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#### Citation

KOH, Francis; KOH, Winston T. H.; and KOH, Benedict S. K.. Corporate Divestitures and Spinoffs in Singapore. (2005). *Journal of Restructuring Finance*. 2, (1), 69-79.

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# Corporate Divestitures and Spinoffs in Singapore<sup>\*</sup>

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30 June 2004

## Abstract

This paper discusses the different forms of corporate divestitures, the motives for this corporate activity and the empirical findings about their economic outcomes. A sample of corporate divestitures is also used to identify the main motivations in the Singapore context. We conclude that divestitures are carried out to achieve operational efficiency, gain incremental profitability and liquidity. Using share price data around the event-dates, we show that announcements of divestitures generally lead to significant increases in the returns of the parent company. The positive abnormal returns are related to the relative size of the divestitures and the computed accounting gains. Overall, corporate divestiture is a value-increasing activity for Singapore companies.

**JEL Classification number:** G34

**Keywords:** spinoffs, divestitures, Singapore

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<sup>\*</sup> We would like to acknowledge the collaboration of Soo Kee Ang in this research project. Jon Lee provided excellent research assistance. Financial support from Singapore Management University is also gratefully acknowledged. The usual disclaimer applies here.

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## **1. Introduction**

The term ‘divestiture’ covers a number of corporate actions. As Rosenfeld (1984) puts it, divestiture involves ‘an alteration of the firm’s productive asset portfolio, and is accomplished by either spinning-off or selling off the unwanted assets.’ Corporate restructuring, via voluntary divestments and spinoffs, has become a commonly-used strategy since the 1980s. Over the past two decades, a substantial number of firms worldwide have disposed of many peripheral activities to concentrate on their core businesses.

The increasing number and size of spinoffs, sell-offs, equity carved-outs and partial private sales have brought about significant changes to the way businesses are being conducted. Formally, a spinoff occurs when a company distributes all the shares it owns in a controlled subsidiary to its existing shareholders, thereby creating a separate publicly listed company. A sell-off occurs when a part or all of the company’s assets are sold to another party in return for cash or securities. In the case where a portion of a subsidiary is offered for sale to the public, this is referred to as ‘split-off initial public offering,’ or more commonly known as equity carved-out.

Many empirical studies have recorded that there are gains to the parent company in corporate divestitures. We provide a brief review of the empirical studies in the literature in Section 2, while Section 3 reviews the motives for divestitures. In Section 4, we frame the hypotheses linking the announcement effects of corporate divestitures to share price performance. We also describe the sample and testing methodology used in Section 5. The results are reported in Section 6. Section 7 concludes with a discussion of directions for future research.

## **2. Review of Previous Studies**

Corporate divestiture was a worldwide phenomenon throughout the 1990s. In the United States, a study by Vijh (1994) reported that there has been a large increase in the number of corporate restructuring programs in the late 1980s and early 1990s. Gilson reports that, “Since 1980, more than 2,000 public companies, with nearly US\$700 billion of assets, have filed for Chapter 11 bankruptcy protection.” And, “during this period, more than 1,500 companies have split themselves apart through equity spin-offs and care-outs, or by issuing tracking stocks, creating over US\$700 billion in new publicly traded equity.”

Mergers and acquisitions do not always succeed. Kaplan and Weisbach (1992) document that in a sample of 282 corporate acquisitions, which occurred between 1971 and 1987, 44% were divested by 1989. These de-mergers add to the pool of divestitures.

There have been a number of important studies examining the outcomes of corporate divestitures and spinoffs. In the early eighties, the early wave of corporate restructuring prompted studies by Hite and Owers (1983) and Miles and Rosenfeld (1983) on spin-offs, Rosenfeld (1984) and Jain (1985) on sell-offs, and Schipper and Smith (1986) on equity carved-outs.

Miles and Rosenfeld (1983) study 55 spin-offs and find significantly large positive abnormal returns over the announcement period. Similar research by Hite and Owers (1983) also record significant increases in share prices around spin-off announcements. Both results suggest that announcements of spin-offs generally improve shareholder wealth. The studies also conclude that larger spin-offs tend to exhibit stronger price movements than those which are relatively smaller.

In his research on a sample of 62 cases of sell-offs, Rosenfeld (1984) detects significant positive abnormal returns around the announcement dates. This finding is further supported by Jain (1985). Jain analyzes a sample of more than one thousand sell-offs. He reports positive abnormal returns for a 5-day period preceding the announcement date. These results indicate that sell-off announcements are also beneficial to shareholders, though their effects are notably smaller than those of spin-offs.

