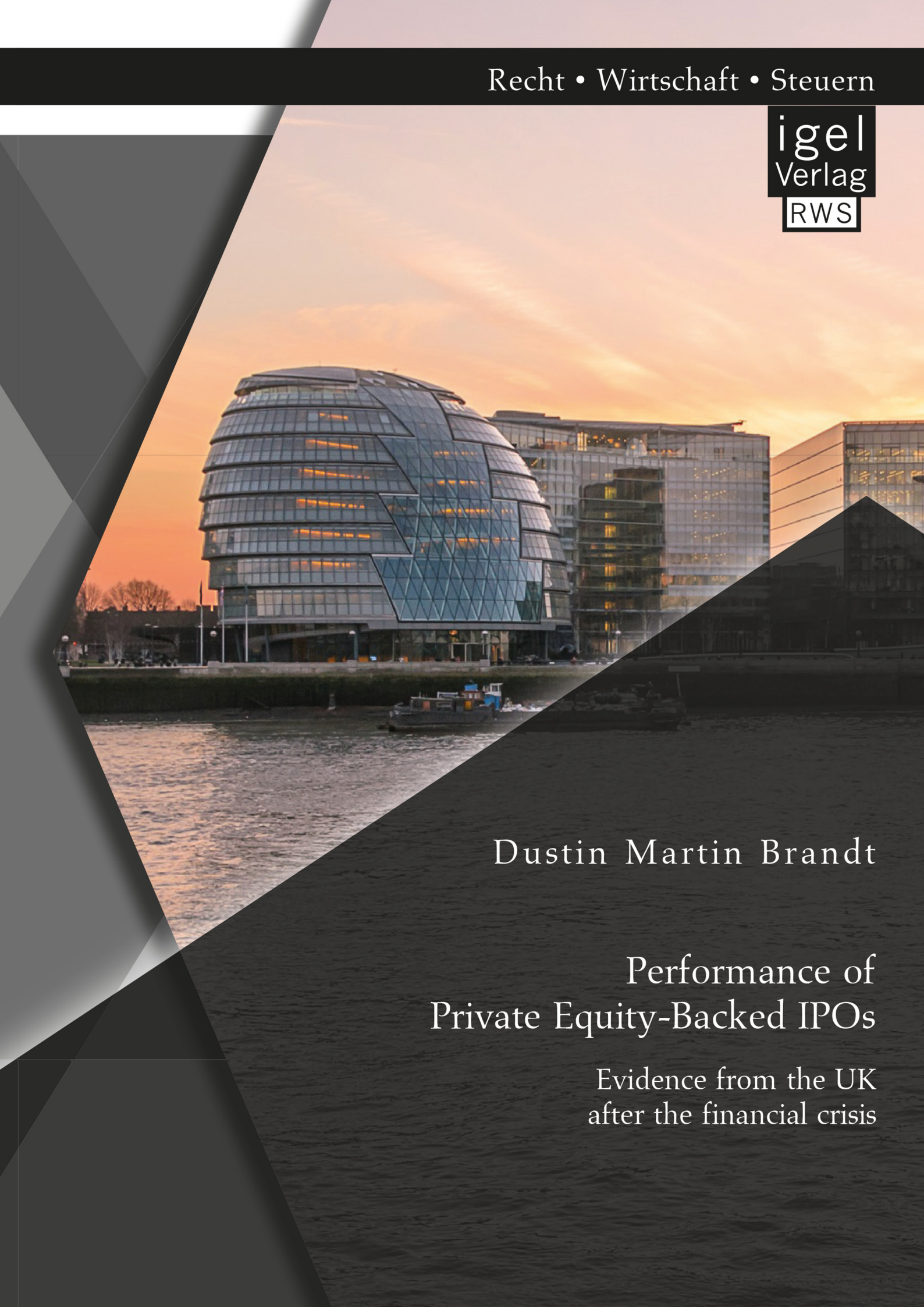


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Dustin Martin Brandt

Performance of Private Equity-Backed IPOs

Evidence from the UK
after the financial crisis

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Summary

The paper studies the performance of private equity backed initial public offerings between 2013 and 2015 relative to both firms without financial backing on either the London Stock Exchange's Main Market or the Alternative Investment Market, and the stock market, respectively. In particular, since PE-backed IPOs accounted for approximately 55% of the total IPO volume on the LSE and AIM (GBP 27.2 million) from 2013 to 2015, a detailed analysis of the performance of PE-backed IPOs may be of special interest for financial scholars, practitioners and investors.

