IPOs and Entrepreneurial Firms

Other titles in Foundations and Trends[®] in Entrepreneurship

Ambidexterity and Entrepreneurship Studies: A Literature Review and Research Agenda Maribel Guerrero ISBN: 978-1-68083-818-3

Innovative Entrepreneurship as a Collaborative Effort: An Institutional Framework Niklas Elert and Magnus Henrekson ISBN: 978-1-68083-810-7

Entrepreneurial Finance: Emerging Approaches Using Machine Learning and Big Data Francesco Ferrati and Moreno Muffatto ISBN: 978-1-68083-804-6

Advice to Entrepreneurs and Small Business Kevin Mole ISBN: 978-1-68083-758-2

From Ethnic Enclaves to Transnational Landscapes: A Review of Immigrant Entrepreneurship Research Anuradha Basu and Sarika Pruthi ISBN: 978-1-68083-756-8

IPOs and Entrepreneurial Firms

Giancarlo Giudici

School of Management Politecnico di Milano Italy giancarlo.giudici@polimi.it

Silvio Vismara

Department of Management University of Bergamo Italy silvio.vismara@unibg.it



Foundations and Trends[®] in Entrepreneurship

Published, sold and distributed by: now Publishers Inc. PO Box 1024 Hanover, MA 02339 United States Tel. +1-781-985-4510 www.nowpublishers.com sales@nowpublishers.com

Outside North America: now Publishers Inc. PO Box 179 2600 AD Delft The Netherlands Tel. +31-6-51115274

The preferred citation for this publication is

G. Giudici and S. Vismara. *IPOs and Entrepreneurial Firms*. Foundations and Trends[®] in Entrepreneurship, vol. 17, no. 8, pp. 766–852, 2021.

ISBN: 978-1-68083-869-5 © 2021 G. Giudici and S. Vismara

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, mechanical, photocopying, recording or otherwise, without prior written permission of the publishers.

Photocopying. In the USA: This journal is registered at the Copyright Clearance Center, Inc., 222 Rosewood Drive, Danvers, MA 01923. Authorization to photocopy items for internal or personal use, or the internal or personal use of specific clients, is granted by now Publishers Inc for users registered with the Copyright Clearance Center (CCC). The 'services' for users can be found on the internet at: www.copyright.com

For those organizations that have been granted a photocopy license, a separate system of payment has been arranged. Authorization does not extend to other kinds of copying, such as that for general distribution, for advertising or promotional purposes, for creating new collective works, or for resale. In the rest of the world: Permission to photocopy must be obtained from the copyright owner. Please apply to now Publishers Inc., PO Box 1024, Hanover, MA 02339, USA; Tel. +1 781 871 0245; www.nowpublishers.com; sales@nowpublishers.com

now Publishers Inc. has an exclusive license to publish this material worldwide. Permission to use this content must be obtained from the copyright license holder. Please apply to now Publishers, PO Box 179, 2600 AD Delft, The Netherlands, www.nowpublishers.com; e-mail: sales@nowpublishers.com

Foundations and Trends[®] in Entrepreneurship Volume 17, Issue 8, 2021 Editorial Board

Editors-in-Chief

Albert N. Link University of North Carolina at Greensboro United States David B. Audretsch Indiana University United States

Editors

Howard Aldrich University of North Carolina

Sharon Alvarez University of Denver

Per Davidsson Queensland University of Technology

Michael Frese National University of Singapore

William B. Gartner Copenhagen Business School

Magnus Henrekson IFN Stockholm

Michael A. Hitt Texas A&M University

Joshua Lerner Harvard University Jeff McMullen Indiana University

P.R. Kumar Texas A&M University

Maria Minniti Syracuse University

Simon Parker University of Western Ontario

Holger Patzelt TU Munich

Saras Sarasvathy University of Virginia

Roy Thurik Erasmus University

Editorial Scope

Topics

Foundations and Trends $^{\tiny (0)}$ in Entrepreneurship publishes survey and tutorial articles in the following topics:

- Nascent and start-up entrepreneurs
- Opportunity recognition
- New venture creation process
- Business formation
- Firm ownership
- Market value and firm growth
- Franchising
- Managerial characteristics and behavior of entrepreneurs
- Strategic alliances and networks
- Government programs and public policy
- Gender and ethnicity

- New business financing:
 - Business angels
 - Bank financing, debt, and trade credit
 - Venture capital and private equity capital
 - Public equity and IPOs
- Family-owned firms
- Management structure, governance and performance
- Corporate entrepreneurship
- High technology:
 - Technology-based new firms
 - High-tech clusters
- Small business and economic growth

Information for Librarians

Foundations and Trends[®] in Entrepreneurship, 2021, Volume 17, 4 issues. ISSN paper version 1551-3114. ISSN online version 1551-3122. Also available as a combined paper and online subscription.

Contents

1	Introduction	2
2	The Going Public Decision	5
3	Pricing and Valuation	22
4	Intermediaries in the IPO Process	32
5	Short- and Long-Run Performance5.1Underpricing5.2Long-Run Underperformance	40 42 45
6	Trends in the Number of IPOs	64
7	Directions and Trends	68
Re	References	

IPOs and Entrepreneurial Firms

Giancarlo Giudici 1 and Silvio Vismara 2

¹School of Management Politecnico di Milano, Italy;
giancarlo.giudici@polimi.it
²Department of Management, University of Bergamo, Italy;
silvio.vismara@unibg.it

ABSTRACT

The listing on a stock exchange is a paramount milestone in the life cycle of an enterprise. By taking their company public on a stock market through an Initial Public Offering (IPO), entrepreneurs may target several benefits (e.g., raising money, facilitating acquisitions, offering valuable stock ownership plans to employees) but their firms will bear new costs and requirements. In this work we review the academic literature on IPOs of entrepreneurial firms, focusing on five main topics: (i) the going public decision, (ii) pricing and valuation, (iii) the role of intermediaries and underwriters in the listing process, (iv) the performance of IPO-firms in the short and long run, and (v) market cycles in the IPO industry.

