

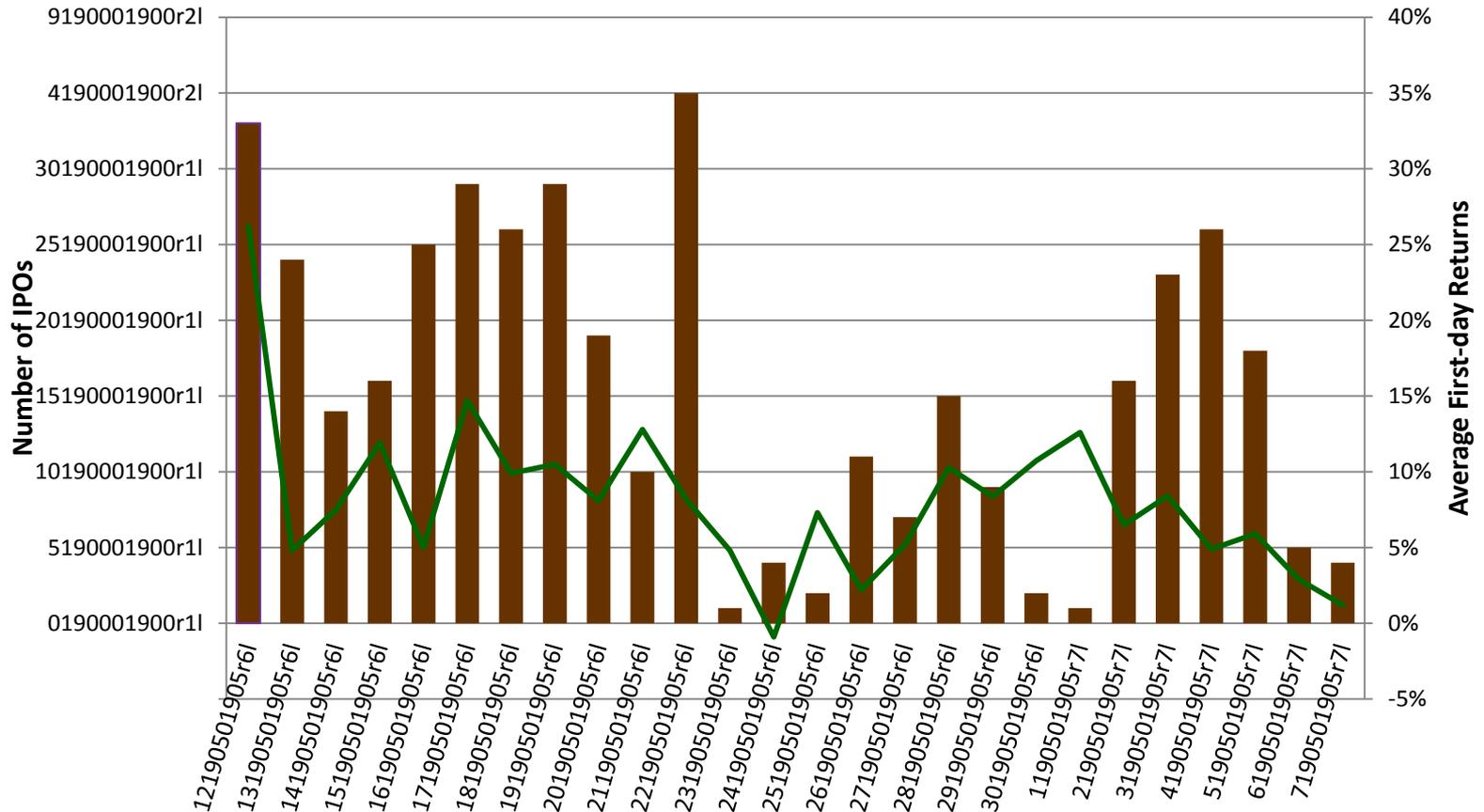
Initial Public Offerings