The research on equity carved-outs was conducted by Schipper and Smith (1986). Using a sample of 76 carved-outs, Schipper and Smith show that firms with equity carved-outs experience strong positive abnormal returns for a 5-day period preceding and including the event date. Their results indicate that announcements of equity carved-outs are also value-enhancing events.

Empirical research in the 1990s show that firms continued to earn positive excess returns when they announce spin-offs and corporate divestitures. Kaplan and Weisbach (1992) conclude that although there are a high proportion of acquisitions that are subsequently divested, this is not the result of corporate “failures”. A high percentage of the divestitures are carried out by acquirers which reported a “gain” or “no loss” on divestment, that is, most firms are sold for more than their cost. Furthermore, in those observations where the acquiring and target firms are not related, almost 60 per cent are subsequently divested in contrast to 20 per cent for related acquisitions. This implies that unrelated acquisitions have a higher probability of a subsequent divestiture.

Vijh (1994) reports that excess returns of 3 per cent are obtained on the spin-off ex-dates. Vijh attributes this to a “clientele” effect, where the parent and

subsidiary stocks attract different investors who prefer to buy the separated shares after the ex-date. This is another finding supporting the conclusion that spin-offs are wealth-increasing events.

Cusatis, Miles and Woolridge (1993) study the value creation of spinoffs over the period 1965 to 1988, by measuring the stock returns of spinoffs, the parent firms and the parent-spinoff combinations for periods of up to three years following the spinoffs. The authors find significantly positive abnormal returns for all three sets of entities. Habib, Johnsen and Naik (1997) provide an information-based explanation for spinoffs. They argue that when the various divisions of a firm are spun off into several firms that have separate stock market listings, the number of traded securities increases. As a result, the price system becomes more informative, and the quality of investment decisions made by managers improves. At the same time, the uncertainty about the value of the divisions is lowered. Both of these effects serve to increase the sum total of the market values of the spun-off divisions above the market value of the original firm.

Similarly, Krishnaswami and Subramaniam (1999) find that information symmetries in parent firms are positively related to the excess stock returns around spin-off announcements, while Daley Mehrontra and Sivakuma (1997) report that focus-increasing spinoffs in the United States earn higher excess stock returns during the announcement period relative to spin-offs that do not increase the corporate focus.

Along a similar vein, Huson and MacKinnon (2003) examine the effect of corporate spinoffs on the trading environment of the stock of firms that spin off units. The authors find that changes in the information environment associated with

focusing spinoffs appear to benefit informed traders at the expense of uninformed traders.

Weston, Mitchell and Mulherin (2004) have provided a summary of a number of empirical studies relating to divestitures. This is reproduced in Table 1. From the table, it can be seen that the return to the parent company, around the announcement date, is in the range of 1 to 4 per cent over a narrow window of between one to 4 days. This is a significant result. The positive return to the parent company indicates that divestitures are a wealth-increasing event for the parent company.

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INSERT TABLE 1  
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Outside of the United States, relatively little academic research on corporate divestments has been carried out. In two papers, Haynes, Thompson and Wright (2000, 2003) examine the extent and the determinants of divestment across a sample of 141 firms in the United Kingdom over the period 1985-1989. The studies conclude that corporate divestment activities are purposeful responses to exogenous change in a manner broadly consistent with both the agency-theoretic and strategic views of the firm.

Thus, the literature provides evidence that, on the whole, divestitures have wealth-enhancing effects and they have been carried out with purpose. In the next section, we examine the motivations behind corporate restructuring, through spinoffs and divestments, and with reference to the case of Singapore companies.

### 3. Motives for Divestitures

In a world of zero information cost and transaction costs, divestitures would be irrelevant as a firm cannot increase its value by restructuring itself. But, in a less than perfect world, restructuring may confer benefits to either the parent or its subsidiary.

For example, an equity carved-out may create a new public entity which can pursue independent growth strategies separate from the parent firm without impinging on the reputation of the latter. The new entity may also raise capital for the parent and increase its financial resources.

Similarly, a spin-off may provide information to existing shareholders of the intent of the parent company to “focus” or “re-focus”. Berger and Ofek (1995) and Comment and Jarrell (1995) argue that firms that are more focused (that is, carry out business in fewer industries) are more valued than less focused firms, *ceteris paribus*. Gilson (2001) explains that managers of focused firms are less distracted and better able to oversee the firm’s core business operations.

