

## **Initial Public Offerings: International Insights**

Tim Loughran  
University of Notre Dame

Jay R. Ritter  
University of Florida

Kristian Rydqvist  
Norwegian School of Management

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### **ABSTRACT OF ARTICLE**

This paper discusses evidence on the short-run and long-run performance of companies going public in many countries. Differences in average initial returns are analyzed in terms of binding regulations, contractual mechanisms, and the characteristics of the firms going public. The evidence suggests that the move in recent years by most East Asian countries to reduce regulatory interference in the setting of offering prices should result in less short-run underpricing in the 1990s than in the 1980s. Evidence is presented that companies successfully time their offerings for periods when valuations are high, with investors receiving low returns in the long-run. Implications for investors, issuers, and regulators are discussed.

**The following table updates Table 1 of the *Pacific-Basin Finance Journal* article, with the inclusion of data from Austria, China, Denmark, Greece, India, Indonesia, Iran, Israel, Nigeria, Norway, the Philippines, Poland, South Africa, and Turkey, and updated information from Australia, Belgium, Canada, Chile, Finland, France, Germany, Hong Kong, Italy, Japan, Malaysia, the Netherlands, New Zealand, Portugal, Singapore, Spain, Sweden, Switzerland, Taiwan, Thailand, the U.K., and the U.S.**

**Table 1**  
**Average initial returns for 39 countries**

<b>Country</b>	<b>Source</b>	<b>Sample Size</b>	<b>Time Period</b>	<b>Avg. Initial Return</b>
Australia	Lee, Taylor & Walter; Woo	381	1976-1995	12.1%
Austria	Aussenegg	83	1984-2002	6.3%
Belgium	Rogiers, Manigart & Ooghe; Manigart DuMortier	93	1984-2004	14.2%
Brazil	Aggarwal, Leal & Hernandez	62	1979-1990	78.5%
Canada	Jog & Riding; Jog & Srivastava Kryzanowski & Rakita	500	1971-1999	6.3%
Chile	Aggarwal, Leal & Hernandez; Celis & Maturana	55	1982-1997	8.8%
China	Datar & Mao; Gu and Qin (A shares)	432	1990-2000	256.9%
Denmark	Jakobsen & Sorensen	117	1984-1998	5.4%
Finland	Keloharju; Westerholm	99	1984-1997	10.1%
France	Husson & Jacquillat; Leleux & Muzyka; Paliard & Belletante; Derrien & Womack; Chahine	571	1983-2000	11.6%
Germany	Ljungqvist; Rocholl	545	1978-2001	31.1%
Greece	Nounis, Kazantzis & Thomas	363	1976-2005	25.1%
Hong Kong	McGuinness; Zhao & Wu; Ljungqvist & Yu	857	1980-2001	17.3%
India	Krishnamurti & Kumar	98	1992-1993	35.3%
Indonesia	Hanafi; Ljungqvist & Yu; Danny	265	1989-2003	20.2%
Iran	Bagherzadeh	279	1991-2004	22.4%
Israel	Kandel, Sarig & Wohl; Amihud & Hauser	285	1990-1994	12.1%
Italy	Arosio, Giudici & Paleari; Cassia, Paleari & Redondi	181	1985-2001	21.7%
Japan	Fukuda; Dawson & Hiraki; Hebner & Hiraki; Pettway & Kaneko; Hamao, Packer, & Ritter; Kaneko & Pettway	1,689	1970-2001	28.4%
Korea	Dhatt, Kim & Lim; Ihm; Choi & Heo	477	1980-1996	74.3%
Malaysia	Isa; Isa & Yong	401	1980-1998	104.1%
Mexico	Aggarwal, Leal & Hernandez	37	1987-1990	33.0%
Netherlands	Wessels; Eijgenhuijsen & Buijs; Jenkinson, Ljungqvist, & Wilhelm	143	1982-1999	10.2%
New Zealand	Vos & Cheung; Camp & Munro	201	1979-1999	23.0%
Nigeria	Ikoku	63	1989-1993	19.1%
Norway	Emilsen, Pedersen & Saettem	68	1984-1996	12.5%
Philippines	Sullivan & Unite	104	1987-1997	22.7%
Poland	Jelic & Briston	140	1991-1998	27.4%
Portugal	Almeida & Duque	21	1992-1998	10.6%
Singapore	Lee, Taylor & Walter; Dawson	441	1973-2001	29.6%
South Africa	Page & Reyneke	118	1980-1991	32.7%
Spain	Ansotegui & Fabregat	99	1986-1998	10.7%

