

Initial Public Offerings

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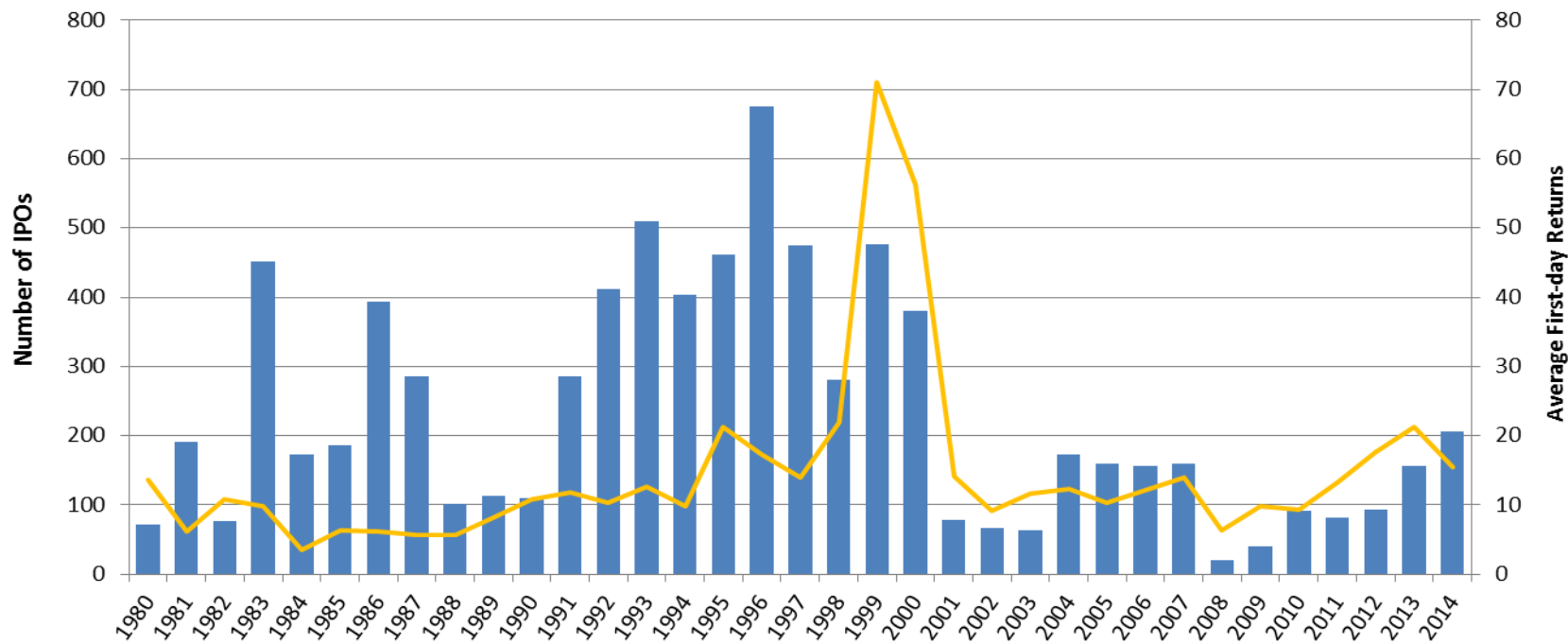
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January 2015

IPO volume has been very low in the U.S. since 2000

In 1980-2000, an average of **310** firms went public every year

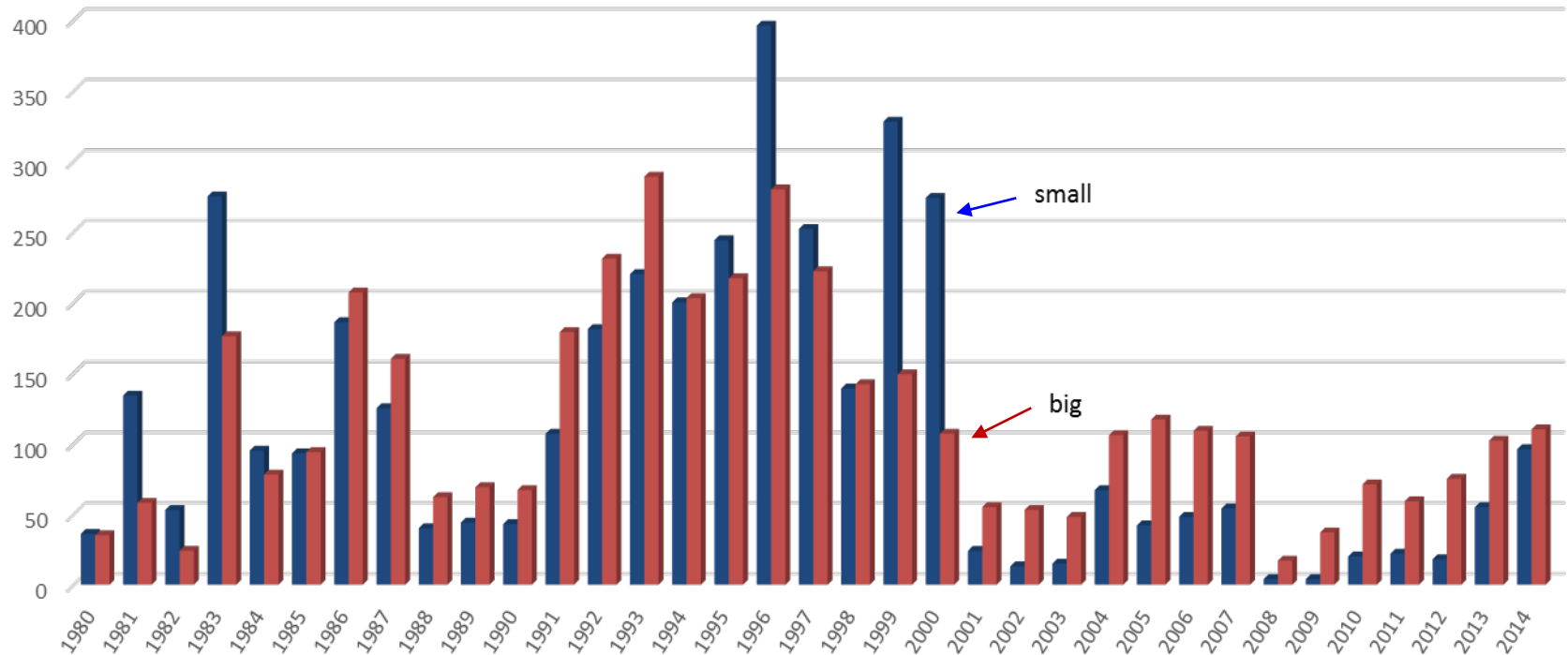
In 2001-2014, an average of **110** firms went public every year



Number of Offerings (bars) and Average First-day Returns (yellow) on US IPOs, 1980-2014