I find a sample of 238 IPOs on both stock exchanges, however as stock price data is missing for 38 firms due to either delistings, listing cancellations or mergers, the final sample size constitutes 200 IPOs. With regards to different types of financial backing I construct four subsamples consisting of 55 PE-backed, 23 VC-backed, 6 PE/VC-backed and 154 non-backed IPOs by studying financial backing data thoroughly.

I study initial day returns, in particular the phenomenon of underpricing, as well as long-run performances in event-time and calendar-time throughout a 36-months observation period. For the latter purpose different metrics such as buy-and-hold abnormal returns, cumulative abnormal returns and wealth relatives in event-time are used, in addition to CAPM and Carhart's Four-Factor Model estimates in calendar time. Abnormal returns are calculated using raw-adjusted returns as well as benchmark-adjusted returns. To adjust for benchmark returns, data of some major indices that reflect the performance of UK-based companies as set upon specific criteria are being used. Henceforth, I decide to calculate benchmark-adjusted returns using data of the FTSE 100, FTSE 350, FTSE 250, FTSE Small Cap, FTSE All Share, FTSE AIM 100 and FTSE AIM UK 50. Moreover, synthetic equity portfolios are constructed using equally-weighting and value-weighting schemes, respectively to allow for a comparison of results.

I find evidence that offer size of PE-backed IPOs is significantly larger, on average by 2.5 times and with the median by 15 times compared to non-backed IPOs. Besides, consistent with previous research findings, I can successfully show that the majority of PE firms hold a pre-IPO stake of more than 50%, which might be explained with common practice of PE firms in reserving their rights to exercise control over portfolio firms until exit.

Furthermore, I find evidence that consistent with earlier research PE firms tend to acquire firms operating in consumer discretionary, industrials, IT, health care, and since the crisis also such in the financial sector.

Studying initial day returns in the UK after the financial crisis in a market with recovered IPO activity, consistent with previous research for the sample of PE-backed IPOs I find lower underpricing compared to the sample size average and the non-backed IPO portfolio average, which is true for the whole observation period from 2013 to 2015, as well as for each individual calendar year.

Also, I find lower initial day returns in PE-backed IPOs between 2013 and 2015 than documented by past research.

In contrast to previous findings that report higher IPO underpricing in hot market conditions, I find evidence that following the latest financial crisis, underpricing has been higher in periods with relatively high IPO activities (2013 and 2015) than in periods with relatively ‘normal’ IPO activity (2014). Nevertheless, this finding should be interpreted cautiously as the phenomenon of higher underpricing in hot market conditions is reported for historical years in which IPO activity deviated to greater extent than the difference is between 2014 and both 2013 and 2015, respectively, which might potentially lead to diluted findings.

Studying long-run performances in the aftermarket, I find evidence that in event-time portfolio returns are subject to greater differences with regard to the benchmarks used for return adjustments, return calculation methods and weighting schemes.

Adjusting raw returns for a benchmark shows that the effect of the adjustment is more significant for longer observation periods. Moreover, I report two patterns of portfolio weighting schemes affecting portfolio returns. For non-backed IPOs commencing the 9-months holding period, I find the weighting scheme to have significant impact on portfolio returns as returns depending on the weighting scheme deviate to greater extent until the 36-months period, whereas in case of the PE-backed IPO portfolio the opposite is true as I do not find significant differences between equally-weighting and value-weighting portfolio returns. Furthermore, I find that measurement methods have the least significant impact on portfolio returns.

Studying long-run performances of PE-backed IPOs relative to non-backed IPOs, I find difficulties in drawing clear conclusions as results are not consistently statistically significant. Nevertheless, I can show that consistent with previous research PE-backed IPOs still outperform non-backed IPOs over a 36-months period.

Also, I conclude that PE-backed IPOs outperformed stock market indices such as the FTSE 100, FTSE 350, FTSE 250, FTSE SmallCap, FTSE All Share indices. However, for the latter conclusion ambiguity persists as results are not consistently statistically significant. In contrast, I find statistically significant results for PE-backed IPOs having underperformed

stock markets as reflected by the FTSE AIM 100 and the FTSE AIM UK 50, although underperformance is economically not significant.

