



## Learning the wealth effects from equity carve-outs

Asad Iqbal Mashwani, Sébastien Dereeper, Michael Dowling, Saqib Aziz

### ► To cite this version:

Asad Iqbal Mashwani, Sébastien Dereeper, Michael Dowling, Saqib Aziz. Learning the wealth effects from equity carve-outs. Finance Research Letters, 2020, 33, pp.101191. 10.1016/j.frl.2019.05.009 . hal-03004469

**HAL Id: hal-03004469**

**<https://rennes-sb.hal.science/hal-03004469>**

Submitted on 22 Aug 2022

**HAL** is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.



Distributed under a Creative Commons Attribution - NonCommercial 4.0 International License

## **Learning the wealth effects from equity carve-outs**

### **Abstract**

We investigate how the market can provide early signals about the eventual effects of an equity carve-out on the wealth of parent firm shareholders. Using a sample of equity carve-outs from 1985-2015, we show that most wealth information regarding the IPO valuation of a subsidiary is observable in the share returns of the parent firm during the book-building period. Our study therefore adds timing and process understanding to existing studies showing a wealth impact of equity carve-outs on parent company shareholders.

**Keywords:** equity carve-outs; divestitures; event studies; wealth effects

## 1. Introduction

In an equity carve-out, the parent firm sells a fraction (usually a small fraction) of a subsidiary to the general public in the form of an IPO. The parent tends to continue to hold a controlling stake in the carved-out subsidiary after the IPO and hence the value of the subsidiary is reflected in the shares of the parent firm (Ghosh et al, 2012).

A normal feature of equity carve outs is a positive impact on the wealth of parent company shareholders upon announcement (Dasilas and Leventis, 2018; Prezas and Simonyan, 2015). However, there are a number of stages in an equity carve out listing process apart from just the announcement, and therefore the possibility for further information discovery during these stages. Particularly, the book building process highlights the extent to which informed investors agree with the parent company valuation of the spun-off unit. During this stage the IPO proposed price range gets narrowed towards a specific IPO float price indicating new information being incorporated in pricing. The IPO event itself is a further opportunity for information discovery as the shares become tradeable by a wider section of investors.

Benveniste et al. (2008) argue that, as investors can trade directly in the un-rationed shares of the parent throughout the carve-out process, changes in the valuation of the ongoing subsidiary can be tracked through the price change in the parent firm. Thompson (2010) proposes that public information available before the carve-out offering can be used to predict the initial returns of a carve-out. Absent from this prior research is an explicit investigation of precisely when in the carve-out event information is observable on the eventual wealth effect for existing parent firm shareholders. Our study addresses this absence.

We approach this through splitting Loughran and Ritter's (2002) loss and gain measuring inequality for IPOs across different parts of the carve-out process. We show that the wealth effects are particularly observable during the book-building period and therefore predictable from this period. As the parent company holds a non-trivial fraction of the asset of the carved-out subsidiary both before and after the IPO, the value revision in the subsidiary impacts on the equity returns of the parent firm. As a result, the returns to the parent firm during book-building period can be used to predict the wealth effect of the carve-out on existing shareholders.

We show this using a sample of 166 carve-outs from the US between 1985 and 2015. Specifically we show that if the wealth effect at carve-out is zero or negative, the abnormal

returns<sup>1</sup> to the parent during book-building period are negative but not significant. However, if the wealth effect is positive, abnormal returns to the parent are positive and significant during the book-building period. There is therefore a predictive effect from positive abnormal returns during book-building to eventual parent firm shareholder positive wealth effects.

Our results, thus, contribute to prior studies examining the information content of equity carve outs for parent company shareholders. By concentrating on the timing of these information flows we add new understanding as to when and how equity carve outs affect the wealth of parent company shareholders. The remainder of the paper is arranged as follows: In Section 2, we discuss the sample selection and data description. In Section 3, the results are presented and analysed, and Section 4 briefly concludes the paper.

## **2. Sample selection and data description**

### ***2.1. Sample selection***

Our sample consists of 166 IPOs which are classified as equity carve-outs offered on the New York Stock Exchange (NYSE) in the US over the period from 1985 to 2015. This data is sourced from the Securities Data Company (SDC Thomson). To build this sample we followed the criteria used Benveniste et al. (2008). Our initial count was 226 IPOs when we carry out matching criteria based on CUSIP, Dow Jones Factiva news wires on announcements, and after excluding financial companies. These IPOs comprise only offers from subsidiaries of listed companies and exclude partnerships, real estate investment trusts (REITs), closed end funds, unit offerings and American depository receipts (ADRs). This sample size was reduced to the final sample size of 166 after excluding firms with either: missing information about the parent's ownership percentage before and after the issue; lack of parent company share price on CRSP and Compustat; parents being listed on non US exchanges; and CUSIP changes.