<b>Country</b>	<b>Source</b>	<b>Sample Size</b>	<b>Time Period</b>	<b>Avg. Initial Return</b>
Sweden	Rydqvist; Schuster	332	1980-1998	30.5%
Switzerland	Drobetz, Kammermann & Walchli	120	1983-2000	34.9%
Taiwan	Lin & Sheu; Liaw, Liu & Wei	293	1986-1998	31.1%
Thailand	Wethyavivorn & Koo-smith; Lonkani & Tirapat	292	1987-1997	46.7%
Turkey	Kiyamaz	163	1990-1996	13.1%
United Kingdom	Dimson; Levis; Ljungqvist	3,122	1959-2001	17.4%
United States	Ibbotson, Sindelar & Ritter; Ritter	15,333	1960-2005	18.1%

Sources: See references listed in the published article. Where more than one set of authors is listed as a source of information, combined sample sizes have been constructed. Average initial returns are constructed in different manners from study to study. In general, in countries where market prices are available immediately after offerings, the one-day raw return is reported. In countries where there is a delay before unconstrained market prices are reported, market-adjusted returns over an interval of several weeks are reported.

The Australian numbers for 1990-95 are from Li-Anne Woo's University of New South Wales dissertation. The Austrian numbers are from Aussenegg's Vienna University of Technology working paper. The updated Belgian numbers come from Sophie Manigart of the University of Ghent, with assistance from Alexander Ljungqvist of NYU. For 2000-2004, the Belgian numbers are from Christophe DuMortier. The updated Canadian numbers are from an unpublished Concordia University working paper by Lawrence Kryzanowski and Ian Rakita. The updated Chilean numbers are from Cristian Celis and Gustavo Maturana's 1998 *Revista ABANTE* article. The Chinese numbers are from Datar and Mao's 1997 Seattle University working paper for 1990-1996 and Tony Gu and Jing Qin's 2000 State University of New York at Genesco working paper "The Stability of the Highest Short-term IPO Returns: The 'A' Share Experience on Shanghai Stock Exchange," and represent A shares traded domestically. The Danish numbers are from Jan Jacobsen and Ole Sorensen at Copenhagen Business School. The updated Finnish numbers are from a Swedish School working paper by Joakim Westerholm. The French numbers from 1993-98 are from Francois Derrien and Kent Womack. The French numbers from 1999-2000 are from Salim Chahine. The German numbers are a weighted average of 27.7% for 407 IPOs from 1978-1999 from Alexander Ljungqvist and 41.0% for 138 Neuer Market IPOs from 2000-2001, with the latter numbers from Jorg Rocholl's 2005 University of North Carolina working paper. The Greek numbers for 1987-1994 can be found in a chapter in Mario Levis' 1996 book *Empirical Issues in Raising Equity Capital*, but the reported numbers for 1976-2005 are from a working paper by Christos Nounis of the National and Kapodistrian University of Athens. Zhao and Wu's Hong Kong numbers are from a City University of Hong Kong working paper. For 1997-2001, the Hong Kong numbers are from Alexander Ljungqvist and Xiaoyun Yu's 2003 working paper "Stock market development, liquidity, and corporate governance." The average initial return for India is based upon IPOs with an offer price of above 10 Rupees, with the data coming from the 2002 *Managerial Finance* article by Chandra Krishnamurti and Pradeep Kumar. The Indonesian numbers for 1989-1994 are from Arosio, Giudici and Paleiri's Italian working paper, where they cite Hanafi's (1997) working paper "Efisiensi Emisi Saham Baru di Bursa Efek Jakarta (1989-1994)." The Indonesian numbers from 1995-2001 are from Ljungqvist and Yu's working paper, and the 2002-2003 numbers are from Freddy Danny. The Iranian numbers from 1991-2004 are from Saeed Bagherzadeh's 2006 University of Tehran working paper "The Initial Public Offerings Underpricing and Long-Run Underperformance in the Iranian Emerging Stock Market: Some Empirical Evidence." The Israeli numbers are from Yakov Amihud and Shmuel Hauser's 2001 NYU working paper. Kandel, Sarig, and Wohl's *Review of Financial Studies* article covers the period after Israeli auctions with no price limits became mandatory. The updated Italian numbers are from a working paper by Arosio, Giudici and Paleari of Politecnico di Milano and Universita degli Studi di Bergamo through 2000, and from Cassia, Paleari & Redondi for 2001. The updated Japanese numbers are from Hamao, Packer and Ritter's 2000 *Pacific-Basin Finance Journal* article for 1989-1995 OTC firms, and from Takashi Kaneko and Richard Pettway's "Auctions versus Book-Building Underwriting of Japanese IPOs: OTC, Mothers, and Nasdaq-Japan Issues" for 1996-2001. Takashi Kaneko also supplied numbers on TSE-listed IPOs from 1992-2000. The updated Korean numbers are from Byung Kyun Ihm's 1997 *Korean Journal of Financial Management* and Choi and Heo's 2000 *Korean Journal of Finance* articles. Numbers for several European countries for the 1992-99 period are from a Boston College working