Giancarlo Giudici and Silvio Vismara (2021), "IPOs and Entrepreneurial Firms", Foundations and Trends[®] in Entrepreneurship: Vol. 17, No. 8, pp 766–852. DOI: 10.1561/030000067.

1

Introduction

An initial public offering (IPO) allows a privately held company to raise capital by offering equity stock to the general public. Companies involved in IPOs are aware of the potential benefits. The money raised may increase its growth capital. The entrepreneurs obtain an objective valuation of their company. On the other side, the status of a listed company increases public exposure and is associated with increased costs and requirements.

The first IPO in the United States was in 1783 when Bank of America went public by selling shares of stock. In Europe, the Dutch East India Company issued public shares in 1602 to raise capital to fund the expansion of its operations. Notwithstanding more than 400 years passed away, taking a company public holds a special place in entrepreneurs' (and investors') imagination. IPOs are glorious and wellpublicized. They certify that a company did not fail and may continue to grow autonomously, with thousands of shareholders trading the stock and new wealth created.

In this monograph, we propose an analysis of the most recent literature on IPOs of entrepreneurial firms, focusing on the contributions published mainly in entrepreneurship and finance journals. We refer to entrepreneurial firms as young firms, based on intangible rather than physical assets, where the founder of the firm often serves as the key inventor and the CEO. Although taking an entrepreneurial perspective, a contribution of this monograph is to bring together different streams of literature. Entrepreneurial finance literature is indeed largely segmented (Cumming and Vismara, 2017). Different streams of the academic literature between entrepreneurship and finance have become segmented for reasons of theoretical tractability and data availability. The literature on entrepreneurial finance has evolved through distinct paths, with the same topic often being addressed from multiple perspectives. When different streams of research study the same thing, authors might respond by conveniently ignoring work by other authors, to make their studies look innovative to a segmented readership. In this monograph, we aim at contributing to reducing this gap by highlighting topics that have been widely investigated by scholars as well as pointing out themes that are still relatively uncovered.

The subject of the monograph, IPOs and entrepreneurial firms, covers a very broad area of topics. The richness of the literature spanning from finance to management journals forces us to make some choices. While many aspects of the IPO process are of interest and many theoretical advancements have been put forward, this study is necessarily focused on a few ones. For sake of focus, we did not consider relevant aspects such as the role of financial intermediaries or the role of the policies and regulation. We do consider IPO performance but only in terms of short-term or long-term share price and operating performance, paying little attention to other measures such as the survival of IPO firms. A broader range of topics are discussed in previous works on IPOs, such as Levis and Vismara (2013) or Lowry *et al.* (2017).

Both IPOs and entrepreneurial ventures vary across "space and time". This survey is less focused on the context but more on general findings which, we acknowledge, could not necessarily be generalized or treated as stylized facts. A clear example comes from the valuation of firms going public. To satisfy investors' demand for reliable valuation guidelines, scholars have highlighted several interesting "stylized facts," mainly related to the valuation of IPOs. For instance, existing studies find that the skills and abilities of entrepreneurial teams, along with

Introduction

affiliation with prestigious third parties, are effective signals of firm quality, leading to higher valuation (e.g., Bruton *et al.*, 2009; Sanders and Boivie, 2004). However, the fragmented nature of this evidence prevents it from providing reliable theory-based guidelines for investors, either professional or retail. In particular, whether this evidence can be extended to other financial milestones, such as private deals or equity crowdfunding offerings (Block *et al.*, 2018), is debatable.

The structure of this work is as follows. In Section 2 we review the literature on the reasons why companies go public. A trade-off between direct and indirect costs and benefits is considered, as well as entrepreneurial strategic objectives, comprising engaging more easily in acquisitions, signaling the quality of the company, increasing its reputation. Section 3 deals with alternative methodologies to price IPO shares, including cash flow discounting and peer comparison. Section 4 describes the role of intermediaries in the placement of IPO shares. Section 5 focuses on the short-run (underpricing) and long-run performance of IPO companies. Section 6 discusses the cyclical dynamics of the IPO flow on the market. Finally, in Section 7 we identify future research directions at the cross-road between finance and entrepreneurship and comparing IPOs with new digital finance, with the hope to help de-segmenting research and provide new ideas.

- Abrahamson, M., T. Jenkinson, and H. Jones (2011). "Why don't U.S. issuers demand European fees for IPOs?" *Journal of Finance*. 66(6): 2055–2082.
- Acharya, V. and Z. Xu (2017). "Financial dependence and innovation: The case of public versus private firms". Journal of Financial Economics. 124(2): 223–243.
- Aggarwal, R., S. Bhagat, and S. Rangan (2009). "The impact of fundamentals on IPO valuation". *Financial Management*. 38(2): 253– 284.
- Aggarwal, R., N. R. Prabhala, and M. Puri (2002). "Institutional allocation in initial public offerings: Empirical evidence". Journal of Finance. 57(3): 1421–1442.
- Allen, F. and G. R. Faulhaber (1989). "Signaling by underpricing in the IPO market". *Journal of Financial Economics*. 23: 303–323.
- Amihud, Y., S. Hauser, and A. Kirsch (2003). "Allocations, adverse selection and cascades in IPOs: Evidence from the Tel Aviv stock exchange". Journal of Financial Economics. 68: 137–158.
- Anderson, C. W., J. Huang, and G. Torna (2017). "Can investors anticipate post-IPO mergers and acquisitions?" *Journal of Corporate Finance*. 45: 496–521.