We used Factiva to identify the date when the IPO was first seen in the news i.e., the announcement date. Out of 166 observations, 140 were announced on the filing date (when the IPO is filed with the SEC), and 26 were announced before or after the filing date. Figure 1 provides a graphical depiction of our sample. From this figure, we clearly observe years of peaks and troughs both in terms of number of IPOs and their value in millions of US dollars. For number of IPOs, 1996 was the most active year for our sample with a total of 13 IPOs and

---

<sup>1</sup> Abnormal returns refer to the cumulative abnormal returns

is followed by 1999 with 12 IPOs. On the other side, we observe the year 2000 spearheading in value terms with proceeds approximating \$14 billion.

## 2.2. Variables

### *Variable of interest*

Our main variable of interest is the abnormal return (AR) to the parent at different stages in the IPO process: filing, during book-building, at offer, and at listing of the carved-out IPO. AR at filing shows the AR at the date of filing and one day after the filing (F, F+1). AR during book-building period is return between filing plus two days and offer minus one day (F+2, O-1). AR at offer is return at offer date (O) and AR at listing is return on listing of the IPO and one day after the listing day (L, L+1). For the wealth effect, we represent where necessary, wealth at the offer date as ‘Wealth O’, wealth at listing date as ‘Wealth L’ and wealth for the whole IPO as ‘Wealth IPO’. Figure 2 provides a visual description of the various stages in the IPO offering process as just described.

### *IPO and firm level control variables*

Following the existing literature, we control for important IPO and firm related features that affect our analysis. Table 1 reports the summary statistics of the control variables used in this study. We define these controls here. Subsidiaries in our sample take 81 days on average to go public, which is represented by variable *N days*. In the sample, 33% of subsidiaries and their parents have *relatedness*, identified on the basis of having the same first two digits of their SIC codes. Around 35% of the subsidiaries are from *high tech industries*<sup>2</sup>. The proportion of primary shares to secondary shares (*percent prim*) is quite high in our sample. About 86% of the shares issued were primary shares i.e., new shares issued by the parent firm. *Underwriter rank* averages 8 in our sample on the scale of 1-9. This ranking is based on the Loughran and Ritter (2004) tombstone measure. The mean gross *proceeds* (mil US dollars) that the subsidiaries file with the Securities and Exchange Commission (SEC) are about \$406 million having a median of \$75 million. The evident difference between the two measures can be attributed to the presence of very large issues in the sample (up to \$10.62 billion).

The average *leverage* is 3.37, market to book (*MTB*) ratio is 2.92, and prior year revenue *growth* is 15.63%. The average *relative size* (calculated as subsidiary market value divided by

---

<sup>2</sup> The definition follows Benveniste et al. (2008) and SDC definition of “High Tech Industry group”

parent market value) is 61%, which means that the average subsidiaries carved-out were of high relative value compared to the parent firm. Subsidiaries of such relative value would be expected to have a non-trivial impact on the value of parent firm.

### 3. Results and analysis

#### *3.1. Wealth effects on parent firm shareholders*

We first examine the wealth effect of the carve-out subsidiary on the parent company using the Loughran and Ritter (2002) wealth calculation equation. Assuming that the wealth change information is not available prior to the offer, we calculate the wealth effect at both offer and listing of the issue and the combined effect gives the wealth effect of the whole IPO (See Figure 2). These findings are reported in Table 2 and show an average wealth at offer is - \$6.82 million, while at the time of listing wealth is +\$321.59 million. The overall wealth at IPO is +\$314.77 million. The average gross spread in our sample is \$17.84 million, which indeed is a cost to the issuer and it will reduce the wealth of issuer by the amount it holds. This illustrates some of the changes in wealth over the process of the equity carve-out and demonstrate some limitations of prior studies that only examine announcement effects (see e.g., Allen and McConnell, 1998).

Wealth at offer is calculated from the first portion of the Loughran and Ritter (2002) wealth equation:

$$[\text{Retained by parent after offer} + \text{secondary shares sold by parent}] * [\text{offer price} - \text{midpoint}]$$

This is the information that is available until the offer date. If the offer price is higher than the midpoint of the filing range (midpoint is considered a reasonable expected price by the issuers), a positive wealth impact is observed as the existing shareholders are getting more than expected. If the midpoint is higher than the offer price, a negative wealth impact is observed.