paper by Jenkinson, Ljungqvist, and Wilhelm. The New Zealand numbers for 1992-99 are from a University of Auckland and University of Melbourne working paper by Graeme Camp and Robert Munro. The Nigerian numbers are from a University of Southern California working paper by Ikoku. The Norwegian numbers are from N. Haug Emilsen, K. Pedersen, and Frode Sættlem, 1997, Børsintroduksjoner, *BETA - Tidsskrift for bedriftsøkonomi* 11, 1-13 (in Norwegian). The Philippine numbers are from Michael Sullivan and Angelo Unite's 2001 *Pacific-Basin Finance Journal* article. The Polish numbers are from Jelic and Briston's 2003 *European Financial Management* article. The Portuguese numbers are from a Universidade Tecnica de Lisboa working paper by Miguel Almeida and Joao Duque. Numbers for Singapore from 1992-2001 are from Steve Dawson of the University of Hawaii. The South African numbers are from Page and Reyneke's 1997 *Journal of Business, Finance, and Accounting* article. The updated Spanish numbers are from an ESADE working paper by Carmen Ansotegui and Jordi Fabregat. Swedish numbers for 81 IPOs from 1995-1998 are from Josef Schuster's LSE dissertation. The Swiss numbers are from a University of Basel working paper by Wolfgang Drobetz, Matthias Kammermann, and Urs Walchli. The updated Taiwanese numbers are from a 1997 *Journal of Financial Studies* article by Lin and Sheu and a Hong Kong University of Science and Technology working paper by Gwohorng Liaw, Yu-Jane Liu, and John Wei for 52 auctions from 1995-1998. For the auctions, the average first-day return of 15.06% is computed as an average of the quantity-weighted average price paid in the discriminatory auction tranche and the fixed price paid for the other tranche. Each tranche has a 50% weight. Thai numbers are from a working paper by Ravi Lonkani (Payap University) and Sunti Tirapat (Chulalongkorn University). The Turkish numbers are from Halil Kitmaz's June 2000 *Journal of Multinational Financial Management* article "The Initial and Aftermarket Performance of IPOs in an Emerging Market: Evidence from Istanbul Stock Exchange." The U.K. numbers for 2001 are from Alexander Ljungqvist and for 2000 are from Mario Levis' "The UK IPO Market in 2000" at [www.business.city.ac.uk/af/homepages/mlevis.html](http://www.business.city.ac.uk/af/homepages/mlevis.html).

In general, the numbers for a given country represent the average first-day return on IPOs where the company is headquartered in that country. For Belgium, for example, during 1991-1999, 61 companies went public, for which first-day return information is available on 41 IPOs. Of the 61 IPOs, 39 went public on the Brussels Stock Exchange, 3 on Nasdaq, 9 on Easdaq, and 10 on Euro.NM. Of the 3 Nasdaq IPOs by Belgian companies (Lernout et Hauspie, Xiekon, and ICOS Vision Systems), only Xiekon was an American Depository Share (ADS) issue. The other 2 Nasdaq IPOs have been included in the U.S. totals, resulting in double-counting. The U.S. numbers exclude ADS issues, but in general include other foreign firms going public in the U.S., especially on Nasdaq. Many larger Canadian companies and Israeli tech companies went public in the U.S. in the 1990s. The Israeli numbers in the table are based on Israeli companies going public in Israel.