Allen (2001) notes that the sources of the gains in spin-offs are difficult to identify and validate. According to him, spin-offs may offer the following benefits:

- (a) mitigate an unwieldy organizational structure by increasing focus
- (b) enhance contracting efficiency
- (c) reduce regulatory or tax constraints
- (d) reduce information asymmetries regarding the operations of the parent firms
- (e) correct past acquisition mistakes, and
- (f) improve managers’ incentives to maximize shareholder wealth in spun-off firms.



In the Asia-Pacific region, corporate restructuring increased significantly in the 1990s. This gathered momentum after the Asian Financial Crisis in 1997. The growing number and size of spin-offs, sell-offs, equity carved-outs and partial private sales may be attributed to both the maturity of the capital markets in the Asia Pacific region and the increased opportunities for restructuring resulting from the economic downturn and subsequent recovery.

Similarly, Singapore has experienced an increase in the number of corporate divestitures in Singapore since early 1990s. This may be attributed, firstly, to the growth of merger and acquisition activities since the 1980s, in tandem with the development of the capital markets in Singapore. Secondly, with a larger pool of listed and unlisted companies, the general sophistication of the financial market has increased, and firms have become more adept at handling acquisitions as well as divestment.

To analyze the motives of divestitures in the Singapore market, we review a sample of Singapore listed companies which underwent restructuring between 1985 and 1991. Through a case-by-case review of the press announcements and relevant supporting information, three broad motivations emerge as the dominant reasons for corporate divestments in Singapore:

(a) *Enhancing Operational efficiency*

A firm that expands rapidly also increases its size and complexity and hence often imposes considerable strain on its management and resources. Consequently, management loses its focus and efficiency, and company performance may suffer.

This argument is related to the economic concept of decreasing returns to scale and scope. There is an optimal operational size for a company.

Operational efficiency is evidently the motivating factor for the divestments of Haw Par Brothers and Straits Steamship. Haw Par Brothers sold its garment and property operations to concentrate on its core businesses of leisure, industrials and pharmaceutical<sup>a</sup>. In the 1991 Annual Report, Haw Par's Chairman Wee Cho Yaw commented that 'these core business operations make best use of the Group's traditional strength in marketing and distribution, which is also now being augmented by related manufacturing activities. This focus on core business operations enables the Group to concentrate its energies and resources more effectively, instead of spreading them thin over too many business areas.'

Similarly, Straits Steamship spun off its shipping subsidiary to focus on property development and management. The company spun off Steamers Maritime, a shipping subsidiary, and sold its engineering division. Subsequently, its name was changed to Straits Steamship Land to reflect a more focused identity.<sup>b</sup>

(b) *Maintaining Profitability*

Faced with increased competition, some firms would be under pressure to maintain their profitability. One way is to increase operational efficiency through specialization and concentration of resources. Another way is to boost earnings by harvesting profitable assets and disposing unprofitable ones.

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<sup>a</sup> See *The Straits Times* and *Business Times* on 31 January 1989 and 18 January 1991, and Haw Par Brothers 1991 Annual Report.

<sup>b</sup> See *The Straits Times* and *Business Times* on 9 February 1989.

An example of a corporate divestment that improves profitability is the sale of a shopping complex, the Paragon, by United Industrial Corporation (UIC), for S\$690 million, which yielded a profit of S\$292 million.<sup>c</sup> An illustrative example of removing an unprofitable asset is the sale of a Malaysian subsidiary, Cold Storage Malaysia, by Cold Storage Holdings, to Cycle and Carriage in 1989. Cold Storage Malaysia had been unprofitable for a number of years.<sup>d</sup>

(c) *Improving Liquidity*

Another problem associated with a company's rapid expansion is the shortage of cash flow. Some companies may then choose to address this problem by corporate divestiture. This will then improve corporate liquidity, and may also lower corporate debt levels and borrowing costs.

An illustrative example is the case of UIC.<sup>e</sup> After its billion dollar takeover of Singapore Land, the company was over-leveraged and cash-strapped. When its attempt to raise additional financing from the capital market was unsuccessful (its rights issue was rejected by the Stock Exchange of Singapore), UIC disposed several assets such as properties, hotels and equity shares to improve its financial position. The divestitures included the sale of its interests in Inchcape House, Supreme House, Phuket Yacht Club, Tung Centre, First Capital Corporation, Development and Commercial Bank and Toyo Bank. Finally, UIC had to trim its holdings in Singapore Land at a loss of S\$138.2 million to maintain its borrowings at a sustainable level.