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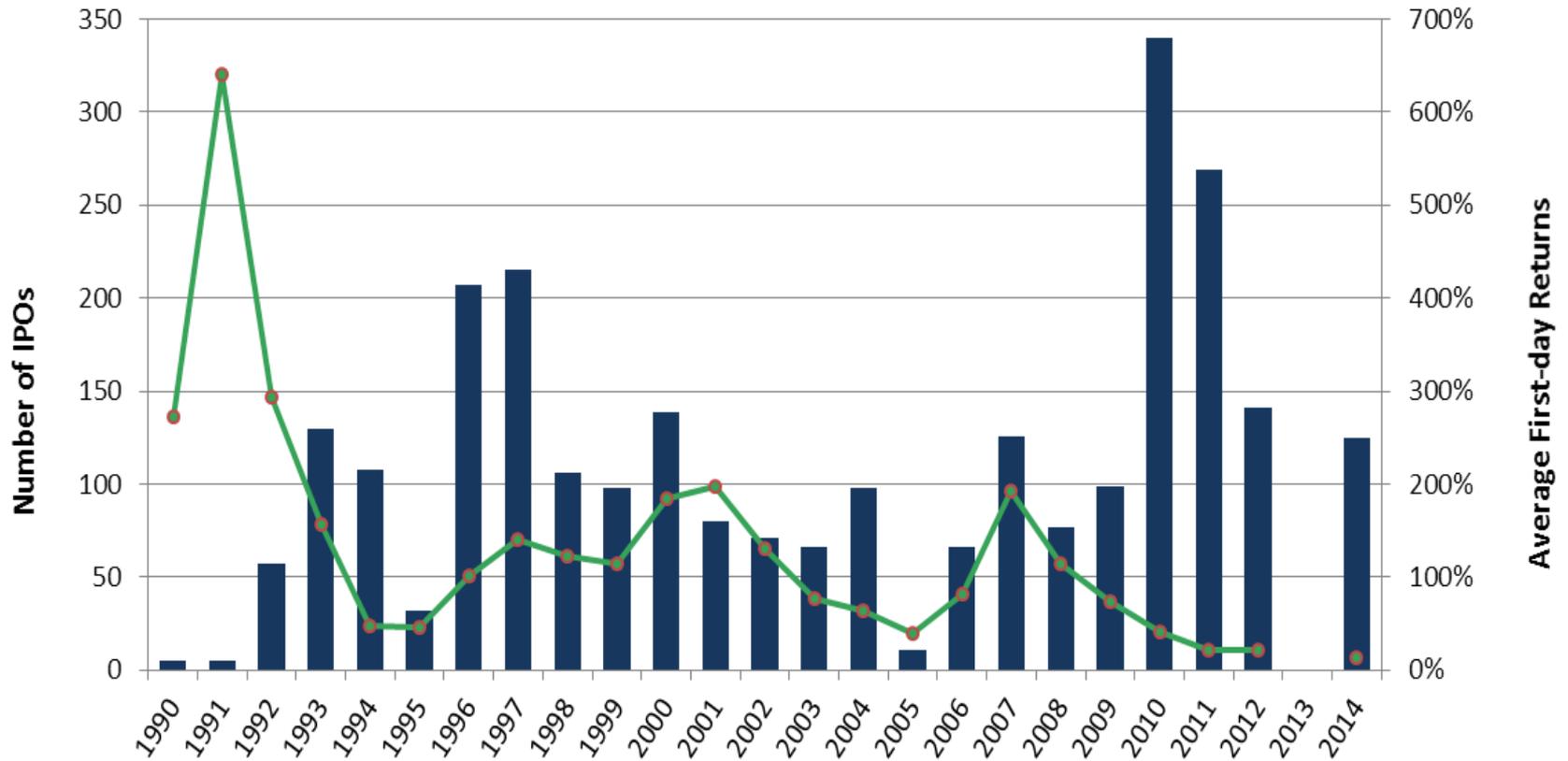
December 2015