The wealth effect at listing can be calculated from the second part of the Loughran and Ritter (2002) wealth equation:

***Retained by parent after \* [P-OP] - [P-OP] \* [secondary shares sold + Primary shares sold (Retained by parent after / retained by all)]***

Here, *Retained by parent after \* [P-OP]* represents the wealth that the issuers will have after the carve-out IPO is listed on a stock exchange, with P representing the market price and OP the offer price. The higher the portion retained by the issuer, provided there is a positive price jump, the higher will be the positive wealth effect on this portion of their investments. The remaining part of this equation represents the amount of money lost due to selling some shares at a price that turns out to be underpriced. Again, the smaller the dilution of issuer's share in the business, the lower will be the impact of loss on the wealth of issuers if there is a positive increase in the price of the new issue on the listing.

Regarding the relative wealth at different stages of the process including offer, listing and IPO, we observe a negative wealth effect at offer (-2.88%,  $p < 0.05$ ) and a positive and significant wealth effect at the listing of the IPO (3.84%,  $p < 0.01$ ). The relative wealth of the whole IPO (combined effect of wealth at offer and listing) is positive but insignificant.

### ***3.2. Timing of abnormal returns in the parent firm***

We calculate abnormal returns to the parent firm during the IPO process in relation to the S&P 500 index using the Karafiath (1988) event study approach. As we calculate the abnormal returns at each stage in the process this enables us to observe a significant change in the return to the parent firm from the moment they first file for carving out their subsidiary, through to the completion of the listing on the market.

The results reported in Table 3 clearly indicate that the parent share price significantly outperforms the market at the time of filing and during the book-building period. However, it is also evident that the parent shares tend to underperform at the time of offer and listing. The share price appreciates by 1.9% at filing in comparison with the market conditions prevailing at the moment of filing. This result is consistent to the one observed by Schipper and Smith (1986) and Allen and McConnell (1998). The average price jump during the book-building is as 8.5% (significantly positive  $p < 0.01$ ). This percentage is slightly higher than that of Benveniste et al. (2008) as they report 7% increase in share price increase for the parent adjusted for S&P 500 returns during the subsidiary pre-IPO book-building period. At the time of offering, the parent significantly underperforms the market by 2.9%. The return around listing is similarly negative with a 1.9% underperformance on listing.

### ***3.3. Abnormal returns to the parent and wealth effects of carved-out subsidiary***

We now explore whether and how the abnormal return to the parent firm shareholders are related to the wealth effect of a subsidiary IPO. This is first tested using main effects in Table 4, which shows the wealth effect at offer, listing, and then at IPO, compared to parent firm abnormal returns. Firms are grouped according to whether a firm experienced a wealth loss or a gain at a particular stage. Abnormal returns are calculated at filing, during book-building, at offer and at listing plus one day. We thus have a 3 x 4 matrix of wealth effects at three stages during the process and four abnormal returns at different stages. Table 4 reports mean returns and differences at each of these twelve possible co-occurrences.

We see that when the wealth effect at the offer date is negative, abnormal return to the parent during book-building was 3.47% ( $p < 0.10$ ). However, when the wealth effect was positive, the abnormal return during the book-building period was much higher at 14.04% ( $p < 0.01$ ). The difference between the two abnormal returns is also highly significant (10.57%,  $p < 0.01$ ). This finding is broadly in line with the previous literature (e.g., Loughran and Ritter, 2002) supporting the notion that an upward offer price revision fosters higher underpricing at the listing of the IPO than that of a downward price revision. The relation between the wealth effect at listing date and abnormal return to the parent during the book-building period also yield interesting results. This time, for negative wealth the abnormal return is 4.90% ( $p < 0.05$ ), while for positive wealth is abnormal return to the parent firm shareholders is 10.28% ( $p < 0.01$ ). Lastly, if the wealth effect for the whole IPO turns out to be positive the abnormal return to the parent during the book-building period is also highly positive at 13.87% ( $p < 0.01$ ). There is no relationship if the wealth effect for the whole IPO is negative. This key finding suggests that during the book-building period of the subsidiary the market increases the value of the parent firm as new positive wealth information is uncovered about the subsidiary. Hence, information regarding the wealth effect that will occur at offer date and listing date is observable during the book-building period in the price of the parent shares (Loughran and Ritter, 2002; Benveniste et al., 2008).