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<sup>c</sup> See *The Straits Times* and *Business Times* on 21 September 1989

<sup>d</sup> See *The Straits Times* and *Business Times* on 28 July 1989

<sup>e</sup> See *The Straits Times* and *Business Times* on 28 May 1990, 6 June 1990, 16 July 1990, 17 June 1991 and 13 September 1991

#### **4. Empirical Analysis**

To examine the announcement effects of corporate divestitures on share prices in Singapore, we formulate the following three working hypotheses.

**HYPOTHESIS 1:** Announcements of corporate divestiture do not yield abnormal returns in share price.

Hypothesis 1 examines the overall price effects of divestiture announcements in Singapore. Rejection of this hypothesis indicates that divestiture announcements have an impact on shareholder wealth. A significant positive change in share prices implies that corporate divestitures are generally viewed as beneficial to a company. *Ceteris paribus*, a decline in share prices indicates otherwise. If the hypothesis is not rejected, it means that corporate divestments of most local firms do not affect their market worth. Past studies by Hite and Owers (1983), Rosenfeld (1984), and Schipper and Smith (1986) provide empirical evidence that supports this hypothesis.

**HYPOTHESIS 2:** Announcements of large corporate divestiture do not yield a significantly larger rate of abnormal return than the announcements of small corporate divestitures.

Hypothesis 2 compares the announcement effects of large and small divestitures in Singapore. Studies by Hite and Owers (1983) and Miles and Rosenfeld (1983) show that large divestitures in the United States have a significantly stronger announcement effect than small divestitures. Their findings further strengthen the argument that divestitures are generally advantageous to shareholders. For the

purpose of testing this hypothesis, a large divestiture is defined as one where the divested assets form 10 per cent or more of the divesting firm's market capitalization.

**HYPOTHESIS 3:** Announcements of corporate divestitures with large relative accounting gains do not have a significant larger rate of abnormal return than those with small relative accounting gains.

Hypothesis 3 investigates the relationship between share price movements and the relative size of accounting gains arising from the divestitures. The efficient markets hypothesis postulates that the current value of a firm should be fully reflected in its share price. An accounting gain is the difference between the selling price and book value of a divestiture. If selling price of a company's assets is correctly priced, the event will not result in abnormal gains, *ceteris paribus*. For the purpose of testing this hypothesis, a divestiture with large accounting gain refers to one where the gain is more than 5 per cent of the divesting firm's market capitalization.

## **5. Data, Sample and Methodology**

The sample used in this study comprises all form of divestitures (spin-offs, sell-offs, and equity carved-outs and partial private sale) undertaken by companies listed on the Stock Exchange of Singapore (SES) between July 1985 and April 1991. This sample consists entirely of Singapore incorporated companies. The original sample consists of 105 events, but is later reduced to 63, due to data incompleteness as well as the removal of clustered events in order to avoid confounding effects. Also, in our study, involuntary divestitures, such as the compulsory sell-offs due to

statutory acquisitions by the government are excluded. (The list of divestitures is available from the authors.)

The Mean Adjusted Return (MAR) model is used to compute abnormal returns in share prices, for the purpose of examining the announcement effects of divestitures. This model assumes that the expected return for a security is constant, but may differ across firms. It is selected for its simplicity and relative accuracy. Evidence by Brown and Warner (1980) suggests that in the absence of event clustering, the MAR model performs as well as other sophisticated market models in detecting abnormal performance. This approach has been used by Masulis (1980), Dann (1981), Rosenfeld (1984) and Alexander et al. (1980) in their studies.

The event period employed in this study is 211 days, consisting of 180 days before and 30 days after day 0, which is the first available press announcement date of the divestiture. The estimation period is from day – 180 to day – 31, while the test period extends from day –30 to day +30.

For each stock, the mean return is computed by taking the arithmetic mean of the series of daily returns over the estimation period. This mean return is then subtracted from the daily returns over the test period to give a series of residuals.

For each day of the test period, we compute an average residual (AR) which is the average of the residuals on that day for all the stocks in the sample. The cumulative average residual on day  $t$  ( $CAR_t$ ) is found by summing the average residuals from day -30 to day  $t$ .

## 6. Empirical Results

### 6.1 *Announcement Effects of Divestitures*

The summary of abnormal returns and their respective t statistics are presented in Table 2 and plotted in Figure 1.