Number of Offerings (bars) and First-day Returns on Turkish IPOs, 1990-2015



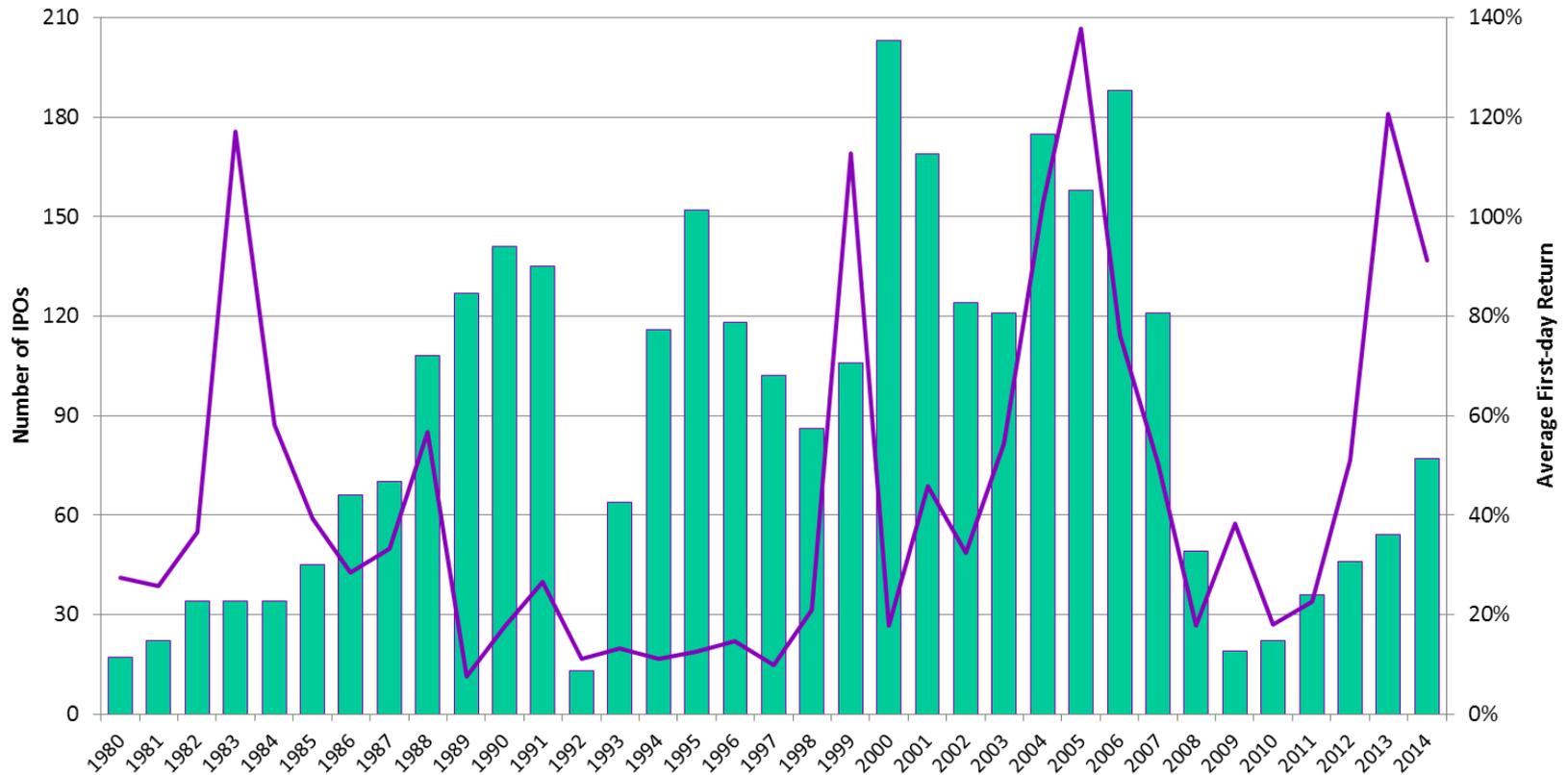
Sources: Halil Kitmaz, Banu Durukan, Guray Kucukkocaoglu, Orhan Emre Elma, Dealogic, and the Borsa Istanbul. 2015 numbers are for the first six months only.

