustat business information file. We exclude the firm-year observations which lack any of the financial information necessary to perform the different matching procedures. We also remove from the control group companies with a changing number of segments during the

sample period. Finally, we require that each control observation has more than one business segment. The time period for both samples of conglomerate companies covers the period 1980-2013.

We exclude parent companies for which company- and segment-level data are not available. Following the sample construction methodology in C&W we exclude companies which operate in financial services industries with Standard Industry Classification (SIC) codes between 6000 and 6999.

## *Our Approach:*

**A**s well as our analysis directly tackling the issue of carve-out success, it is also a methodology that lends itself to judging conglomerate efficiency in a way that analysis of spin-offs and disposals will not.

### *Carve-out analysis may be more insightful*

In contrast to a spin-off or sell-off that truncates the ICM of the parent, a carve-out preserves its size and complexity because the carved-out segment does not leave the control and ownership of the parent. In using the post spin-off or sell-off data to assess whether the pre-restructuring parent's ICM was inefficient, as done in previous studies including C&W, it has to be assumed that the relationship between the spun-off or sold-off business and the rest of the parent's business portfolio is not relevant. We need to make assumptions as to whether this relationship had a positive or negative effect on the other businesses and hence on the portfolio performance. Such assumptions are redundant when one considers carve-outs since the carved-out segments continue to be part of the parental portfolio. Whatever relations had existed between them and the remaining segments would be unimpaired by the carving out.

Given this continuity, assessment of the parent's pre-carve-out investment efficiency using the post-carve-out investment efficiency is a methodologically superior approach since it dispenses with the need to make assumptions concerning the relationship between the carved-out segment and the residual segments.

For the above reasons, we believe that any assessment of the pre-restructuring efficiency of the parent's ICM is likely to be less ambiguous as to its source and more robust when based on a carve-out sample than when based on either a spin-off or sell-off sample. Despite these advantages of basing the analysis on carve-outs, they have not been examined in previous studies.

### *The self-selection issue*

In this study, we examine a sample of US firms that embark on carve-outs. We compare the investment efficiency of the parent firms post- and pre-restructuring and assess the statistical significance of any improvement.

We adopt the methodology in C&W and control for the potential self-selection bias of the carve-out decision by evaluating the change in the allocative efficiency of the internal capital

market relative to the change in such efficiency which occurs in a group of control companies with similar characteristics. Specifically, we account for the degree of diversification, size, liquidity, leverage, industry control and IPO activity as well as industry growth.

### *How we measure internal efficiency*

We employ three different metrics that are expected to reflect the efficiency of the ICM. Two are direct measures of capital allocation based on the relative value creation potential of segments: relative investment ratio (RINV) and relative value added (RVA). Another is an indirect measure, i.e., it reflects the change in the parent company valuation (Excess Value). We will use the term 'investment efficiency' interchangeably for the three metrics.

We use correlation-based measures of investment efficiency, namely as mentioned above, RINV, RVA and Excess Value. Correlation-based measures of investment efficiency capture the association between the level of investment and the investment opportunities across segments. The parent's investment is considered to become more efficient the stronger the association between investment and investment opportunities at the segment level.

RINV will be higher when companies invest more in their higher rated market price/book segments (defined by the ratings of pure-play equivalents), i.e., when they are more efficient.

RVA can be thought of as the sales-weighted variability between investment and the market price to book ratio. Higher values of RVA indicate higher levels of investment efficiency.

We also include measures of the change in company valuation following each of the three types of restructuring, namely the change in the Excess Value of the conglomerate. This variable captures the value of a conglomerate relative to a collection of single-segment companies in the industries corresponding to the conglomerate's segments.

We calculate the average values of RINV, RVA and Excess Value before and after carve-outs.

The 3 questions we pose:

### *1) Will it improve your capital efficiency?*

To investigate the impact of carve-outs on investment efficiency and firm valuation we construct two different samples of companies based on US data: a sample of companies which carve-out divisions and a sample that does not perform any refocusing activities over the whole sample period.

We account for the degree of diversification, size, liquidity, leverage, industry control and IPO activity as well as industry growth.

### *2) What caused any change?*

To examine whether enhanced corporate governance of the parent and offspring post-carve outs is associated with greater allocative efficiency, we match the offspring and its parent firm with the BoardEx database. Corporate internal governance characteristics are measured by board duality (CEO/Chairman overlap), board size, board composition, CEO compensation structure and tenure. External governance characteristics are measured by analyst coverage and the presence of institutional investors on the share register of the given company.

In order to examine the robustness of the results presented in this section we perform additional regression analysis of the relationship between the change in investment efficiency and the change in corporate governance characteristics of the parent firm. This determines whether the improvement in investment efficiency that is higher than any improvement in the matched control sample is driven by increases in the internal and external corporate governance quality of the parent sample that are higher than any potential increases that may have materialised in the matched control sample over the same time period. The difference in difference values are calculated as the change in the parent company minus the change in the matched control firm over the same time period.

### 3) What is the likely final outcome?

Prior research shows that carve-outs appear to be a transitory organisational form that is eventually followed by another corporate event such as a spin-off, sell-off or reacquisition. We find that approximately 80% of the carve-outs in our sample are followed by either a spin-off, a sell-off, a reacquisition or a secondary equity offering of the carved out business. These take place within an average period of three years after the year of the carve-out.

Figure 6: Events after carve-out

Events	Number of events
Spin-off	30
Sell-off	82
Re-acquisition	108
SEO	62
Retention	72
Total	354

Source: Cass Business School

To test whether there is an association between the type of corporate event that follows a given carve-out and the change in allocational efficiency we repeat the analysis above based on the following sub-samples:

Sub-sample A – Carve-outs followed by spin-off: the parent company distributes all the shares in the offspring to its shareholders

Sub-sample B – Carve-outs followed by a sell-off: the parent company sells the offspring to a third party

Sub-sample C – Carve-outs followed by re-acquisitions: the parent company re-acquires the outstanding shares of the offspring

Sub-sample D – Carve-outs followed by secondary equity offering: the parent company sells shares of the offspring to the open market

Sub-sample E – Carve-outs which are not followed by any other corporate events (retention).

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## Notes on Authors

**Dr Valeriya Vitkova**, MARC Research Fellow, who recently completed a PhD on *Topics in Mergers and Acquisitions* at Cass Business School.

**Siyang Tian**, MARC Researcher. He researches in the fields of mergers and acquisitions and private equity.

**Contact:** [cassmarc@city.ac.uk](mailto:cassmarc@city.ac.uk)

**Sudi Sudarsanam** Emeritus Professor of Finance & Corporate Control. His research interests are corporate restructuring, mergers and acquisitions and corporate strategy.

**Scott Moeller**, Director of MARC and Professor in the Practice of Finance. His research and teaching focuses on the full range of mergers and acquisitions activities.

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*Notes*

M&A Research Centre

**Cass Business School**

106 Bunhill Row

London EC1Y 8TZ

T: +44 (0)20 7040 5146

E: [CassMARC@city.ac.uk](mailto:CassMARC@city.ac.uk)

[www.cass.city.ac.uk/marc](http://www.cass.city.ac.uk/marc)



**Cass Business School**

In 2002, City University's Business School was renamed Sir John Cass Business School following a generous donation towards the development of its new building in Bunhill Row. The School's name is usually abbreviated to Cass Business School.

**Sir John Cass's Foundation**

Sir John Cass's Foundation has supported education in London since the 18th century and takes its name from its founder, Sir John Cass, who established a school in Aldgate in 1710. Born in the City of London in 1661, Sir John served as an MP for the City and was knighted in 1713.