In calendar time, and with CAPM estimates I find PE-backed IPO firms to have positive monthly returns for equally-and value-weighted portfolios. Testing for calendar time returns with Carhart's Four-Factor Model, the results show mixed evidence. In case of the equally-weighted PE-backed portfolio, I find superior returns over non-backed IPO firms, whereas the opposite is true for value-weighted portfolios. However, in any case CAPM and Carhart's Four-Factor Model estimates for both positive and negative monthly returns are small and partially lack in statistical significance.

Finally, with the results found in this paper, additional questions arise with regard to the variables that constitute superior performance of PE-backed IPOs, in particular whether there is a positive relationship between the reputation of a PE firm and stock performance of a former portfolio firm.

Contents

Summary	v
Index of Figures	xi
Index of Tables	xii
Nomenclature.....	xiv
1. Introduction	1
1.1. Background	1
1.2. Research Aim and Objective.....	4
1.3. Relevance and Research Contribution	6
2. Literature Review	7
2.1. UK Equity Market—Setting for IPOs and Private Equity	7
2.2. Review on Private Equity	8
2.2.1. Private Equity Transactions.....	8
2.2.2. Exit Strategies.....	9
2.2.2.1. IPO	10
2.2.2.2. Strategic Sale	10
2.2.2.3. Sponsor-to-Sponsor Sale (Secondary Buyout)	11
2.3. IPO Activity	12
2.4. IPO Performance	15
2.4.1. Short-Run Underpricing	15
2.4.2. Determinants of Short-Run Underpricing	16
2.4.2.1. Assymmetric Information	16
2.4.2.2. Firm-Specific Characteristics	17
2.4.2.3. Market Characteristics	17
2.4.2.4. Underwriter Reputation	17
2.4.2.5. Pre-IPO Banking Relationship.....	18
2.4.3. Short-Run Underpricing of PE-backed IPOs.....	19
2.4.3.1. Evidence from the UK	19
2.4.4. Long-Run After-Market Performance	20
2.4.5. Determinants of Long-Run Underperformance.....	22
2.4.5.1. IPO Activity.....	22
2.4.5.2. Overoptimistic High Earnings Reporting	23
2.4.5.3. Underwriter Reputation	23
2.4.5.4. Pre-IPO Debt and Convertible Debt Issuance	23

2.4.6. Long-Run Performance of PE-backed IPOs	23
2.4.6.1. Evidence from the UK	24
3. Sample Data & Methodology	26
3.1. Sample Selection	26
3.1.1. IPO Data	26
3.1.2. Identification of PE-backed IPOs	28
3.1.3. Time Period	29
3.2. Measuring Underpricing	31
3.3. Measuring Long-Run Performance	34
3.3.1. Buy-and-Hold-Abnormal Returns (BHAR)	35
3.3.2. Cumulative Abnormal Returns (CAR)	36
3.3.3. Wealth Relative (WR)	37
3.3.4. Return-weighting	37
3.4. Regressions	38
3.4.1. Single-Factor Time-Series Regression in Calendar Time – Capital Asset Pricing Model	38
3.4.2. Four-Factor Time-Series Regression in Calendar Time – Carhart Four-Factor Model	39
4. Results	41
4.1. General Descriptive Statistics	41
4.2. Underpricing	45
4.3. Long-Run Performance	50
4.3.1. CARs	50
4.3.1.1. CARs – Equally-Weighted	50
4.3.1.2. CARs – Value-Weighted	53
4.3.2. BHARs in Event Time	57
4.3.2.1. BHARs – Equally-Weighted	57
4.3.2.2. BHARs – Value-Weighted	60
4.3.3. Wealth Relative	64
4.4. Regression Results	65
4.4.1. CAPM	65
4.4.2. Carhart-Four Factor Model	67
5. Result Discussion	69
5.1. Underpricing	69

5.2. Long-Run Performance	70
5.2.1. CARs	71
5.2.2. BHARs.....	71
5.2.3. Wealth Relatives.....	73
6. Conclusion.....	74
7. Suggestion for Further Research	77
Bibliography	78
Appendices	xvi

Index of Figures

Figure 1: Global Public-to-Private Deal Volume and Total Deal Count, 2005-2018.....	1
Figure 2: UK IPO Overview	7
Figure 3: Private Equity Transaction Process	8
Figure 4: Global Buyout-Backed Exit Value	10
Figure 5: Global IPO Activity & Total Transaction Value (Median)	13
Figure 6: Re-based UK Stock Market Performance using different UK benchmarks	30
Figure 7: Distribution Plots for normality testing in Underpricing subsample groups: PE-Backed and Non-Backed Raw IPO Underpricing	xxxvii