- Antunovich, P. and A. Sarkar (2006). "Fifteen minutes of fame? The market impact of internet stock picks". *Journal of Business*. 79(6): 3209–3232.
- Arikan, A. M. and R. M. Stulz (2016). "Corporate acquisitions, diversification, and the firm's life cycle". Journal of Finance. 71(1): 139–194.
- Arthurs, J. D., L. W. Busenitz, R. E. Hoskisson, and R. A. Johnson (2009). "Signaling and initial public offerings: The use and impact of the lockup period". *Journal of Business Venturing*. 24(4): 360–372.
- Aslan, H. and P. Kumar (2011). "Lemons or cherries? Growth opportunities and market temptations in going public and private". Journal of Financial and Quantitative Analysis. 46(2): 489–526.
- Audretsch, D. B. and E. E. Lehmann (2008). "The Neuer Markt as an institution of creation and destruction". *International Entrepreneur*ship and Management Journal. 4(4): 419–429.
- Audretsch, D. B. and E. E. Lehmann (2014). "Corporate governance and entrepreneurial firms". Foundations and Trends[®] in Entrepreneurship. 10(1–2): 1–160.
- Ausubel, L. M. (2002). Implications of auction theory for new issues markets. Working Paper, University of Maryland.
- Barber, B. M. and T. Odean (2005). All that glitters: The effect of attention and news on the buying behavior of individual and institutional investors. SSRN Working Paper.
- Baron, D. P. (1982). "A model of the demand for investment bank advising and distribution services for new issues". *Journal of Finance*. 37: 955–976.
- Benninga, S. and O. S. Helmantel (2005). "The timing of initial public offerings". Journal of Financial Economics. 75: 115–132.
- Benson, D. F., J. C. Brau, J. Cicon, and S. P. Ferris (2015). "Strategically camouflaged corporate governance in IPOs: Entrepreneurial masking and impression management". *Journal of Business Venturing*. 30(6): 839–864.
- Benveniste, L. and P. Spindt (1989). "How investment bankers determine the offer price and allocation of new issues". *Journal of Financial Economics.* 24: 343–361.

- Berkman, H., M. E. Bradbury, and J. Ferguson (2000). "The accuracy of price-earnings and discounted cash flow methods of IPO equity valuation". Journal of International Financial Management and Accounting. 11(2): 71–83.
- Bernstein, S. (2015). "Does going public affect innovation?" *The Journal* of Finance. 70: 1365–1403.
- Bessembinder, H., J. Hao, and K. Zheng (2015). "Market making contracts, firm value, and the IPO decision". *The Journal of Finance*. 70: 1997–2028.
- Bessler, W. and C. Bittelmeyer (2008). "Patents and the performance of technology firms: Evidence from initial public offerings in Germany". *Financial Markets and Portfolio Management.* 22(4): 323–356.
- Bhattacharya, U., N. Galpin, R. Ray, and X. Yu (2009). "The role of the media in the Internet IPO bubble". The Journal of Financial and Quantitative Analysis. 44(3): 657–682.
- Biais, B., P. Bossaerts, and J. C. Rochet (2002). "An optimal IPO mechanism". *Review of Economic Studies*. 69: 117–146.
- Biais, B. and A. M. Faugeron-Crouzet (2002). "IPO auctions: English, dutch,...French and internet". Journal of Financial Intermediation. 11: 9–36.
- Bikhchandani, S., D. Hirshleifer, and I. Welch (1992). "A theory of fads, fashion, custom, and cultural change as informational cascades". *Journal of Political Economy*. 100(5): 992–1026.
- Bikhchandani, S., D. Hirshleifer, and I. Welch (1998). "Learning from the behavior of others: Conformity, fads, and informational cascades". *Journal of Economic Perspectives*. 12(3): 151–170.
- Billings, M. and M. Lewis-Western (2016). "When does pre-IPO financial reporting trigger post-IPO legal consequences?" Contemporary Accounting Research. 33(1): 378–411.
- Block, J., M. Colombo, D. Cumming, and S. Vismara (2018). "New players in entrepreneurial finance and why they are there". *Small Business Economics*. 50: 239–250.
- Block, J. H., A. Groh, L. Hornuf, T. Vanacker, and S. Vismara (2021). "The entrepreneurial finance markets of the future: A comparison of crowdfunding and initial coin offerings". *Small Business Economics*. 57: 865–882.