We now turn to multivariate regression analysis on abnormal returns to formally confirm this finding. We examine abnormal returns in the parent at four points (filing, book building, offer, and listing) on the continuum of the IPO process, and present the results in four panels in Table 5. In all four panels, we regress the abnormal returns to the parent against relative wealth (%) variables and a set of control variables as described in Section 2. The relative wealth variables are relative wealth at the time of offer (Model 1), time of listing (Model 2), at



time of IPO representing the combined effect of offer and listing (Model 3), and relative gross spread (Model 4).

It is evident from the results of these four panels that the abnormal returns to the parent demonstrate positive and statistically significant coefficients at the 1% level during the book-building period (Panel B). This is shown with respect to relative wealth at offer, at listing, and at IPO. However, for all other periods the relationship between abnormal returns to the parent and relative wealth is not significant. While Benveniste and Spindt (1989) observed similar effects in the case of conventional IPOs, in case of equity carve-outs, this means that the shares prices of the parent firm during the book-building period is the main period when future wealth effects are discovered.

## **6. Conclusion**

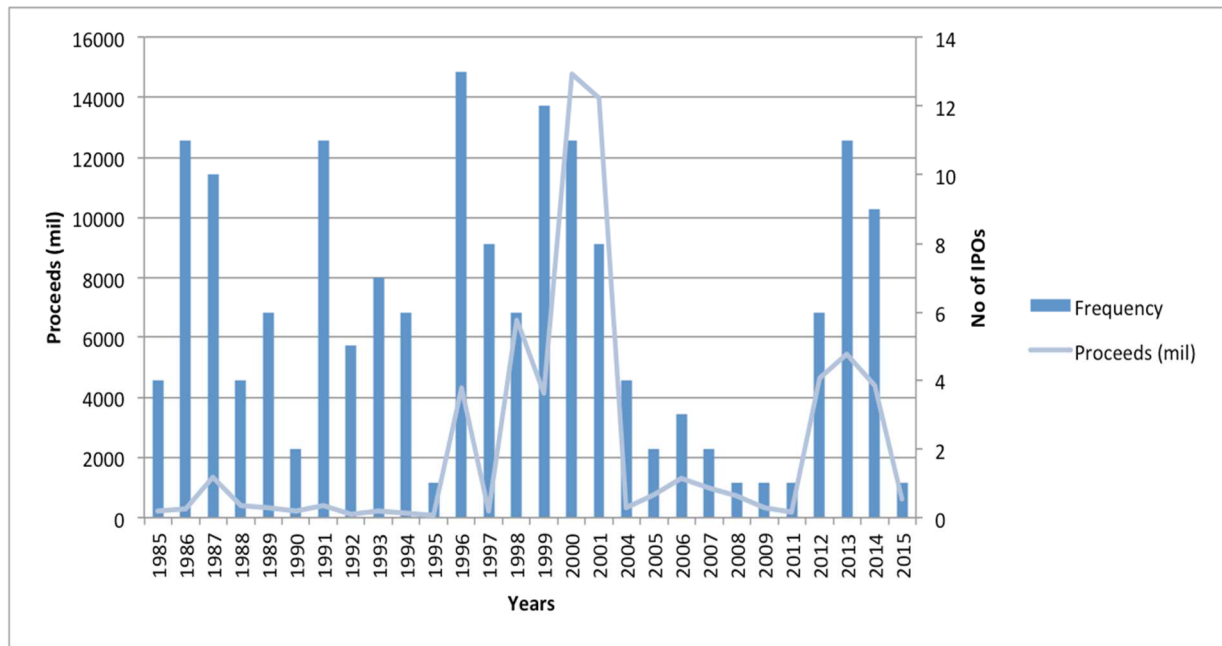
We extend research on the information content of equity carve-outs. We study the wealth effect of the carve-outs on the existing shareholders and find that the wealth effect of a carve-out is predictable well before the offering of the issue. Though the exact value of the wealth effect may not be predicted before the offer, the already trading parent shares provide a window to investors to predict the expected outcome of the new issue.

Using the profit and loss measuring inequality of Loughran and Ritter (2002), we document that the positive eventual wealth effect on the existing shareholders of the ongoing public firm can be traced through price increases in the shares of parents during the book-building period of the carve-out. This is just the case for positive surprises. We therefore show that if investors focus on the movement of share prices of the parent during the book-building period, they may require less additional efforts in making their investment decisions.