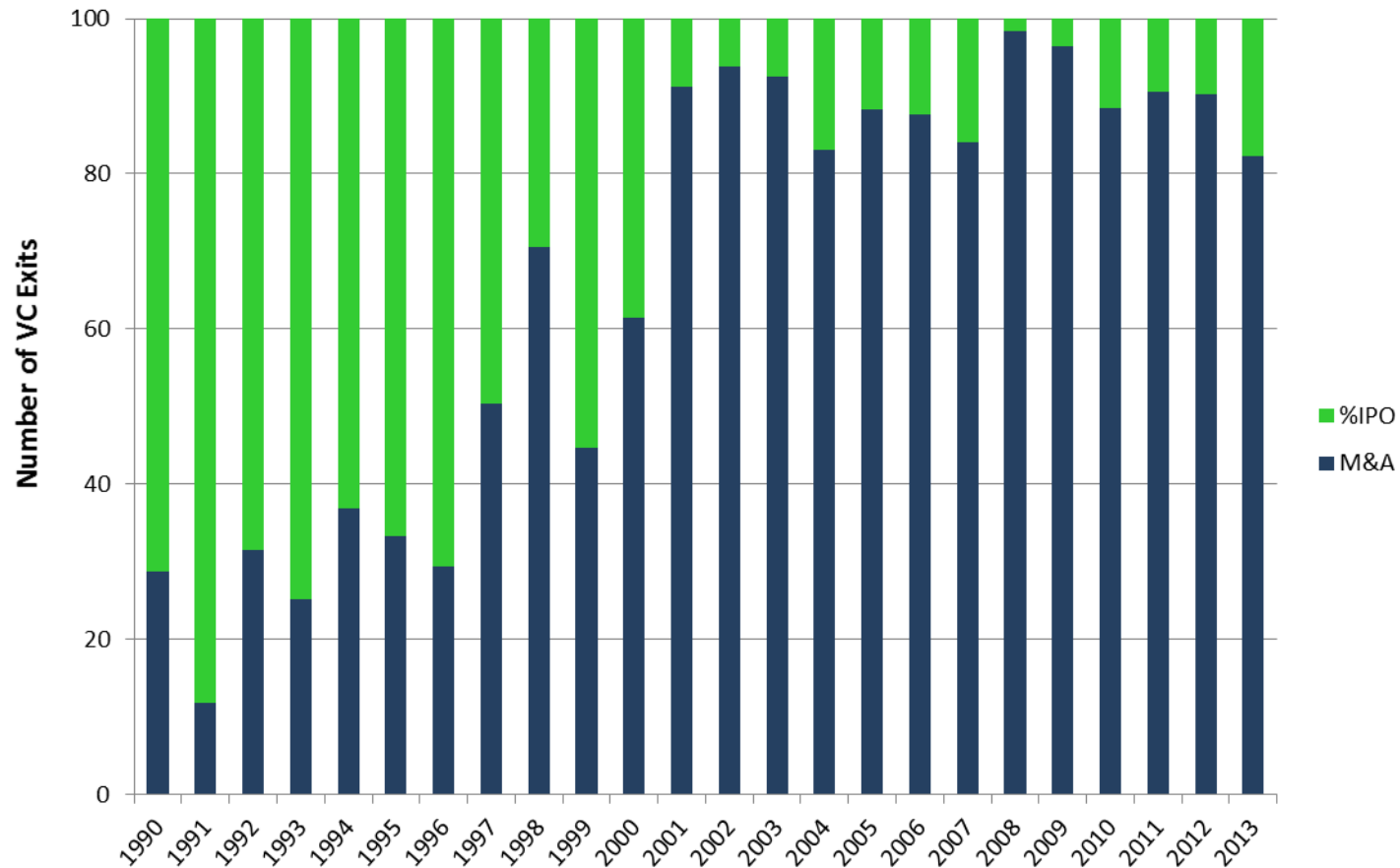
US IPO Volume has been particularly low for small firms

Small firm IPOs are defined as IPOs with less than \$50 million in LTM sales (\$2009)



Number of U.S. IPOs with pre-IPO Annual Sales less than or greater than \$50m/Year (\$2009)

IPO Exits for VC-backed Firms Have Been Limited



Source: NVCA 2014 Yearbook Tables 9 and 10

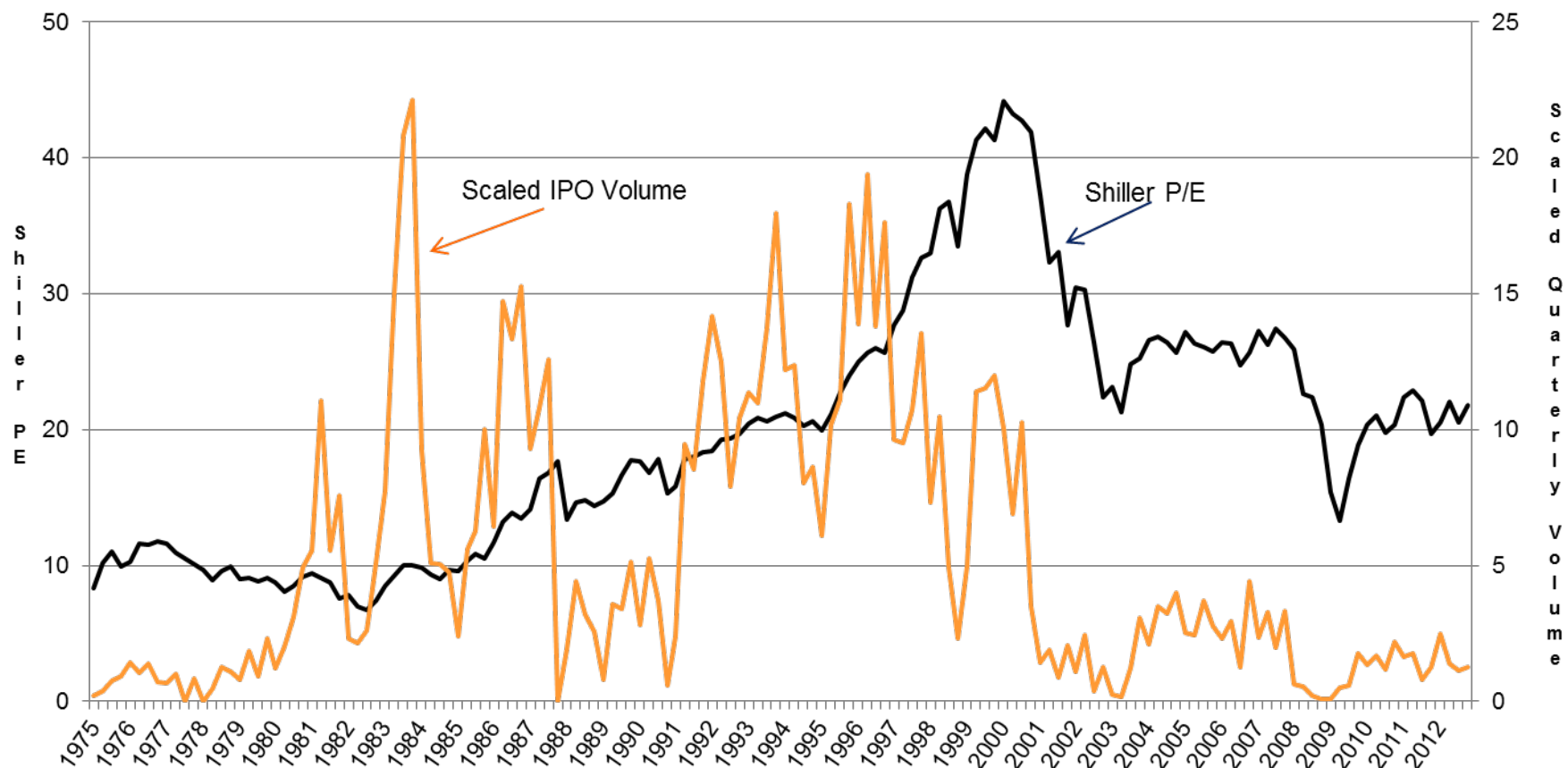


Figure 2: The Shiller P/E ratio is taken from Robert Shiller's website and is computed as the ratio of the S&P 500 index divided by the inflation-adjusted ten-year moving average of S&P 500 earnings. Scaled IPO volume is quarterly IPO volume divided by annual real GDP, in trillions of 2009 dollars.

Why Has IPO Volume Been So Low?