References

- Bodnaruk, A., E. Kandel, M. Massa, and A. Simonov (2008). "Shareholder diversification and the decision to go public". *The Review of Financial Studies*. 21(6): 2779–2824.
- Boeh, K. K. and C. Dunbar (2016). "Underwriter deal pipeline and the pricing of IPOs". *Journal of Financial Economics*. 120(2): 383–399.
- Boehmer, E. and R. Fishe (2001). Who ends up short from underwriter short covering? A detailed analysis of IPO price stabilization. Working Paper, University of Georgia and University of Miami.
- Bonardo, D., S. Paleari, and S. Vismara (2011). "Valuing universitybased firms: The effects of academic affiliation on IPO performance". *Entrepreneurship: Theory and Practice.* 35(4): 755–776.
- Bonaventura, M. and G. Giudici (2017). "IPO valuation and profitability expectations: Evidence from the Italian exchange". *Eurasian Business Review*. 7(2): 247–266.
- Bonaventura, M., G. Giudici, and S. Vismara (2018). "Valuation and performance of reallocated IPO shares". Journal of International Financial Markets, Institutions and Money. 54: 15–26.
- Boot, A. W. A., R. Gopalan, and A. V. Thakor (2006). "The entrepreneur' choice between private and public ownership". *Journal* of Finance. 61: 803–836.
- Boulton, T., S. Smart, and C. Zutter (2010). "IPO underpricing and international corporate governance". Journal of International Business Studies. 41: 206–222.
- Boulton, T., S. Smart, and C. Zutter (2013). "Industrial diversification and underpricing of initial public offerings". *Financial Management*. 42(3): 679–704.
- Boulton, T., S. Smart, and C. Zutter (2017). "Conservatism and international IPO underpricing". Journal of International Business Studies. 48(6): 763–785.
- Brau, J. C., R. B. Couch, and N. K. Sutton (2012). "The desire to acquire and IPO long-run underperformance". *Journal of Financial* and Quantitative Analysis. 47(3): 493–510.
- Brau, J. C. and S. E. Fawcett (2006). "Initial public offerings: An analysis of theory and practice". *Journal of Finance*. 61: 399–436.

74

- Bruton, G. D., S. Chahine, and I. Filatotchev (2009). "Founders, private equity investors, and underpricing in entrepreneurial IPOs". *Entrepreneurship Theory and Practice*. 33: 909–923.
- Bruton, G. D., I. Filatotchev, S. Chahine, and M. Wright (2010). "Governance, ownership structure, and performance of IPO firms: The impact of different types of private equity investors and institutional environments". *Strategic Management Journal.* 31: 491–509.
- Bulow, J. and P. Klemperer (2002). "Prices and the winner's curse". Rand Journal of Economics. 33: 1–21.
- Bustamante, M. C. (2012). "The dynamics of going public". *Review of Finance*. 16(2): 577–618.
- Carpenter, R. and B. Petersen (2002). "Is the growth of small firms constrained by internal finance?" *Review of Economics and Statistics*. 84: 298–309.
- Cassia, L., S. Paleari, and D. Vismara (2004). "The valuation of firms listed on the Nuovo Mercato: The peer comparables approach". Advances in Financial Economics. 10: 113–129.
- Celikyurt, U., M. Sevilir, and A. Shivdasani (2010). "Going public to acquire? The acquisition motive in IPOs". Journal of Financial Economics. 96(3): 345–363.
- Chahine, S., S. Saade, and M. Goergen (2019). "Foreign business activities, foreignness of the VC syndicate, and IPO value". *Entrepreneurship: Theory and Practice.* 43(5): 947–973.
- Chaplinsky, S., K. W. Hanley, and S. K. Moon (2017). "The JOBS Act and the costs of going public". *Journal of Accounting Research*. 55: 795–836.
- Chemmanur, T. J. (1993). "The pricing of initial public offerings: A dynamic model with information production". *Journal of Finance*. 48: 371–387.
- Chemmanur, T. J. and J. He (2011). "IPO waves, product market competition, and the going public decision: Theory and evidence". *Journal of Financial Economics*. 101(2): 382–412.
- Chemmanur, T. J., M. Gupta, and K. Simonyan (2020). "Top management team quality and innovation in venture-backed private firms and IPO market rewards to innovative activity". *Entrepreneurship: Theory and Practice.* Forthcoming.

- Chen, J., C. S. Heng, B. C. Y. Tan, and Z. Lin (2018). "The distinct signaling effects of R&D subsidy and non-R&D subsidy on IPO performance of IT entrepreneurial firms in China". *Research Policy*. 47(1): 108–120.
- Choe, H., R. W. Masulis, and V. Nanda (1993). "Common stock offerings across the business cycle". *Journal of Empirical Finance*. 1: 3–31.
- Chou, T.-K., J.-C. Cheng, and C.-C. Chien (2013). "How useful is venture capital prestige? Evidence from IPO survivability". *Small Business Economics.* 40(4): 843–863.
- Cogliati, G. M., S. Paleari, and S. Vismara (2011). "IPO pricing: Growth rates implied in offer prices". *Annals of Finance*. 7(1): 53–82.
- Colombo, M. G., M. Meoli, and S. Vismara (2019). "Signaling in sciencebased IPOs: The combined effect of affiliation with prestigious universities, underwriters, and venture capitalists". *Journal of Business Venturing.* 34(1): 141–177.
- Cumming, D. J., G. Leboeuf, and A. Schwienbacher (2020). "Crowdfunding models: Keep-it-all vs. all-or-nothing". *Financial Management*. 49(2): 331–360.
- Cumming, D. J., M. Meoli, and S. Vismara (2021). "Does equity crowdfunding democratize entrepreneurial finance?" Small Business Economics. 56: 533–552.
- Cumming, D. J. and S. Vismara (2017). "De-segmenting research in entrepreneurial finance". *Venture Capital.* 19(1–2): 17–27.
- Daily, C. M., S. T. Certo, and D. R. Dalton (2005). "Investment bankers and IPO pricing: Does prospectus information matter?" *Journal of Business Venturing*. 20(1): 93–111.
- Daily, C. M., S. T. Certo, D. R. Dalton, and R. Roengpitya (2003). "IPO underpricing: A meta-analysis and research synthesis". *Entrepreneurship Theory and Practice*. 27(3): 271–295.
- Dalziel, T., R. J. Gentry, and M. Bowerman (2011). "An integrated agency-resource dependence view of the influence of directors' human and relational capital on firms' R&D spending". *Journal of Management Studies*. 48: 1217–1242.
- Dambra, M., L. C. Field, and M. T. Gustafson (2015). "The JOBS Act and IPO volume: Evidence that disclosure costs affect the IPO decision". Journal of Financial Economics. 116(1): 121–143.