## References

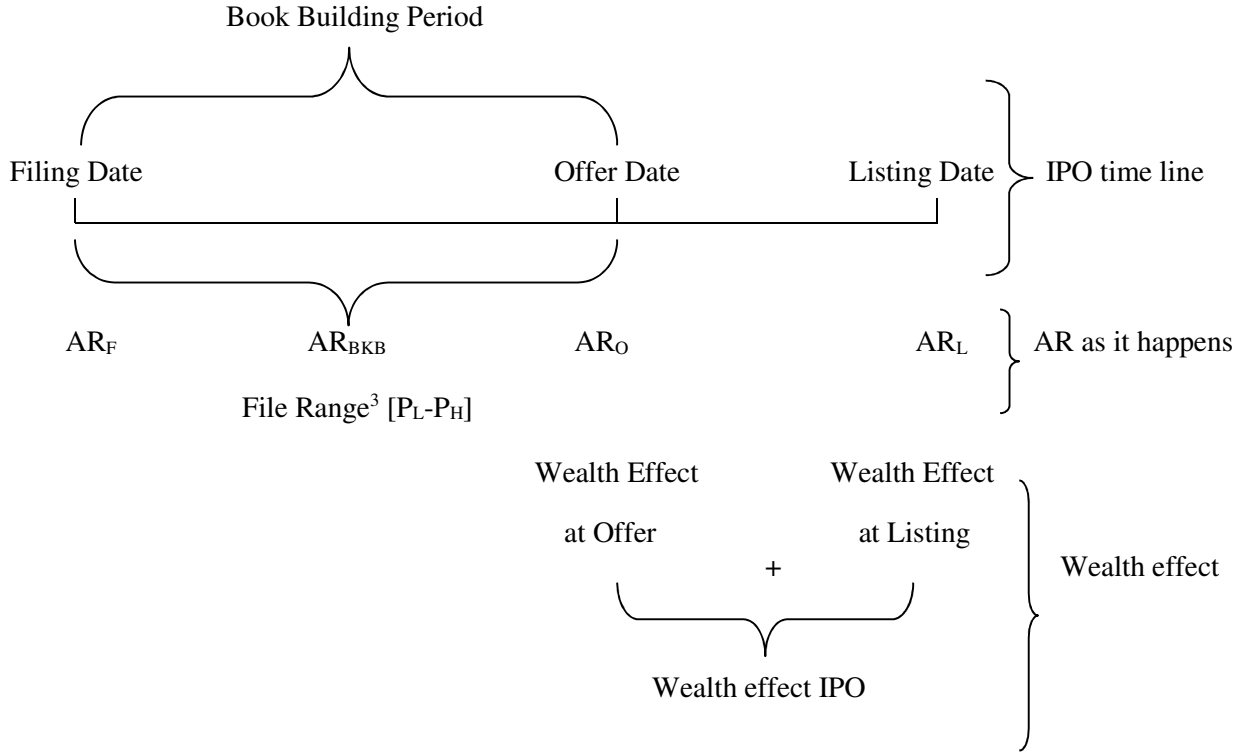
- Allen, J.W. & McConnell, J.J., 1998. Equity carve-outs and managerial discretion. *The Journal of Finance*, 53(1), pp.163–186.
- Benveniste, L. M., & Spindt, P. A, 1989. How investment bankers determine the offer price and allocation of new issues. *Journal of Financial Economics*, 24, pp.343-361.
- Benveniste, L. M., Huijing, F., Seguin, P. J., & Yu, X., 2008. On the anticipation of IPO underpricing: Evidence from equity carve-outs. *Journal of Corporate Finance*, 14(5), pp.614-629.
- Dasilas, A., & Leventis, S., 2018. The performance of European equity carve-outs. *Journal of Financial Stability*, 34, 121-135.
- Ghosh, C., Petrova, M., Feng, Z., & Pattanapanchai, M., 2012. Does IPO pricing reflect public information? New insights from equity carve-outs. *Financial Management*. 41, 1–33.
- Karafiath, I., 1988. Using dummy variables in the event methodology. *The Financial Review*, 23(3), pp.351–357.
- Loughran, T., & Ritter J.R., 2002. Why don't issuers get upset about leaving money on the table in IPOs? *Review of Financial Studies*, 15(2), pp.413-444.
- Loughran, T. and Ritter, J., 2004. Why has IPO underpricing changed over time? *Financial Management*, 33(3), pp.5-37.
- Prezas, A.P. and Simonyan, K., 2015. Corporate divestitures: Spin-offs vs. sell-offs. *Journal of Corporate Finance*, 34, pp.83-107.
- Schipper, K., 1986. A comparison of equity carve-outs and seasoned equity offerings share price effects and corporate restructuring. *Journal of Financial Economics*, 15(1-2), pp.153–186.
- Thompson, T.H., 2010. Partial price adjustments and equity carve-outs. *The Financial Review*, 45(3), pp.743-759.