Conventional Wisdom: The IPO Market Is Broken

Sarbanes-Oxley Act of 2002 (SOX) has imposed costs on publicly traded firms, especially small firms

Decimalization, Reg FD in 2000, and the Global Settlement in 2003 have led to a drop in analyst coverage for small firms, lowering their P/E ratios, and the collapse of the IPO ecosystem

The Economies of Scope Hypothesis

Increased economies of scope

Increased importance of speed to market

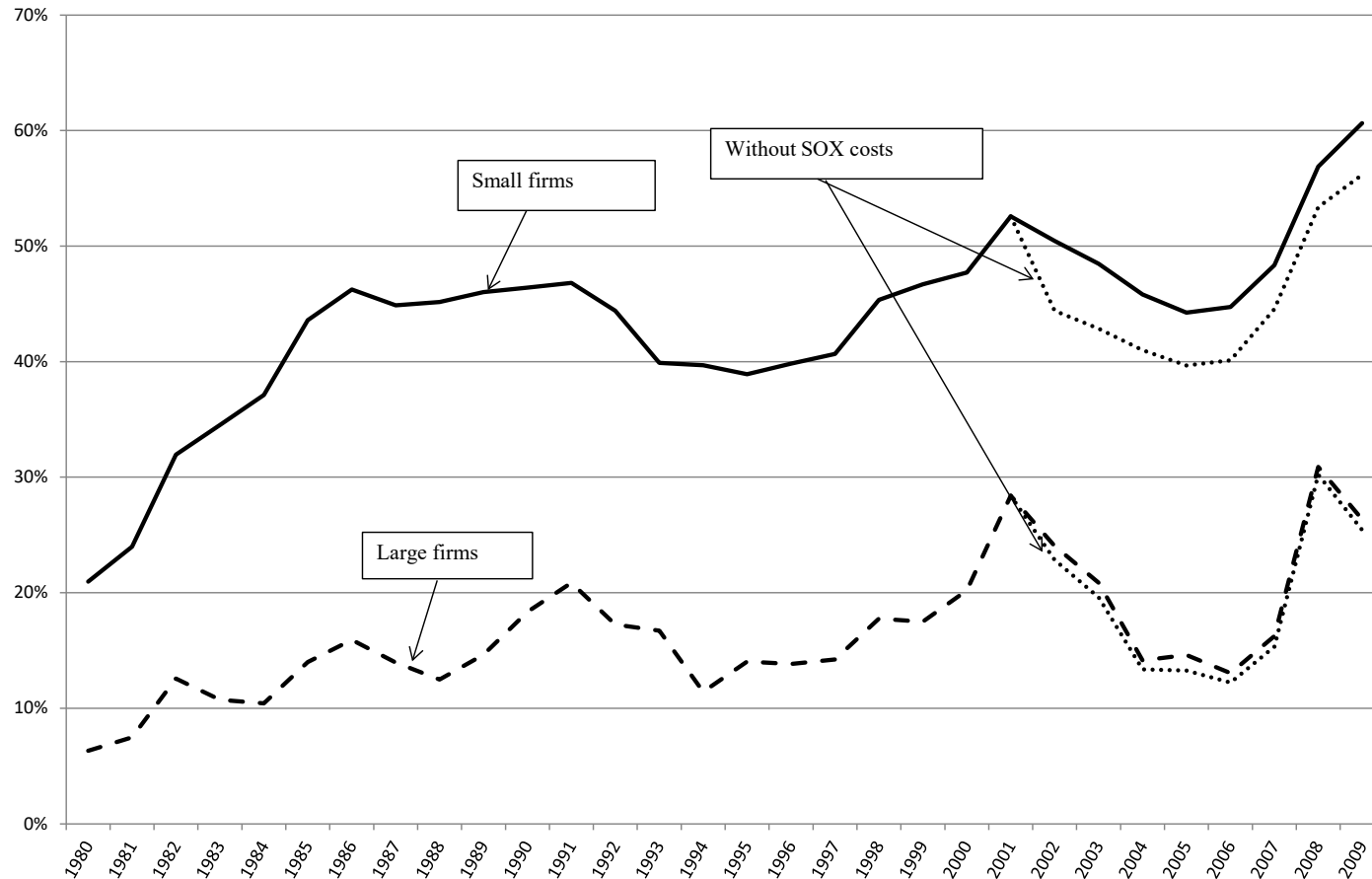
Getting big fast is more important than in the past

Changes in the Product Market

The profitability of small independent firms has declined relative to the value created as part of a larger organization that can quickly implement new technology and benefit from economies of scope