- Deloof, M., W. De Maeseneire, and K. Inghelbrecht (2009). "How do investment banks value initial public offerings (IPOs)?" Journal of Business Finance and Accounting. 36(1-2): 130–160.
- Demers, E. and P. Joos (2005). *IPO failure risk: Determinants and pricing consequences*. Working Paper, University of Rochester.
- Demers, E. and K. Lewellen (2003). "The marketing role of IPOs: Evidence from internet stocks". *Journal of Financial Economics*. 68: 413–437.
- Derrien, F. and K. Womack (2003). "Auctions vs. book-building and the control of underpricing in hot IPO markets". *Review of Financial Studies.* 16: 31–61.
- DuCharme, L. L., S. Rajgopal, and S. Sefcik (2001). Why was internet IPO underpricing so severe? Working Paper, University of Washington.
- Ecker, F. (2014). "Information precision and long-run performance of initial public offerings". Contemporary Accounting Research. 31: 876–910.
- Edelman, L., T. Manolova, and C. Brush (2017). "Angel investing: A literature review". Foundations and Trends[®] in Entrepreneurship. 13(4–5): 265–439.
- Ellingsen, T. and K. Rydqvist (1997). The stock market as a screening device and the decision to go public. Working Paper, Stockholm School of Economics and Norwegian School of Management.
- Falkenstein, E. G. (1996). "Preferences for stock characteristics as revealed by mutual fund portfolio holdings". *Journal of Finance*. 51: 111–135.
- Fama, E. F. (1998). "Market efficiency, long-term returns, and behavioral finance". Journal of Financial Economics. 49: 283–306.
- Fama, E. F. and K. R. French (1989). "Business conditions and expected returns on stocks and bonds". *Journal of Financial Economics*. 25: 23–50.
- Fama, E. F. and K. R. French (2004). "New lists: Fundamentals and survival rates". Journal of Financial Economics. 73: 229–269.
- Fan, P. and K. Yamada (2020). "Same bed different dream composition of IPO shares and withdrawal decisions in weak market conditions". *Small Business Economics*. 55(4): 955–974.

- Farag, H. and S. Johan (2021). "How alternative finance informs central themes in corporate finance". Journal of Corporate Finance. 67: 101879.
- Ferris, S. P., Q. Hao, and M. Liao (2013). "The effect of issuer conservatism on IPO pricing and performance". *Review of Finance*. 17(3): 993–1027.
- Field, L. C. and J. M. Karpoff (2002). "Takeover defenses of IPO firms". Journal of Finance. 57(5): 1857–1889.
- Field, L. and M. Lowry (2009). "Institutional versus individual investment in IPOs: The importance of firm fundamentals". *The Journal* of Financial and Quantitative Analysis. 44(3): 489–516.
- Friedlan, J. M. (1994). "Accounting choices of issuers of initial public offerings". Contemporary Accounting Research. 11(1): 1–31.
- Gao, X., J. Ritter, and Z. Zhu (2013). "Where have all the IPOs gone?" Journal of Financial and Quantitative Analysis. 48(6): 1663–1692.
- Giudici, G. and P. G. Roosenboom (2004). The Rise and Fall of Europe's New Stock Markets, Advances in Financial Economics. Emerald Publishing.
- Gornall, W. and I. A. Strebulaev (2020). "Squaring venture capital valuations with reality". *Journal of Financial Economics*. 135(1): 120–143.
- Hanley, K. and W. J. Wilhelm (1995). "Evidence on the strategic allocation of initial public offerings". *Journal of Financial Economics*. 37: 239–257.
- Ho, B., M. Taher, R. Lee, and N. L. Fargher (2001). Market sentiment, media hype and the underpricing of initial public offerings: The case of Australian technology IPOs. Working Paper, University of New South Wales.
- Holmström, B. and J. Tirole (1993). "Market liquidity and performance monitoring". Journal of Political Economy. 101: 678–709.
- Houston, J., C. James, and J. Karceski (2006). "What a difference a month makes: Stock analyst valuations following initial public offerings". Journal of Financial and Quantitative Analysis. 41: 111– 137.
- Hovakimian, A. and I. Hutton (2010). "Merger-motivated IPOs". Financial Management. 39(4): 1547–1573.

78

- How, J. C., K. Ngo, and P. Verhoeven (2011). "Dividend initiations and long-run IPO performance". Australian Journal of Management. 36(2): 267–286.
- Hsieh, J., E. Lyandres, and A. Zhdanov (2011). "A theory of mergerdriven IPOs". Journal of Financial and Quantitative Analysis. 46(5): 1367–1405.
- Hsu, H.-C., A. V. Reed, and J. Rocholl (2010). "The new game in town: Competitive effects of IPOs". *The Journal of Finance*. 65: 495–528.
- Huang, W., M. Meoli, and S. Vismara (2020). "The geography of initial coin offerings". Small Business Economics. 55: 77–102.
- Hughes, P. J. and A. Thakor (1992). "Litigation risk, intermediation, and the underpricing of initial public offerings". *Review of Financial Studies.* 5: 709–742.
- Huyghebaert, N. and C. Van Hulle (2006). "Structuring the IPO: Empirical evidence on the portions of primary and secondary shares". *Journal of Corporate Finance*. 12: 296–320.
- Ibbotson, R. G. (1975). "Price performance of common stock new issues". Journal of Financial Economics. 2: 235–272.
- Ivanov, V. and C. M. Lewis (2008). "The determinants of market-wide issue cycles for initial public offerings". *Journal of Corporate Finance*. 14(5): 567–583.
- Jagannathan, R. and A. Sherman (2006). Why do IPO auctions fail? Working Paper, Northwestern University.
- Jain, B. A. and O. Kini (1994). "The post-issue operating performance of IPO firms". *Journal of Finance*. 49: 1699–1726.
- Jain, B. A. and O. Kini (2004). Industry investment conditions, strategic investment choices, and the post-issue operating performance of IPO firms. Working Paper, Georgia State University.
- Jain, B. A., N. Jayaraman, and O. Kini (2008). "The path-to-profitability of Internet IPO firms". Journal of Business Venturing. 23(2): 165– 194.
- Jain, B. A. and F. Tabak (2008). "Factors influencing the choice between founder versus non-founder CEOs for IPO firms". Journal of Business Venturing. 23(1): 21–45.