**Figure 1: IPOs Sample**



**Figure 2: Time line of a carve-out IPO, AR and wealth effect**

This figure shows the timing of different events that occur during the offering process of a carve-out. The figure also illustrates the points where we studied the abnormal returns to the parent firms and also the wealth effect of these carve-outs that were observed in our study.  $AR_F$  is abnormal return at filing,  $AR_{BKB}$  is abnormal return during the book-building,  $AR_O$  is abnormal return at offer and  $AR_L$  is abnormal return at listing.



<sup>3</sup>  $P_L$  is lower price of the filing range and  $P_H$  is the upper price of the filing range

**Table 1: Descriptive statistics**

N days is the number of days between filing date and offer date. Relatedness is a dummy variable equal to '1' if the parent and subsidiary have the same first two digit SIC code and '0' if they do not share the same first two digit SIC code. High-tech is also a dummy variable carrying '0' if subsidiary is not in high-tech industry and '1' if it is in high-tech. They are classified by the first three digit SIC codes 283, 357, 366, 367, 381, 382, 383, 384, 737, 873, 874. Percent prim is the percentage of primary shares in the new issue. Underwriter rank represents the rank of lead underwriter (investment banker) and is based on the Loughran and Ritter (2004) tombstone measure of ranking. Log proceeds are log (proceeds). Proceeds are the proceeds for the IPO. Filing spread is  $[(\text{price high} - \text{price low}) / ((\text{price high} + \text{price low}) / 2)]$ . Relative size is subsidiary market value / parent market value. Leverage is debt / equity ratio. MTB is market price per share / book value per share. Growth is  $[(\text{this year sales (turnover)} - \text{previous year sales (turnover)}) / (\text{previous year sales (turnover)} * 100)]$

Variables	N	Mean	Median	Lower Quartil e	Upper Quartile	Standard Deviation
N Days	166	81.602	64.000	45.000	90.000	67.523
Relatedness	166	0.337	0.000	0.000	1.000	0.474
High Tech	166	0.355	0.000	0.000	1.000	0.480
Percent Prime	166	0.863	1.000	0.993	1.000	0.287
Underwriter Rank	166	8.124	9.000	8.001	9.001	1.577
Log Proceeds	166	18.316	18.134	16.994	19.571	1.655
Proceeds (mil)	166	406.436	75.100	24.000	315.789	1193.933
Filing Spread	166	0.152	0.146	0.118	0.182	0.064
Leverage	155	3.369	1.541	0.861	2.689	6.291
MTB	155	2.922	2.127	1.339	3.130	3.373
Growth	155	15.630	12.390	-12.498	27.676	49.825
Relative Size	166	0.609	0.367	0.156	0.848	0.664

**Table 2: Wealth effect of carve-out subsidiary on its parent firm**

*Wealth O* is the wealth at the offer date of IPO. *Wealth L* is wealth at listing date. *Wealth IPO* is the combined effect of wealth at the time of offer and listing. All wealth effects calculated as per the Loughran and Ritter (2002) wealth equation. *Gross spread* is the amount paid as gross spread to the underwriters and is calculated as [(percent gross spread \* proceeds)/100]. *Relative wealth O* is the wealth at offer date as percentage of parent market value. *Relative wealth L* is the wealth at listing as percentage of parent market value. *Relative wealth IPO* is the wealth at IPO date as percentage of parent market value. *Relative gross spread* is the gross spread as percentage of parent market value.

Variable	N	Mean	Median	Standard Deviation	T test	P-value
Wealth O (in mil \$)	166	-6.819	0.000			
Wealth L (in mil \$)	166	321.588	5.630			
Wealth IPO (in mil \$)	166	314.770	5.304			
Gross spread (in mil \$)	163	17.836	4.760			
Relative wealth O (in %)	166	-2.882**	0.000	16.342	-2.270	0.024
Relative wealth L (in %)	166	3.842***	0.557	9.653	5.130	0.000
Relative wealth IPO (in %)	166	0.960	0.558	20.006	0.620	0.538
Relative gross spread (in %)	163	0.998***	0.407	1.959	6.500	0.000

**Table 3: Timing of abnormal returns in the parent firm**

ARF represents the abnormal return to the parent firm on the filing date and one day after filing. ARBKB is the abnormal return to the parent during book-building period (i.e., from third day of filing to one day before the offer date). ARO is abnormal return at the offer date and ARL is the abnormal return to the parent at listing date and one day after listing. N is number of firms observed in the sample.