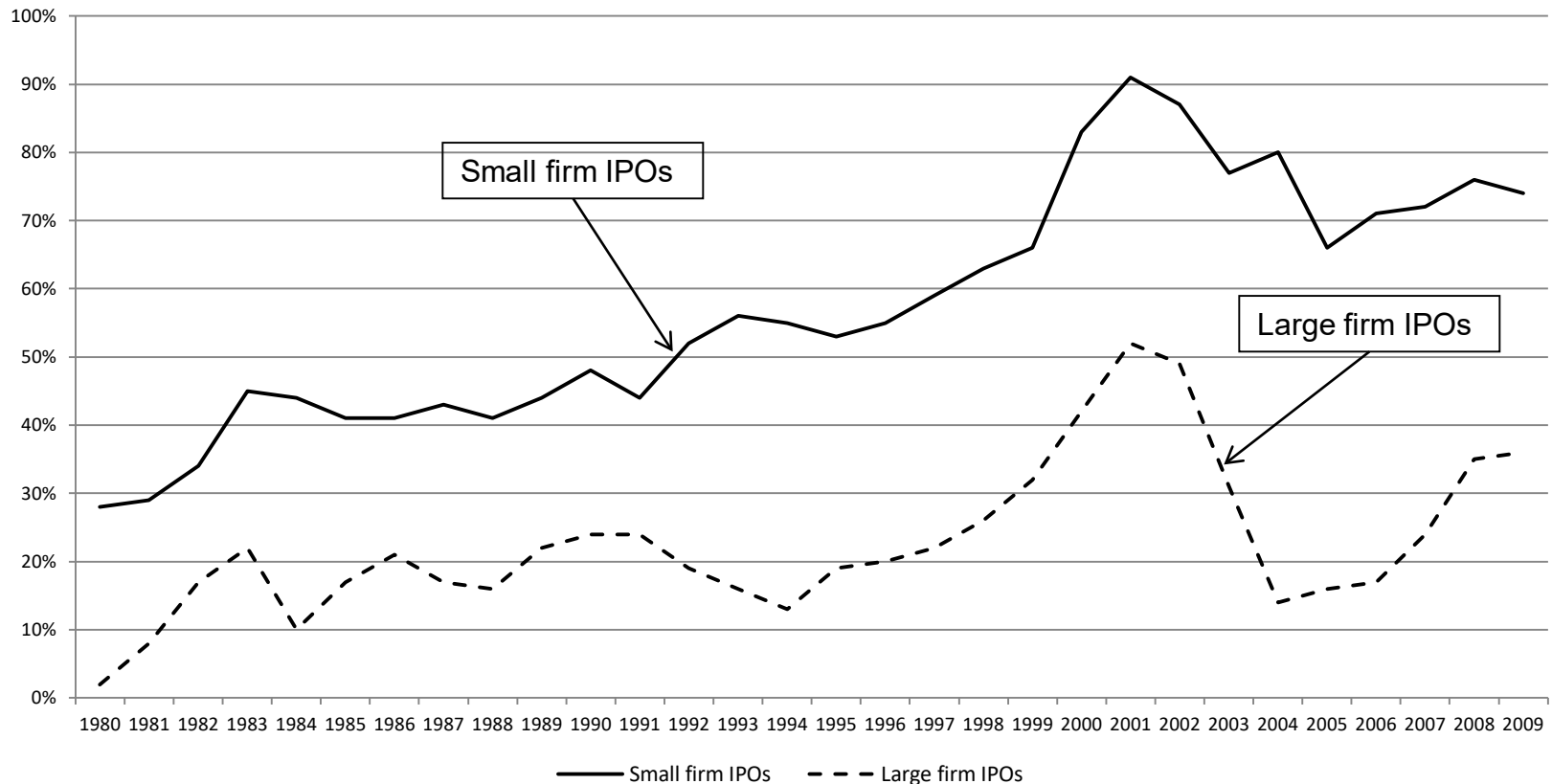
Evidence

The percentage of small firms that are unprofitable has increased



Percentage of seasoned public companies with **negative** EPS, 1980-2009

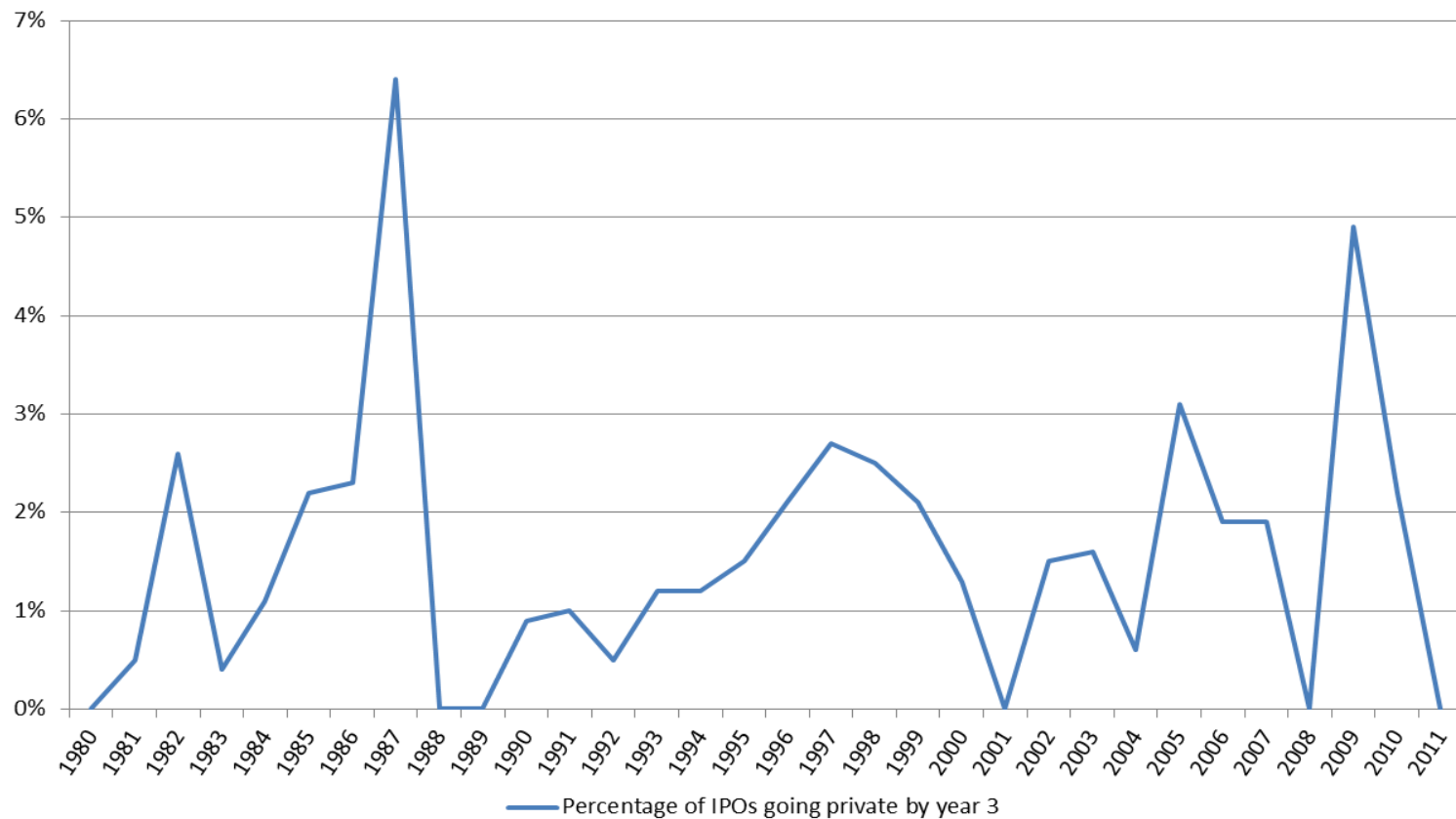
Small firm IPOs have become less profitable



Percentage of IPOs from the prior 3 years with **negative** EPS in fiscal year t

Source: Table 2, columns 2 and 4 of Gao, Ritter, and Zhu "Where Have All the IPOs Gone?"
December 2013 *Journal of Financial and Quantitative Analysis*

Are recent IPOs going private more frequently?



Source: Table 3 (both LBOs and acquisitions by private firms)

Young growth firms are more likely to be involved in an M&A transaction

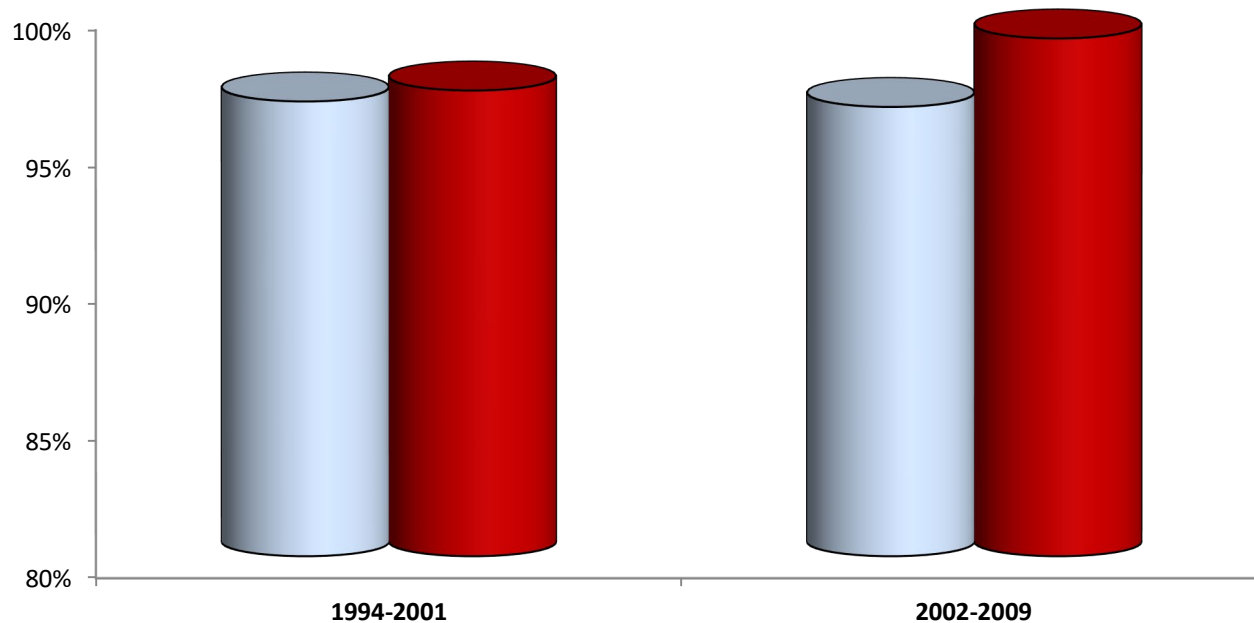
Either as an acquirer or being acquired

Uptrend started in early 1990s

Evidence on post-IPO analyst coverage

There is near universal analyst coverage on IPOs in 1994 to 2009

The percentage of small (grey) and large (red) firm IPOs with analyst coverage from at least one lead underwriter within one year of the IPO