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INSERT TABLE 2  
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INSERT FIGURE 1  
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The results show that corporate divestitures, on average, yield significantly positive abnormal returns around the announcement dates. The strong positive abnormal gains detected on and after the announcement dates suggest favorable market reaction towards the divestitures. The abnormal return on the announcement date is statistically significant at the 1% level. To examine the robustness of the results, the data is also tested using the market model. As the results obtained are similar to those for the mean adjusted models they are not presented here.

The fact that day 0 has the largest AAR (average abnormal return) of +2.43% is not surprising. The strong result for day 0 is due to the immediate market reaction towards the divestment. A weaker but significant AAR is also recorded for day +1, after which, the AARs appear to fluctuate randomly, indicating no further impact of

the information. Thus, news of divestment is quickly impounded in the stock prices within a relatively short period.

Significant market movements recorded before the press date (day -3 and day -2) indicated that information pertaining to the divestitures may have leaked into the market before the actual announcement. Market speculation could have increased trading volumes and driven up share prices.

Interestingly, the average residual for day -1 is small and statistically not significant. This could be partly explained by the suspension of trading for some companies until the announcement of the divestitures.

Hence, the results show that the divestiture announcements are generally beneficial to shareholders. These findings reject the hypothesis that there are no abnormal returns associated with the announcement of divestitures. The results are also consistent with those found by Hite and Owers (1983), Rosenfeld (1984) and Schipper and Smith (1986).

## 6.2 *Announcement Effects of Large versus Small Divestitures*

In this test, the sample of 63 observations is divided into two sub-samples using the classification stated above. The large divestitures sub-sample consists of 28 events, while the small divestitures sub-sample consists of 33.

The results, which are presented in Table 3, show that large divestitures yield a comparatively higher abnormal return than small divestitures. The average residual for large divestitures on day 0 is 3.85% and is statistically significant. This compares with a much lower average residual of 1.29% for small divestitures on that day.



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INSERT TABLE 3  
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Overall, the findings reject the hypothesis that announcements effects for both the large and small divestitures are the same. This result is consistent with the findings of Miles and Rosenfeld (1983).

### 6.3 *Announcement Effects of Large versus Small Accounting Gains*

The previous section shows that large divestitures generally yield a higher rate of abnormal return than small divestitures. From the sub-sample of large divestitures, data for 22 companies that report accounting gains are available. Of these, 12 companies exhibit large accounting gains, while the remaining 10 companies make small accounting gains. The results of the t-tests are presented in Table 4.

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INSERT TABLE 4  
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The findings indicate that the sub-sample with large accounting gains yield a significantly larger abnormal return than the sub-sample with small accounting gains. The companies with large accounting gains sub-sample registered highly significant average residuals on day -2 and day 0, indicating favorable market reaction towards the announcement of large accounting gains. In contrast, the companies with small

accounting gains sub-sample fail to register any significant price movements throughout the 61-day observation period.

The fact that significant differences in abnormal returns appear strongly on day 0 through day +1 interval, and not during other intervals, suggest a direct relationship between share price movements and the relative size of the accounting gains due to the event. Since large accounting gains generate greater abnormal returns than small accounting gains, the findings reject the hypothesis that there are no significant differences in the announcement effects of corporate divestitures with large and small accounting gains.

## **7. Conclusions**

This objective of this study is twofold. Firstly, we seek to understand the motivations surrounding corporate divestitures in Singapore. Next, we use a sample of Singapore divestitures to examine the price effects around the period of announcements, to determine if such announcements have measurable impacts on share price performance. Using the Mean Adjusted Return model, we find that divestiture announcements are generally accompanied by positive abnormal returns. Further, there exists a strong relationship between share price movements and the relative divestiture size and accounting gains.

The market's positive reaction towards divestitures indicates that such actions are generally viewed as beneficial to the divesting company's shareholders. The likely sources of gain stem from the observed motives of divestiture, which are principally to achieve: (a) operational efficiency (b) higher profitability and (c) improved financial liquidity.

The positive relationship between share price movement and the relative size of divestiture that we found is also not surprising. Considering the fact that divestitures are generally beneficial, larger divestitures are likely to contribute proportionately more to shareholder wealth than small divestitures.

The findings that share prices are affected by accounting gains suggest that the Singapore market is rational and anticipates the accounting gains. Overall, these results are consistent with those of earlier studies in the United States.