	N	Mean	Median	Standard Error	T test	P-value
AR <sub>F</sub> (F,F+1)	166	0.019***	0.005	0.075	3.310	0.001
AR <sub>BKB</sub> (F+2,O-1)	166	0.085***	0.055	0.240	4.570	0.000
AR <sub>O</sub> (O)	166	-0.029***	-0.011	0.090	-4.210	0.000
AR <sub>L</sub> (L,L+1)	166	-0.019***	0.009	0.061	-4.090	0.000

**Table 4: Abnormal returns to the parent and wealth effects of the carve-out subsidiary - Mean difference analysis**

*Wealth O < 0* represents the negative wealth effects at the offer of the issue. *Wealth O > 0* shows the positive wealth effects at the offer of the issue. *Wealth L < 0* stands for the wealth effect at the listing of the issue. *Wealth L > 0* represents the positive wealth effect at listing of the issue. *Wealth IPO < 0* means negative wealth effect at the IPO (i.e., the combined effect of both offer and listing times). *Wealth IPO > 0* shows the positive wealth effects at the IPO. *Difference* is the difference between the negative and positive wealth effects at the respective stages.  $AR_F$  (F, F+1) represents the abnormal return to the parent firm on the filing date and one day after filing.  $AR_{BKB}$  (F+2, O-1) is the abnormal return to the parent during book-building period (i.e., from third day of filing to one day before the offer date).  $AR_O$  (O) is abnormal return at the offer date and  $AR_L$  (L, L+1) is the abnormal return to the parent at listing date and one day after listing. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

		Wealth at the Offer Date			Wealth at the Listing Date			Wealth for all the IPO		
		Wealth O < 0	Wealth O > 0	Difference	Wealth L < 0	Wealth L > 0	Difference	Wealth IPO < 0	Wealth IPO > 0	Difference
$AR_F$ (F,F+1)	Mean	0.0162**	0.0224**	-0.0062	0.0137	0.0218***	-0.0081	0.0131	0.0238***	-0.0106
	N	87	79		55	111		72	94	
	T test	2.51	2.26	-0.53	1.32	3.14	0.66	1.88	2.73	-0.91
$AR_{BKB}$ (F+2,O-1)	Mean	0.0347*	0.1404***	-0.1057***	0.0490**	0.1028***	-0.0538	-0.0148	0.1387***	-0.124***
	N	87	79		55	111		72	94	
	T test	1.69	4.55	-2.90	2.01	4.12	-1.36	0.74	4.98	-3.41
$AR_O$ (O)	Mean	-0.0205***	-0.0101	-0.0104	-0.0252**	-0.0108**	-0.0144	-0.0212**	-0.0113*	-0.0099
	N	87	79		55	111		72	94	
	T test	-2.68	-1.42	-0.99	-2.21	-1.98	-1.29	-2.42	-1.76	-0.93
$AR_L$ (L,L+1)	Mean	-0.0129**	-0.0266***	0.0137	-0.0233**	-0.0175***	-0.0058	-0.0140*	-0.0236***	0.0096
	N	87	79		55	111		72	94	
	T test	-2.00	-3.81	1.44	-2.55	-3.18	-0.57	-1.92	-3.77	1.00

**Table 5: Regression of abnormal returns to the parent firm over the carve-out process**

Dependent variable is abnormal return at the time of (i) filing ( $AR_F$ ) in *Panel A*, (ii) during Book-building ( $AR_{BKB}$ ) in *Panel B* (iii) Offer ( $AR_O$ ) in *Panel C* and (iv) Listing ( $AR_L$ ). *Relative wealth offer* is calculated as wealth offer divided by parent market value. *Relative wealth listing* is wealth at listing divided by parent market value. *Relative wealth IPO* is wealth IPO divided by parent market value and *Relative gross spread* is gross spread divided by parent market value.