References

- Jaskiewicz, P., V. M. González, S. Menéndez, and D. Schiereck (2005). "Long-run IPO performance analysis of German and Spanish familyowned businesses". *Family Business Review*. 18(3): 179–202.
- Jenkinson, T., A. D. Morrison, and W. J. Wilhelm (2006). "Why are European IPOs so rarely priced outside the indicative price range?" *Journal of Financial Economics.* 80: 185–209.
- Jensen, M. C. and W. Meckling (1976). "Theory of the firm managerial behavior, agency costs and ownership structures". Journal of Financial Economics. 3: 305–360.
- Jia, M. and Z. Zhang (2014). "Corporate philanthropy and IPOs". Journal of Management Studies. 51: 1118–1152.
- Johan, S. and Y. Zhang (2020). "Quality revealing versus overstating in equity crowdfunding". *Journal of Corporate Finance*. 65: 101741.
- Judge, W. Q., M. A. Witt, A. Zattoni, T. Talaulicar, J. J. Chen, K. Lewellyn, H. W. Hu, D. Shukla, R. G. Bell, J. Gabrielsson, F. Lopez, S. Yamak, Y. Fassin, D. McCarthy, J. L. Rivas, S. Fainshmidt, and H. Van Ees (2015). "Corporate governance and IPO underpricing in a cross-national sample: A multilevel knowledge-based view". *Strategic Management Journal.* 36: 1174–1185.
- Kahneman, D. and A. Tversky (1982). "The simulation heuristic". In: Judgement Under Uncertainty: Heuristics and Biases. Ed. by D. Kahneman, P. Slovic, and A. Tversky. New York: Cambridge University Press. 201–208.
- Kaplan, S. N. and R. S. Ruback (1995). "The valuation of cash flow forecasts: An empirical analysis". *Journal of Finance*. 50: 1059–1093.
- Kaur, A. and B. Singh (2015). "Does gender diversity on Indian boards impede IPO underpricing?" Management and Labour Studies. 40(1– 2): 194–205.
- Khoury, T. A., M. Junkunc, and D. L. Deeds (2013). "The social construction of legitimacy through signaling social capital: Exploring the conditional value of alliances and underwriters at IPO". *Entrepreneurship: Theory and Practice.* 37(3): 569–601.
- Khurshed, A., S. Paleari, and S. Vismara (2003). *The operating perfor*mance of initial public offerings: The UK experience. SSRN Working Paper.

80

- Khurshed, A., S. Paleari, A. Pande, and S. Vismara (2014). "Transparent bookbuilding, certification and initial public offerings". *Journal of Financial Markets.* 19: 154–169.
- Kim, M. and J. R. Ritter (1999). "Valuing IPOs". Journal of Financial Economics. 53(3): 409–437.
- Kolb, J. and T. Tykvová (2016). "Going public via special purpose acquisition companies: Frogs do not turn into princes". Journal of Corporate Finance. 40: 80–96.
- Krishnan, C., V. Ivanov, R. Masulis, and A. Singh (2011). "Venture capital reputation, post-IPO performance, and corporate governance". *Journal of Financial and Quantitative Analysis.* 46(5): 1295–1333.
- Kroll, M., B. Walters, and S. Le (2007). "The impact of board composition and top management team ownership structure on post-IPO performance in young entrepreneurial firms". The Academy of Management Journal. 50(5): 1198–1216.
- Lee, S. H., S. B. Bach, and Y. S. Baik (2011). "The impact of IPOs on the values of directly competing incumbents". *Strategic Entrepreneurship Journal.* 5(2): 158–177.
- Lehmann, E. E. and S. Vismara (2020). "Corporate governance in IPO firms". Annals of Corporate Governance. 5(1): 1–100.
- Leitterstorf, M. P. and S. B. Rau (2014). "Socioemotional wealth and IPO underpricing of family firms". *Strategic Management Journal*. 35: 751–760.
- Leland, H. and D. Pyle (1977). "Informational asymmetries, financial structure, and financial intermediation". Journal of Finance. 32: 371–387.
- Levis, M. and S. Vismara (2013). *Handbook of Research on IPO*. Cheltenham: Edward Elgar.
- Li, O. Z., Y. Lin, and J. R. Robinson (2016). "The effect of capital gains taxes on the initial pricing and underpricing of IPOs". *Journal of Accounting and Economics*. 61(2–3): 465–485.
- Liu, K., J. D. Arthurs, D. Nam, and F.-T. Mousa (2014a). "Information diffusion and value redistribution among transaction partners of the IPO firm". *Strategic Management Journal*. 35: 1717–1726.