In recent years, to comply with the Monetary Authority of Singapore's (MAS) requirement that local banks cut their holdings in their non-financial assets to 10%, Singapore banks have been divesting their non-core assets. This process is still ongoing and will provide additional data for future research. Further work is also being carried out by the authors to extend this study to include the recent corporate restructuring activities in the Southeast Asian region.

## REFERENCES

- Alexander, G.J., P.G. Benson and J.M. Kampmeyer, 1980, Investigating the Valuation Effects of Announcements of Voluntary Sell-Offs, *Journal of Finance*, 39, 503-517
- Berger, P. and E. Ofek, 1995, Diversification's effect on firm value. *Journal of Financial Economics* 37, 39-65.
- Brown, S.J. and J.B. Warner, 1980, Measuring security Price Performance, *Journal of Financial Economics*, 8, 205-258.
- Comment, R., and G. Jarrell, 1995. Corporate focus and stock returns. *Journal of Financial Economics*, 37, 67-87.
- Cusatis, P.J., J. A. Miles and J.R. Woolridge, 1993, Restructuring through Spinoffs: The Stock Market Evidence, *Journal of Financial Economics*, 33, 293-311.
- Daley, L., V. Mehrotra, and R. Sivakumar, 1997. Corporate focus and value creation: Evidence from spin-offs. *Journal of Financial Economics*, 45, 257-281.
- Dann, L., 1981, Common Stock Repurchases: An Analysis of Returns to Bondholders and Stockholders, *Journal of Financial Economics*, 9, 113-138.
- Gilson, Stuart C., 2001, *Creating Value through Corporate Restructuring*, John Wiley & Sons.
- Habib, M.A., D.B. Johnsen and N.Y. Naik, 1997, Spinoffs and Information, *Journal of Financial Intermediation*, 6, 153-176.
- Haynes, M., Thompson, S., Wright, M., 2000. The determinants of corporate divestment in the UK. *International Journal of Industrial Economics*, 18, 1201-1222.
- Haynes, M., Thompson, S., Wright, M., 2003. The determinants of corporate divestment: Evidence from a panel of UK firms. *Journal of Economic Behavior and Organization*, 52, 147-166.
- Hite, G.L. and J.E. Owers, 1983, Security Price Reactions around Corporate Spin-Offs Announcements, *Journal of Financial Economics*, 12, 409-436
- Huson, M.R., MacKinnon, G., 2003. Corporate spinoffs and information asymmetry between investors. *Journal of Corporate Finance*, 9, 481-503.
- Jain, P.C., 1985, The Effect of Voluntary Sell-Off Announcements on Shareholder Wealth, *Journal of Finance*, 40, 209-223.
- Kaplan, S. and M.S. Weisbach, 1992, The Success of Acquisitions: Evidence from Divestitures, *Journal of Finance*, 47, 107-138
- Krishnaswami, S., and V. Subramaniam, 1999. Information asymmetry, valuation, and the corporate spin-off decision. *Journal of Financial Economics*, 53, 73-112.
- Masulis, R., 1980, The Effects of Capital Structure on Security Prices, *Journal of Financial Economics*, 8, 139-177

- Miles, J.A. and J.D. Rosenfeld, 1983, The Effect of Voluntary Spin-Off Announcements on Shareholder Wealth, *Journal of Finance*, 38, 1597-1606
- Rosenfeld, J.D., 1984, Additional evidence on the Relation between Divestiture Announcements and Shareholder Wealth, *Journal of Finance*, 39, 1437-1447.
- Schipper, K. and A. Smith, 1986, A Comparison of Equity Carved-Outs and Seasoned Equity Offerings: Share Price Effects and Corporate Restructuring, *Journal of Financial Economics*, 15, 152-186.
- Vijh, A.M., 1994, The Spinoff and Merger Ex-Date Effect, *Journal of Finance*, 49, 581-609.
- Weston, J. Fred, M. L. Mitchell and J.H. Mulherin, 2004, *Takeovers, Restructuring, and Corporate Governance*, Pearson Prentice-Hall.