*Panel A – Wealth effects at the filing of carve out*

	Dependent Variable: Abnormal Return at Filing ( $AR_F$ )			
	(1)	(2)	(3)	(4)
<i>Intercept</i>	0.030 (0.36)	0.037 (0.40)	0.038 (0.44)	0.056 (0.71)
<i>Relative Wealth Offer (%)</i>	0.033 (0.53)			
<i>Relative Wealth Listing (%)</i>		0.018 (0.22)		
<i>Relative Wealth IPO (%)</i>			0.024 (0.57)	
<i>Relative Gross Spread (%)</i>				-0.511 (-0.95)
<i>N Days</i>	0.000 (-0.25)	0.000 (-0.25)	0.000 (-0.27)	0.000 (-0.23)
<i>Relatedness</i>	0.005 (0.31)	0.004 (0.27)	0.004 (0.29)	0.004 (0.28)
<i>High Tech</i>	0.011 (0.70)	0.011 (0.75)	0.010 (0.65)	0.009 (0.64)
<i>Percent Primary Shares</i>	-0.021 (-0.89)	-0.020 (-0.85)	-0.022 (-0.92)	-0.022 (-0.96)
<i>Underwriter Rank</i>	-0.004 (-0.61)	-0.004 (-0.64)	-0.004 (-0.64)	-0.004 (-0.65)
<i>Log Proceeds</i>	0.002 (0.31)	0.001 (0.28)	0.001 (0.27)	0.000 (0.08)
<i>Filing Spread</i>	0.018 (0.18)	0.004 (0.04)	0.014 (0.13)	0.003 (0.03)
<i>Relative Size</i>	0.016 (1.31)	0.013 (0.98)	0.013 (1.41)	0.024* (1.72)
<i>Leverage</i>	-0.001 (-0.99)	-0.001 (-1.06)	-0.001 (-0.99)	-0.001 (-1.11)
<i>MTB</i>	0.001 (0.50)	0.001 (0.48)	0.001 (0.49)	0.001 (0.58)
<i>Growth</i>	0.000 (-1.17)	0.000 (-1.26)	0.000 (-1.20)	0.000 (-1.23)
<i>N</i>	152	152	152	152
<i>Adj. R<sup>2</sup></i>	-0.030	-0.033	-0.031	-0.028

*Panel B – Wealth effects during the book-building of carve out*

	Dependent Variable: Abnormal Return during Book-building ( $AR_{BKB}$ )			
	(1)	(2)	(3)	(4)
<i>Intercept</i>	0.146 (0.70)	0.383* (1.86)	0.328* (1.66)	0.167 (0.73)
<i>Relative Wealth Offer (%)</i>	0.670*** (3.93)			
<i>Relative Wealth Listing (%)</i>		0.701** (2.05)		
<i>Relative Wealth IPO (%)</i>			0.551***	



			(4.280)	
<i>Relative Gross Spread (%)</i>				-0.259
				(-0.14)
<i>IPO Features</i>	<i>Yes</i>	<i>Yes</i>	<i>Yes</i>	<i>Yes</i>
<i>Firm Features</i>	<i>Yes</i>	<i>Yes</i>	<i>Yes</i>	<i>Yes</i>
<i>N</i>	152	152	152	152
<i>Adj. R<sup>2</sup></i>	0.197	0.131	0.218	0.077

*Panel C – Wealth effects at offer of carve out*

	Dependent Variable: Abnormal Return at Offer ( $AR_O$ )			
	(1)	(2)	(3)	(4)
<i>Intercept</i>	-0.121** (-1.97)	-0.083 (-1.26)	-0.105* (-1.72)	-0.106 (-1.47)
<i>Relative Wealth Offer (%)</i>	0.039 (1.06)			
<i>Relative Wealth Listing (%)</i>		0.113 (1.30)		
<i>Relative Wealth IPO (%)</i>			0.049 (1.36)	
<i>Relative Gross Spread (%)</i>				-0.279 (-0.32)
<i>IPO Features</i>	<i>Yes</i>	<i>Yes</i>	<i>Yes</i>	<i>Yes</i>
<i>Firm Features</i>	<i>Yes</i>	<i>Yes</i>	<i>Yes</i>	<i>Yes</i>
<i>N</i>	152	152	152	152
<i>Adj. R<sup>2</sup></i>	-0.018	-0.005	-0.009	-0.021

*Panel D – Wealth effects at listing of carve out*

	Dependent Variable: Abnormal Return at Listing ( $AR_L$ )			
	(1)	(2)	(3)	(4)
<i>Intercept</i>	0.072 (0.87)	0.057 (0.75)	0.063 (0.78)	0.035 (0.43)
<i>Relative Wealth Offer (%)</i>	-0.031 (-0.61)			
<i>Relative Wealth Listing (%)</i>		-0.043 (-0.45)		
<i>Relative Wealth IPO (%)</i>			-0.028 (-0.64)	
<i>Relative Gross Spread (%)</i>				0.729 (1.33)
<i>IPO Features</i>	<i>Yes</i>	<i>Yes</i>	<i>Yes</i>	<i>Yes</i>
<i>Firm Features</i>	<i>Yes</i>	<i>Yes</i>	<i>Yes</i>	<i>Yes</i>
<i>N</i>	152	152	152	152
<i>Adj. R<sup>2</sup></i>	-0.032	-0.033	-0.031	-0.020