Source: Table 5, column 3 of Gao, Ritter, Zhu (2013 *JFQA*)

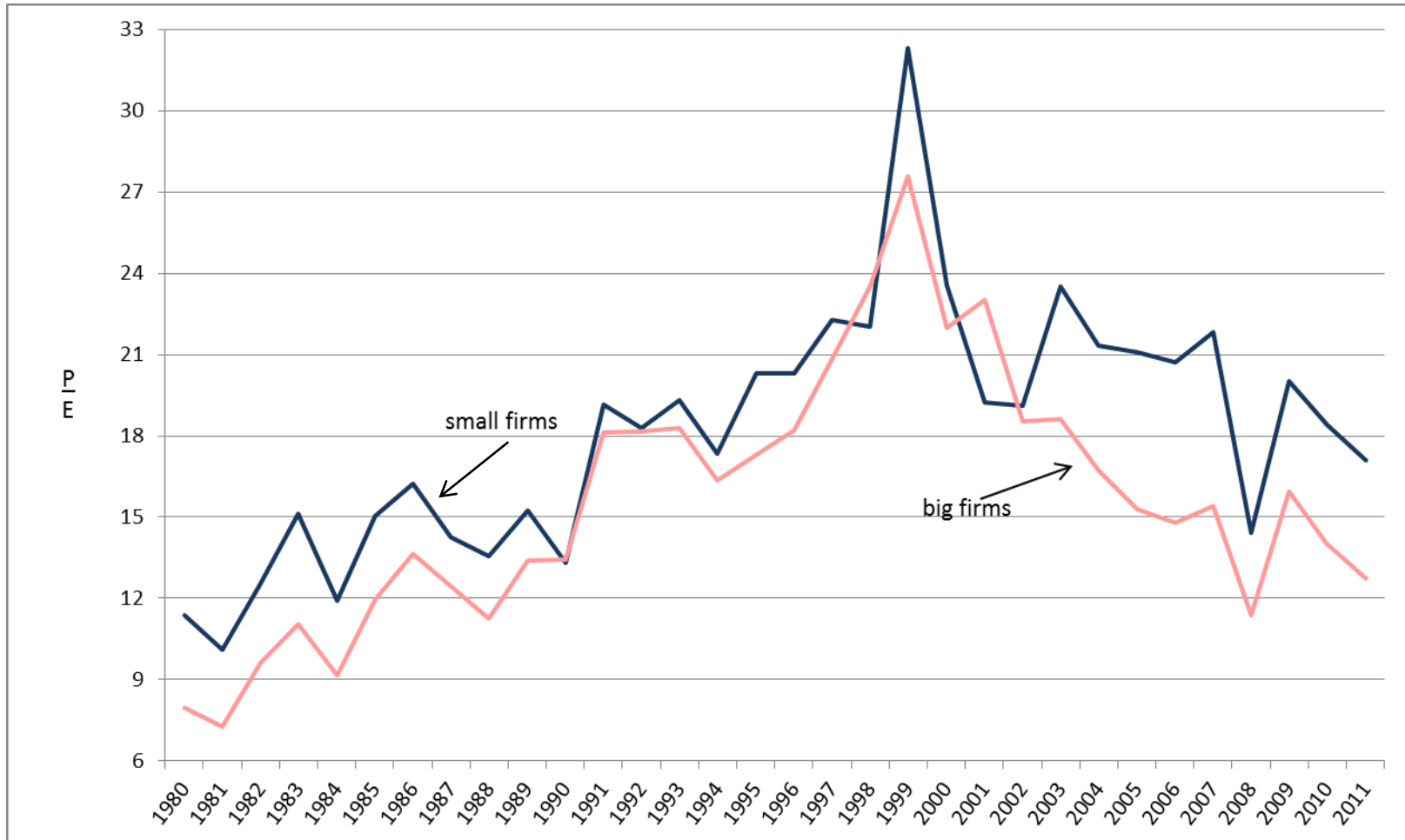
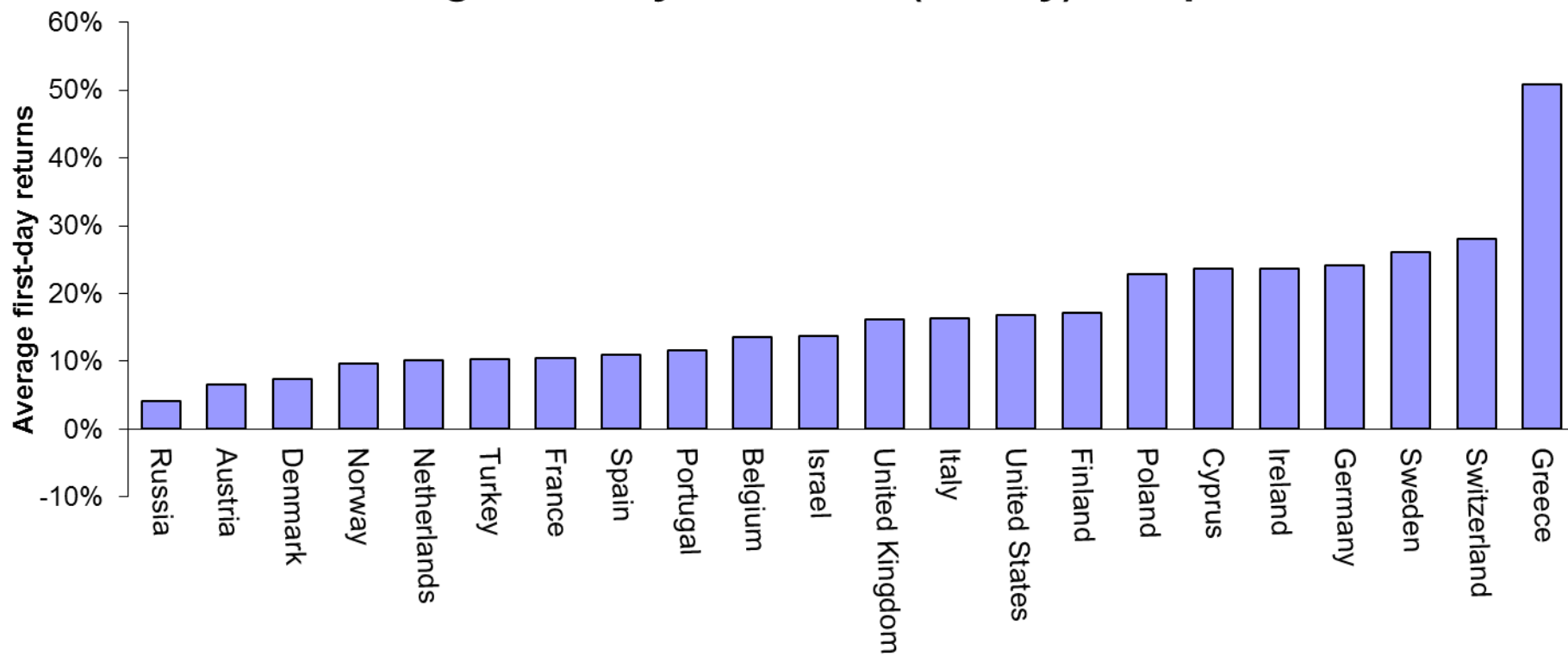


Figure 2. Price-earnings ratio of small company (annual sales less than \$1 billion, 2011 purchasing power) and big company stocks with positive EPS (Before extraordinary items) traded on the Amex, Nasdaq, or NYSE with Compustat EPS data available. The price-earnings ratios are computed as the sum of the market values divided by the sum of the earnings for, respectively, small and big companies with positive EPS.