TABLE 1

## Event Study Analysis of Corporate Divestitures

Research Paper	Divestiture Type	Time Period	Number of Observations	Event Window	Parent Return (%)
Miles and Rosenfeld (1983)	Spin-off	1963-1980	55	(0, +1)	3.34
Hite and Owers (1983)	Spin-off	1963-1981	123	(-1, 0)	3.30
Schipper and Smith (1983)	Spin-off	1963-1981	93	(-1, 0)	2.84
Copeland et al (1987)	Spin-off	1962-1981	73	(0, +1)	2.49
Mulherin and Boone (2000)	Spin-off	1990-1999	106	(-1, +1)	4.51
Schipper and Smith (1986)	Carve-out	1965-1983	76	(-4, 0)	1.83
Mulherin and Boone (2000)	Carve-out	1990-1999	125	(-1, +1)	2.27
Klein (1986)	Asset sale	1970-1979	202	(-2, 0)	1.12
Lang, Poulsen, and Stulz (1995)	Asset sale	1984-1989	93	(-1, 0)	1.41

Table 1 is reproduced from Table \_\_ in chapter \_\_ of Weston, Mitchell and Mulherin (2004). It summarizes past empirical findings on the return to parent companies that have experienced spin-offs, equity carve-outs and asset sell-offs.

TABLE 2

## Abnormal Returns of Divestitures around Announcement Date

Day	AAR	t statistic	CAAR
-30	0.0011	0.3172	0.0011
-25	-0.0010	-0.2813	-0.0021
-20	0.0019	0.5754	-0.0117
-15	-0.0004	-0.1088	-0.0149
-10	0.0003	0.0996	-0.0078
-9	-0.0057	-1.6838	-0.0135
-8	0.0039	1.1478	-0.0096
-7	0.0047	1.3798	-0.0049
-6	-0.0005	-0.1398	-0.0054
-5	0.0009	0.2738	-0.0045
-4	-0.0053	-1.5724	-0.0098
-3	0.0072	<b>* 2.1383</b>	-0.0026
-2	0.0094	<b>**2.7856</b>	0.0068
-1	-0.0012	-0.3485	0.0056
0	0.0243	<b>**7.1722</b>	0.0299
1	0.0084	<b>* 2.4832</b>	0.0383
2	-0.0032	-0.9499	0.0351
3	0.0027	0.7994	0.0378
4	-0.0031	-0.9235	0.0347
5	-0.0019	-0.5641	0.0328
6	0.0003	0.0780	0.0331
7	-0.0019	-0.5724	0.0312
8	0.0003	0.0966	0.0315
9	0.0031	0.9212	0.0346
10	-0.0022	-0.6360	0.0324
15	0.0048	1.4183	0.0258
20	-0.0016	-0.4828	0.0286
25	0.0011	0.3347	0.0299
30	-0.0016	-0.4788	0.0262

\* Significant at the 5% level using a two-tailed test

\*\* Significant at the 1% level using a two-tailed test

TABLE 3

## Abnormal Returns of Large and Small Divestitures around Announcement Date

Large Divestitures				Small Divestitures			
Day	AAR	t statistic	CAAR	Day	AAR	t statistic	CAAR
-30	-0.0045	-0.8589	-0.0045	-30	0.0055	1.1421	0.0055
-25	-0.0025	-0.4842	-0.0115	-25	0.0003	0.0683	0.0058
-20	-0.0012	-0.2221	-0.0052	-20	0.0045	0.9203	-0.0166
-15	-0.0003	-0.0611	-0.0038	-15	-0.0004	-0.0779	-0.0234
-10	0.0042	0.8152	0.0025	-10	-0.0028	-0.2524	-0.0154
-9	-0.0050	-0.9562	-0.0025	-9	-0.0063	-1.2898	-0.0217
-8	0.0059	1.1403	0.0034	-8	0.0023	0.4709	-0.0194
-7	-0.0060	-1.1458	-0.0026	-7	0.0132	* <b>2.7239</b>	-0.0062
-6	-0.0003	-0.0600	-0.0029	-6	-0.0006	-0.1179	-0.0068
-5	0.0025	0.4786	-0.0004	-5	-0.0003	-0.0601	-0.0071
-4	-0.0073	-1.4126	-0.0077	-4	-0.0037	-0.7582	-0.0108
-3	0.0025	0.4799	-0.0052	-3	0.0111	* <b>2.2827</b>	0.0003
-2	0.0073	1.3988	0.0021	-2	0.0112	* <b>2.3080</b>	0.0115
-1	-0.0020	-0.3885	0.0001	-1	-0.0005	-0.0984	0.0110
0	0.0385	** <b>7.4122</b>	0.0386	0	0.0129	* <b>2.6629</b>	0.0239
1	0.0134	* <b>2.5813</b>	0.0520	1	0.0044	0.9134	0.0283
2	0.0013	0.2417	0.0533	2	-0.0068	-1.3951	0.0215
3	-0.0005	-0.1020	0.0528	3	0.0053	1.0988	0.0268
4	-0.0051	-0.9825	0.0477	4	-0.0015	-0.3115	0.0253
5	-0.0041	-0.7815	0.0436	5	-0.0002	-0.0322	0.0251
6	-0.0033	-0.6341	0.0403	6	0.0031	0.6486	0.0282
7	-0.0019	-0.3609	0.0384	7	-0.0020	-0.4035	0.0262
8	-0.0018	-0.3377	0.0366	8	0.0020	0.4176	0.0282
9	0.0049	0.9402	0.0415	9	0.0017	0.3578	0.0299
10	-0.0011	-0.2185	0.0404	10	-0.0029	-0.6056	0.0270
15	0.0039	0.7509	0.0451	15	0.0056	1.1450	0.0119
20	-0.0025	-0.4866	0.0441	20	-0.0009	-0.1831	0.0178
25	-0.0010	-0.1972	0.0327	25	0.0029	0.5964	0.0294
30	-0.0054	-1.0460	0.0278	30	0.0015	0.3019	0.0269