Index of Tables

Table 1: Top 10 UK-based Private Equity Firms by Aggregate Capital Raised	8
Table 2: Criteria and filtering of the IPO sample	27
Table 3: Current Status of IPO firms	28
Table 4: Overview on selected UK market indices	32
Table 5: IPO Statistics per Type and Market.....	41
Table 6: IPOs per Type and Market.....	44
Table 7 : IPOs per PE firm.....	44
Table 8: Pre-IPO Ownership Stake Distribution	45
Table 9: Raw Initial Day Return Statistics	46
Table 10: Benchmark-Adjusted Initial Day Return Statistics.....	48
Table 11: Mean/Median Test Statistics for PE-Backed / Non-Backed IPO Underpricing Whole Period	49
Table 12: Cumulative Abnormal Returns (Equally-Weighted).....	52
Table 13: Mean/Median Test Statistics for PE-Backed / Non-Backed IPO CARs (Equally-Weighted)	53
Table 14: Cumulative Abnormal Returns (Value-Weighted).....	56
Table 15: Mean/Median Test Statistics for PE-Backed / Non-Backed IPO CARs (Value-Weighted)	57
Table 16: Buy-and-Hold Abnormal Returns (Equally-Weighted).....	59
Table 17: Mean/Median Test Statistics for PE-Backed / Non-Backed IPO BHARs (Equally-Weighted)	60
Table 18: Buy-and-Hold Abnormal Returns (Value-Weighted)	63
Table 19: Mean/Median Test Statistics for PE-Backed / Non-Backed IPO BHARs (Value-Weighted)	64
Table 20: Wealth Relatives	65
Table 21: Mean/Median Test Statistics for PE-Backed / Non-Backed IPO WRs	65
Table 22: Single-Factor Time-Series Regression in Calendar Time – Capital Asset Pricing Model	66
Table 23: Four-Factor Time-Series Regression in Calendar Time – Carhart Four-Factor Model.....	68
Table 24: IPO List 2013-2015	xxix
Table 25: Historical IPO Activity in the UK (1995-2018)	xxxi

Table 26: Overview on Research Findings on PE-Backed IPO Performance in the UK	xxxii
Table 27: Overview on Research Findings on PE-Backed IPO Performance (excl. UK) ..	xxxiv
Table 28: List of PE-Firms backing the PE-backed IPO Subsample.....	xxxvi
Table 29: Descriptive Statistics & Jarque-Bera test statistics for normality testing in Underpricing subsample groups: PE-Backed and Non-Backed IPO Raw Underpricing.....	xxxvi
Table 30: Shapiro-Wilk test statistics for normality testing in Underpricing subsample groups: PE-Backed and Non-Backed IPO Raw Underpricing	xxxvi
Table 31: Two-sample independent t-test with unequal variances for mean difference testing of PE-backed and Non-Backed Raw IPO Underpricing.....	xxxvii
Table 32: Two-sample Wilcoxon rank-sum test (Mann-Whitney U-test) for median difference testing between PE-backed and Non-Backed Raw IPO Underpricing.....	xxxviii

Nomenclature

AIG	American International Group
AIM	Alternative Investment Market
AR	Abnormal Returns
ASE	American Stock Exchange
BHAR	Buy-and-Hold Return
BICS	Bloomberg Industry Classification System
bps	basis points
c.	circa
CAPM	Capital Asset Pricing Model
CAR	Cumulative Abnormal Return
EBITDA	Earnings before interests, taxes, depreciation and amortisation
ECM	Equity Capital Markets
EV	Enterprise Value
EUR	Euro
FCA	Financial Conduct Authority
GBP	Great Britain Pound
GDP	Gross Domestic Product
GP	General Partner
ICB	Industry Classification Benchmark
IPO	Initial Public Offering
IRR	Internal Rate of Return
LBO	Leveraged Buyout
LP	Limited Partner
LSE	London Stock Exchange
NYSE	New York Stock Exchange
OLS	Ordinary Least Squares
P2P	Public-to-Private
PE	Private Equity
RLBO	Reversed Leveraged Buyout
SEO	Seasoned Equity Offering
SIC	Standard Industry Classification
SPD	Social Democratic Party of Germany

UK	United Kingdom
UKLA	United Kingdom Listing Authority
U.S.	United States
USD	United States Dollar
VC	Venture Capital
WR	Wealth Relative