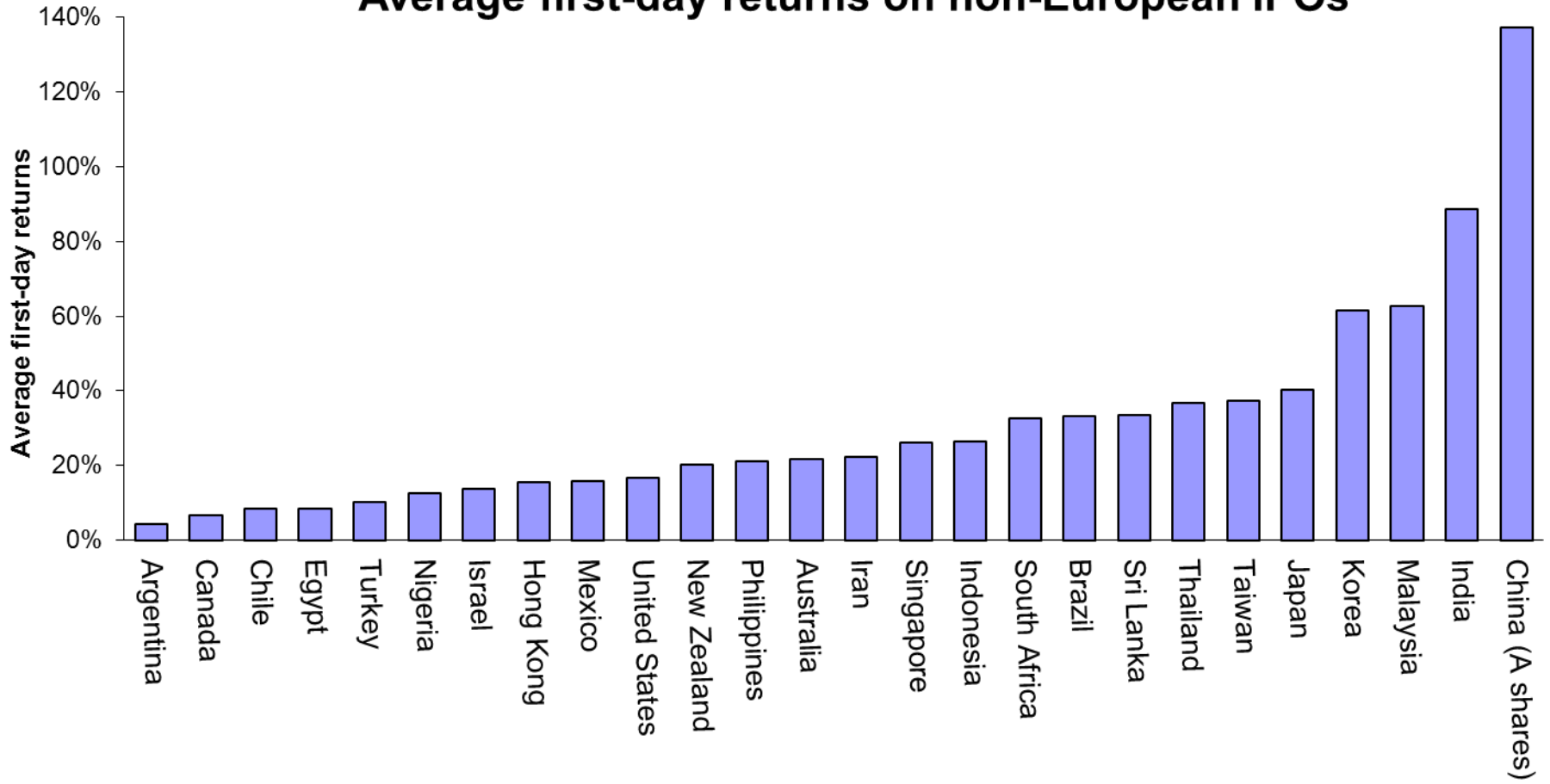
IPOs are underpriced in every country

In the U.S. from 1980-2013, the average first-day return is 18%

Average first-day returns on (mostly) European IPOs



Average first-day returns on non-European IPOs



Does Underpricing Harm the Shareholders of an Issuing Firm?

The Effect of Underpricing on the Wealth and Ownership of Pre-issue Shareholders

Assumptions:

Pre-issue shares outstanding:	15.6 million shares
Gross proceeds of IPO:	\$78 million
Post-issue market cap:	\$280.8 million
# of shares sold by pre-issue shareholders:	zero

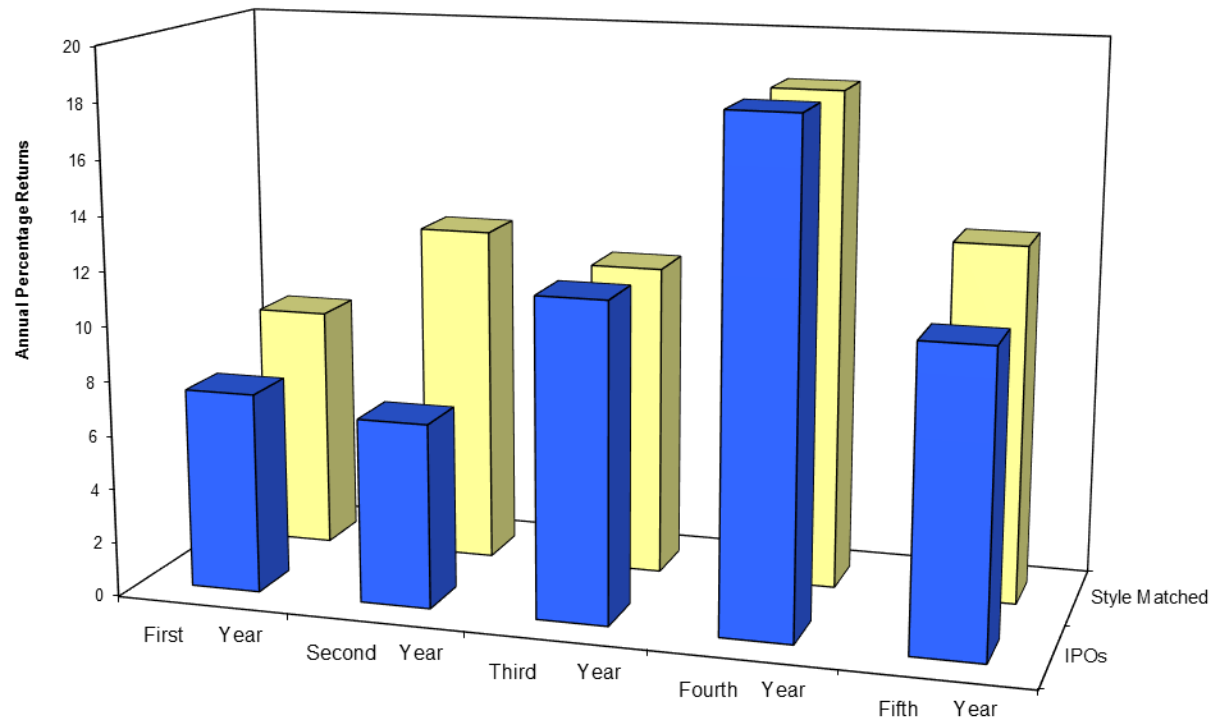
	<u>Strategy 1</u>	<u>Strategy 2</u>
Offer price and number of shares offered:	7.8 m at \$10.00	6.0 m at \$13.00
Post-issue shares outstanding:	23.4 million	21.6 million
Market price per share:	\$12.00	\$13.00
Money left on the table:	\$15.6 million	zero
Post-issue wealth of pre-issue shareholders:	\$187.2 million	\$202.8 million
Post-issue % of firm owned by pre-issue shareholders:	66.7%	72.2%

Long-run Performance of IPOs

While IPOs tend to go up on the first day of trading, in the long run, on average they have tended to underperform.