- Liu, L., A. Sherman, and Y. Zhang (2014b). "The long-run role of the media: Evidence from initial public offerings". *Management Science*. 60(8): 1945–1964.
- Ljungqvist, A. (2009). "IPO underpricing: A survey". In: Handbook of Corporate Finance: Empirical Corporate Finance. Ed. by B. Espen Eckbo. Elsevier.
- Ljungqvist, A. and W. J. Wilhelm (2002). "IPO allocations: Discriminatory or discretionary?" Journal of Financial Economics. 65: 167– 201.
- Loughran, T. and J. Ritter (1995). "The new issues puzzle". Journal of Finance. 50: 23–51.
- Loughran, T., J. Ritter, and K. Rydqvist (1994). "Initial public offerings: International insights". *Pacific-Basin Finance Journal*. 2: 165–199.
- Lowry, M. (2002). "Why does IPO volume fluctuate so much?" *Journal* of Financial Economics. 67: 3–41.
- Lowry, M., R. Michaely, and E. Volkova (2017). "Initial public offerings: A synthesis of the literature and directions for future research". *Foundations and Trends[®] in Finance*. 11(3–4): 154–320.
- Lowry, M. and K. J. Murphy (2007). "Executive stock options and IPO underpricing". *Journal of Financial Economics*. 85(1): 39–65.
- Maksimovic, V. and P. Pichler (2001). "Technological innovation and initial public offerings". *Review of Financial Studies*. 14: 459–494.
- Manigart, S. and M. Wright (2013). "Venture capital investors and portfolio firms". Foundations and Trends[®] in Entrepreneurship. 9(4– 5): 365–570.
- Mello, A. S. and J. E. Parsons (1998). "Going public and the ownership structure of the firm". *Journal of Financial Economics*. 49: 79–109.
- Meoli, M., S. Paleari, and S. Vismara (2013). "Completing the technology transfer process: M&As of science-based IPOs". Small Business Economics. 40(2): 227–248.
- Michel, J.-S. (2014). "Return on recent VC investment and long-run IPO returns". *Entrepreneurship: Theory and Practice*. 38(3): 527–549.
- Modigliani, F. M. and H. Miller (1958). "The cost of capital, corporation finance, and the theory of investment". American Economic Review. 48: 261–297.

- Moore, C. B., R. G. Bell, and I. Filatotchev (2010). "Institutions and foreign IPO firms: The effects of 'home' and 'host' country institutions on performance". *Entrepreneurship Theory and Practice*. 34(3): 469–490.
- Morricone, S., F. Munari, R. Oriani, and G. de Rassenfosse (2017). "Commercialization strategy and IPO underpricing". *Research Policy*. 46(6): 1133–1141.
- Mousa, F. and R. Reed (2013). "The impact of slack resources on hightech IPOs". *Entrepreneurship Theory and Practice*. 37(5): 1123– 1147.
- Mumi, A., M. Obal, and Y. Yang (2019). "Investigating social media as a firm's signaling strategy through an IPO". Small Business Economics. 53(3): 631–645.
- Nagata, K. and T. Hachiya (2007). "Earnings management and the pricing of initial public offerings". *Review of Pacific Basin Financial Markets and Policies*. 10(4): 541–559.
- Pagano, M. (1993). "Financial markets and growth: An overview". European Economic Review. 37(2–3): 613–622.
- Pagano, M., A. Panetta, and L. Zingales (1998). "Why do companies go public? An empirical analysis". *Journal of Finance*. 53: 27–64.
- Paleari, S., A. Signori, and S. Vismara (2014). "How do underwriters select peers when valuing IPOs?" *Financial Management*. 43(4): 731–755.
- Pandya, F. H. (2016). "After market pricing performance of initial public offerings (IPOs)". Jindal Journal of Business Research. 5(1): 1–16.
- Park, H. D. and P. C. Patel (2015). "How does ambiguity influence IPO underpricing? The role of the signalling environment". *Journal of Management Studies*. 52: 796–818.
- Pastor, L. and P. Veronesi (2005). "Rational IPO waves". Journal of Finance. 60: 1713–1757.
- Peristiani, S. and G. Hong (2004). Pre-IPO Financial Performance and Aftermarket Survival, Current Issues 10. Federal Reserve Bank of New York.

- Planell, S. B. (1995). Determinantes y efectos de la salida a bolsa en España: Un analisi empirico. Working Paper, Centro de Estudios Monetarios y Financieros, Spain.
- Purnanandam, A. K. and B. Swaminathan (2004). "Are IPOs really underpriced?" *The Review of Financial Studies*. 17(3): 811–848.
- Ragozzino, R. and J. J. Reuer (2007). "Initial public offerings and the acquisition of entrepreneurial firms". *Strategic Organization*. 5(2): 155–176.
- Ragozzino, R. and J. J. Reuer (2011). "Geographic distance and corporate acquisitions: Signals from IPO firms". *Strategic Management Journal.* 32(8): 876–894.
- Reuer, J. J., T. W. Tong, and C. Wu (2012). "A signaling theory of acquisition premiums: Evidence from IPO targets". Academy of Management Journal. 55: 667–683.
- Ritter, J. R. (1987). "The costs of going public". Journal of Financial Economics. 19(2): 269–281.
- Ritter, J. R. (1991). "The long-run performance of initial public offerings". Journal of Finance. 46: 3–27.
- Ritter, J. R. (2013). "Re-energizing the IPO market". In: Restructuring to Speed Economic Recovery. Ed. by M. N. Bailey, R. J. Herring, and Y. Seki. Washington: Brookings Press.
- Ritter, J. R. and I. Welch (2002). "A review of IPO activity, pricing, and allocations". *Journal of Finance*. 57: 1795–1828.
- Ritter, J. R., A. Signori, and S. Vismara (2013). "Economies of scope and IPO activity in Europe". In: *Handbook of Research on IPOs*. Ed. by M. Levis and S. Vismara. Cheltenham, UK: Edward Elgar Publishing. 11–34.
- Rocholl, J. (2005). The private benefits of listing. SSRN Working Paper.
- Rock, K. (1986). "Why new issues are underpriced". Journal of Financial Economics. 15: 187–212.
- Roosenboom, P. G. J. (2007). "How do underwriters value initial public offerings? An empirical analysis of the French IPO market". *Contemporary Accounting Research.* 24(4): 1217–1243.
- Roosenboom, P. G. J. (2012). "Valuing and pricing IPOs". Journal of Banking and Finance. 36(6): 1653–1664.