\* Significant at the 5% level using a two-tailed test

\*\* Significant at the 1% level using a two-tailed test



TABLE 4

Abnormal Returns of Divestitures with Large and Small Accounting Gains around  
Announcement Date

Large Accounting Gains				Small Accounting Gains			
Day	AAR	t statistic	CAAR	Day	AAR	t statistic	CAAR
-30	-0.0069	-0.8488	-0.0069	-30	-0.0044	-0.5201	-0.0044
-25	-0.0094	-1.1505	-0.0353	-25	-0.0010	-0.1210	0.0021
-20	-0.0051	-0.6205	-0.0462	-20	-0.0039	-0.4643	0.0180
-15	-0.0105	-1.2875	-0.0442	-15	0.0050	0.6011	0.0075
-10	0.0039	0.4772	-0.0633	-10	0.0038	0.4554	0.0387
-9	-0.0075	-0.9161	-0.0708	-9	-0.0086	-1.0264	0.0301
-8	0.0031	0.3843	-0.0677	-8	0.0147	1.7545	0.0448
-7	-0.0057	-0.6939	-0.0734	-7	-0.0069	-0.8274	0.0379
-6	0.0032	0.3956	-0.0702	-6	-0.0062	-0.7438	0.0317
-5	0.0019	0.2351	-0.0683	-5	0.0036	0.4346	0.0353
-4	-0.0034	-0.4215	-0.0717	-4	-0.0119	-1.4196	0.0234
-3	-0.0101	-1.2417	-0.0818	-3	0.0026	0.3057	0.0260
-2	0.0180	<b>* 2.2059</b>	-0.0638	-2	-0.0053	-0.6265	0.0207
-1	-0.0016	-0.1911	-0.0654	-1	0.0005	0.0573	0.0212
0	0.0660	<b>** 8.0993</b>	0.0006	0	0.0139	1.6505	0.0351
1	0.0152	1.8681	0.0158	1	0.0046	0.5493	0.0397
2	0.0108	1.3238	0.0266	2	-0.0086	-1.0228	0.0311
3	0.0024	0.2893	0.0290	3	-0.0015	-0.1726	0.0296
4	-0.0154	-1.8856	0.0136	4	0.0016	0.1934	0.0312
5	-0.0012	-0.1416	0.0124	5	-0.0039	-0.4659	0.0273
6	-0.0018	-0.2172	0.0106	6	0.0037	0.4420	0.0310
7	-0.0064	-0.7881	0.0042	7	0.0055	0.6555	0.0365
8	-0.0046	-0.5631	-0.0004	8	0.0045	0.5367	0.0410
9	0.0151	1.8483	0.0147	9	-0.0034	-0.3986	0.0376
10	-0.0110	-1.3506	0.0037	10	0.0033	0.3963	0.0409
15	0.0082	1.0115	0.0072	15	0.0021	0.2463	0.0531
20	-0.0133	-1.6373	-0.0107	20	0.0064	0.7655	0.0707
25	-0.0030	-0.3626	-0.0247	25	0.0040	0.4728	0.0594
30	-0.0063	-0.7739	-0.0391	30	-0.0104	-1.2388	0.0498

\* Significant at the 5% level using a two-tailed test

\*\* Significant at the 1% level using a two-tailed test

FIGURE 1

Cumulative Average Abnormal Returns (CAAR) and Average Abnormal Returns (AAR) of Corporate Divestitures