But there is a strong cross-sectional pattern in the U.S.: IPOs that had annual sales of less than \$50 million severely underperform, whereas those that had achieved annual sales of \$50 million don't underperform.

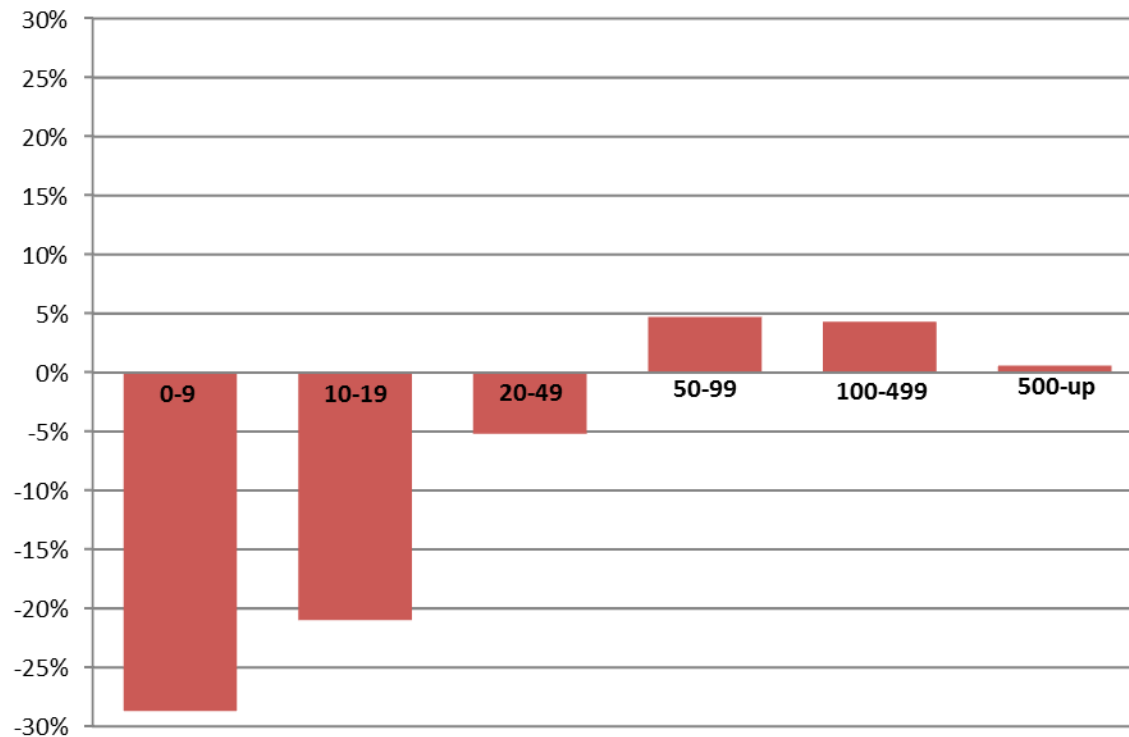
Buy-and-hold stock returns are skewed: there are some big winners, but most stocks underperform. This is especially true with young companies, where there is even greater right skewness.



Annual returns in the five years after going public for U.S. 8,278 IPOs from 1970-2011. Style-matched firms match on market cap and book-to-market.

3-year Buy-and-hold Style-adjusted Returns

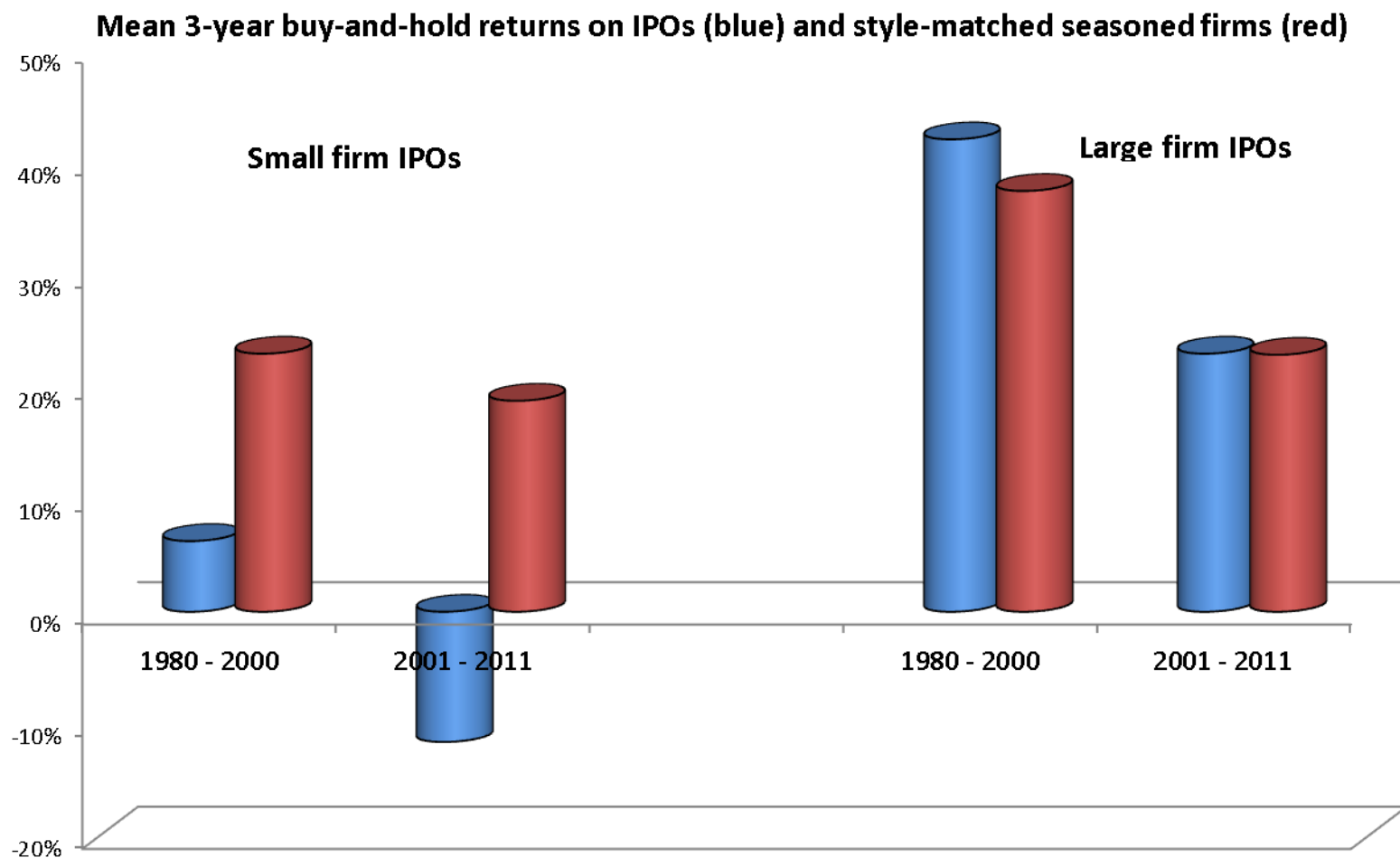
7,598 U.S. IPOs from 1980-2011. Style-adjusted returns exclude the opening day return
Style controls for market capitalization and book-to-market