84

- Rydqvist, K. and K. Högholm (1995). "Going public in the 1980s: Evidence from Sweden". European Financial Management. 1: 287– 315.
- Sanders, W. M. G. and S. T. Boivie (2004). "Sorting things out: Valuation of new firms in uncertain markets". *Strategic Management Journal*. 25: 167–186.
- Schenone, C. (2004). "The effect of banking relations on the firm's IPO underpricing". *Journal of Finance*. 59: 2903–2958.
- Schultz, P. and M. Zaman (2001). "Do the individuals closest to Internet firms believe they are overvalued". *Journal of Financial Economics*. 59: 347–381.
- Sherman, A. (2005). "Global trends in IPO methods: Book building versus auctions with endogenous entry". Journal of Financial Economics. 78(3): 615–649.
- Sherman, A. and S. Titman (2002). "Building the IPO order book: Underpricing and participation limits with costly information". *Journal* of Financial Economics. 65: 3–29.
- Signori, A. and S. T. Vismara (2017). "Stock-financed M&As of newly listed firms". Small Business Economics. 48(1): 115–134.
- Signori, A. and S. Vismara (2018). "M&A synergies and trends in IPOs". Technological Forecasting and Social Change. 127: 141–153.
- Smart, S. B., R. S. Thirumalai, and C. J. Zutter (2008). "What's in a vote? The short- and long-run impact of dual-class equity on IPO firm values". *Journal of Accounting and Economics*. 45(1): 94–115.
- Stoughton, N. M. and J. Zechner (1998). "IPO-mechanisms, monitoring and ownership structure". Journal of Financial Economics. 49: 45– 77.
- Sundaramurthy, C., K. Pukthuanthong, and Y. Kor (2014). "Positive and negative synergies between the CEO's and the corporate board's human and social capital: A study of biotechnology firms". *Strategic Management Journal.* 35: 845–868.
- Teoh, S. H., I. Welch, and T. J. Wong (1998). "Earnings management and the long-run market performance of initial public offerings". *Journal of Finance*. 53: 1935–1974.
- Thaler, R. (1980). "Towards a positive theory of consumer choice". Journal of Economic Behavior and Organization. 1: 39–60.

- Tinic, S. M. (1988). "Anatomy of initial public offerings of common stocks". The Journal of Finance. 18: 789–822.
- Tversky, A. and D. Kahneman (1981). "The framing of decisions and psychology of choice". *Science*. 211: 453–458.
- Useche, D. (2014). "Are patents signals for the IPO market? An EU-US comparison for the software industry". *Research Policy*. 43(8): 1299–1311.
- Vismara, S. (2018). "Information cascades among investors in equity crowdfunding". Entrepreneurship Theory and Practice. 42(3): 467– 497.
- Vismara, S., S. Paleari, and J. R. Ritter (2012). "Europe's second markets for small companies". *European Financial Management*. 18(3): 352–388.
- Vismara, S., A. Signori, and S. Paleari (2015). "Changes in underwriters' selection of comparable firms pre- and post-IPO: Same bank, same company, different peer". *Journal of Corporate Finance*. 34: 235–250.
- Wagner, S. and I. Cockburn (2010). "Patents and the survival of Internetrelated IPOs". *Research Policy*. 39(2): 214–228.
- Wallmeroth, J., P. Wirtz, and A. Groh (2018). "Venture capital, angel financing, and crowdfunding of entrepreneurial ventures: A literature review". *Foundations and Trends[®] in Entrepreneurship.* 14(1): 1–129.
- Wang, X. and P. Wan (2013). "Explaining the variance in underpricing among VC-backed IPOs". Strategic Entrepreneurship Journal. 7: 331–342.
- Weber, J. and M. Willenborg (2003). "Do expert informational intermediaries add value? Evidence from auditors in microcap initial public offerings". *Journal of Accounting Research*. 41: 681–720.
- Welch, I. (1989). "Seasoned offerings, imitation costs, and the underpricing of initial public offerings". *Journal of Finance*. 44: 421–450.
- Welch, I. (1992). "Sequential sales, learning, and cascades". Journal of Finance. 47: 695–732.
- Wilhelm, W. J. (2005). "Bookbuilding, auctions, and the future of the IPO process". *Journal of Applied Corporate Finance*. 17: 55–66.

86

- Willenborg, M., B. Wu, and Y. S. Yang (2015). "Issuer operating performance and IPO price formation". Journal of Accounting Research. 53: 1109–1149.
- Wu, G. A. (2012). "The effect of going public on innovative productivity and exploratory search". *Organization Science*. 23(4): 928–950.
- Yang, Q., M. Zimmerman, and C. Jiang (2011). "An empirical study of the impact of CEO characteristics on new firms' time to IPO". *Journal of Small Business Management*. 49(2): 163–184.
- Zheng, S. X. (2007). "Are IPOs really overpriced?" Journal of Empirical Finance. 14(3): 287–309.
- Zingales, L. (1995). "Insider ownership and the decision to go public". *Review of Economic Studies*. 60: 425–448.