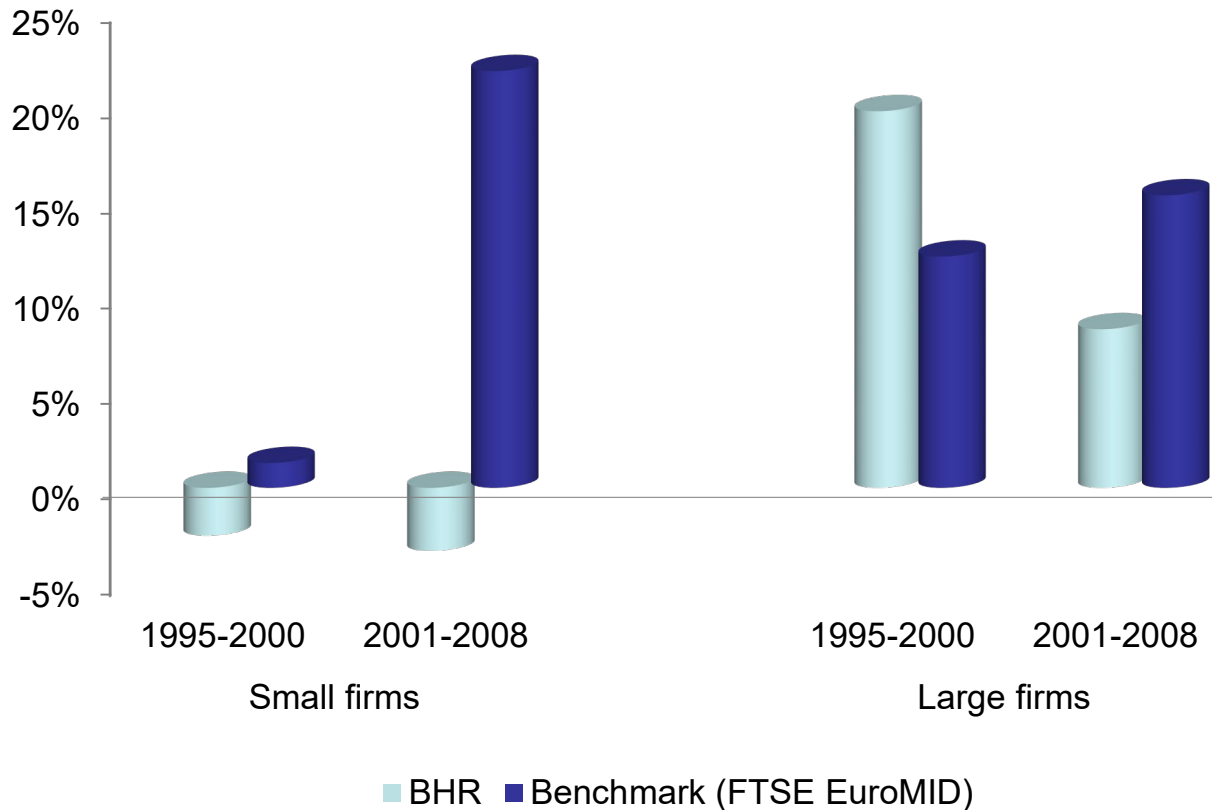
Annual Sales, \$millions (2005 purchasing power)

US small firm IPO returns have been disappointing

\$50 million in pre-IPO annual sales cutoff, returns not including first-day return and ending in Dec. 2012)

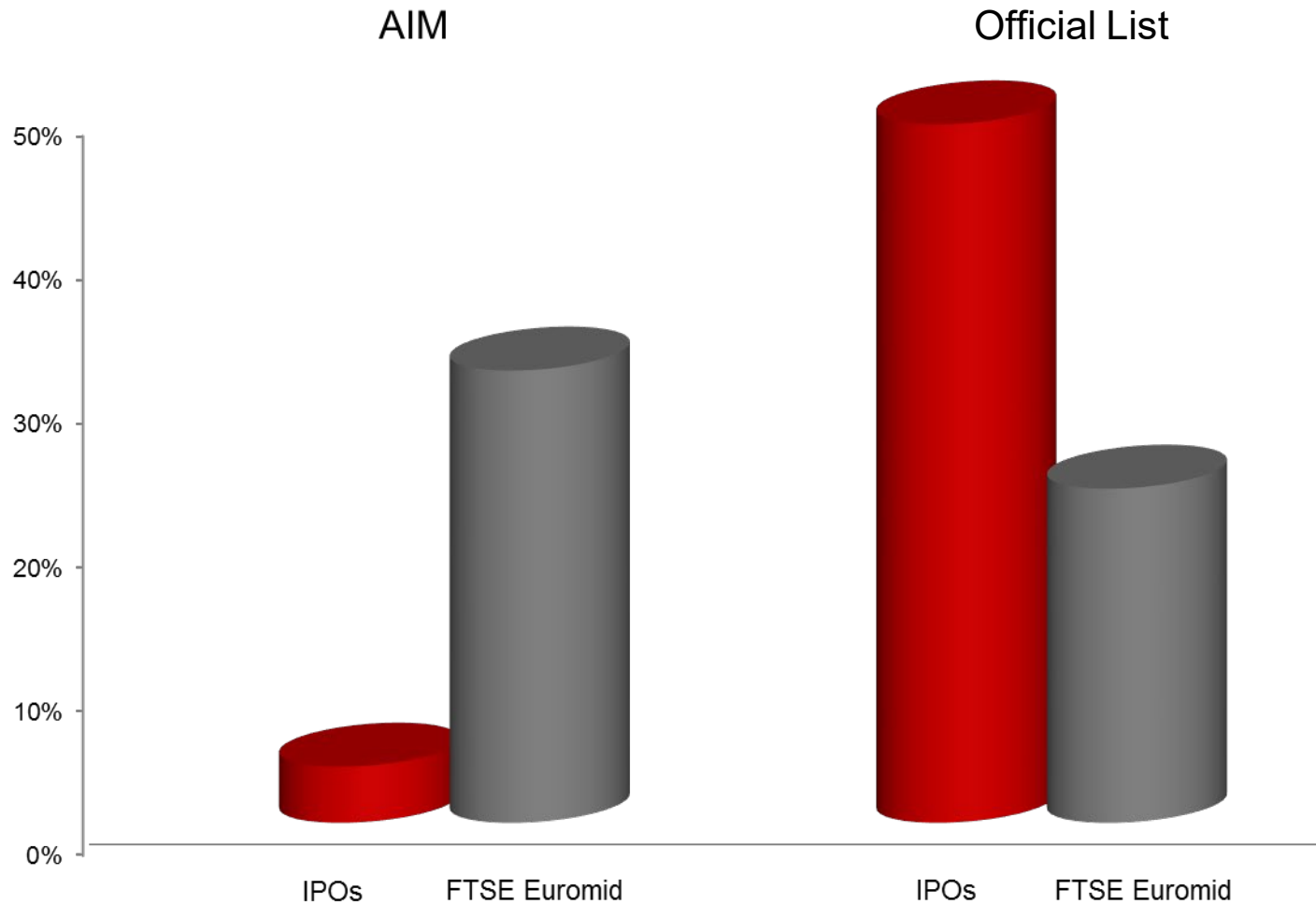


European small firm IPOs returns have also been low



Small firm (<€30m in sales) IPO 3-year buy-and-hold returns are lower than for large firm IPOs (returns are measured from the 22nd trading day closing market price)

3-year buy-and-hold returns of London IPOs, 1995-2006



Source: Vismara, Paleari, and Ritter, June 2012, *European Financial Management*