Number of Offerings and Average First-day Returns on Chinese IPOs, 1990-2014
(There were no IPOs in 2013, due to a CSRC moratorium starting in October 2012)



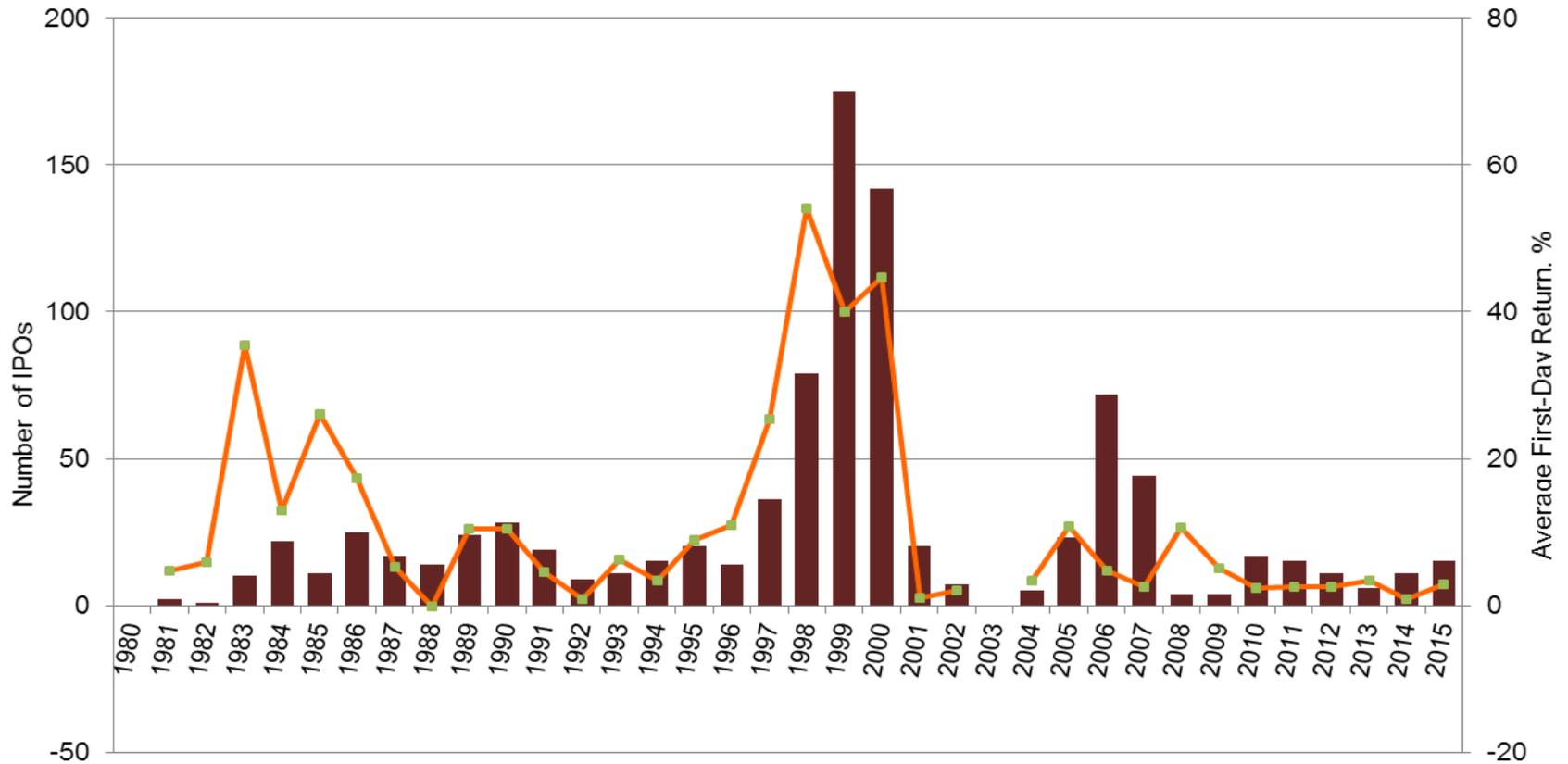
Source: Jia, Xie, and Zhang (2014)

Number of Offerings and Average First-day Returns on Japanese IPOs, 1980-2014



Source: Takashi Kaneko and others

Number of Offerings and Average First-Day Returns on German IPOs, 1980-2015

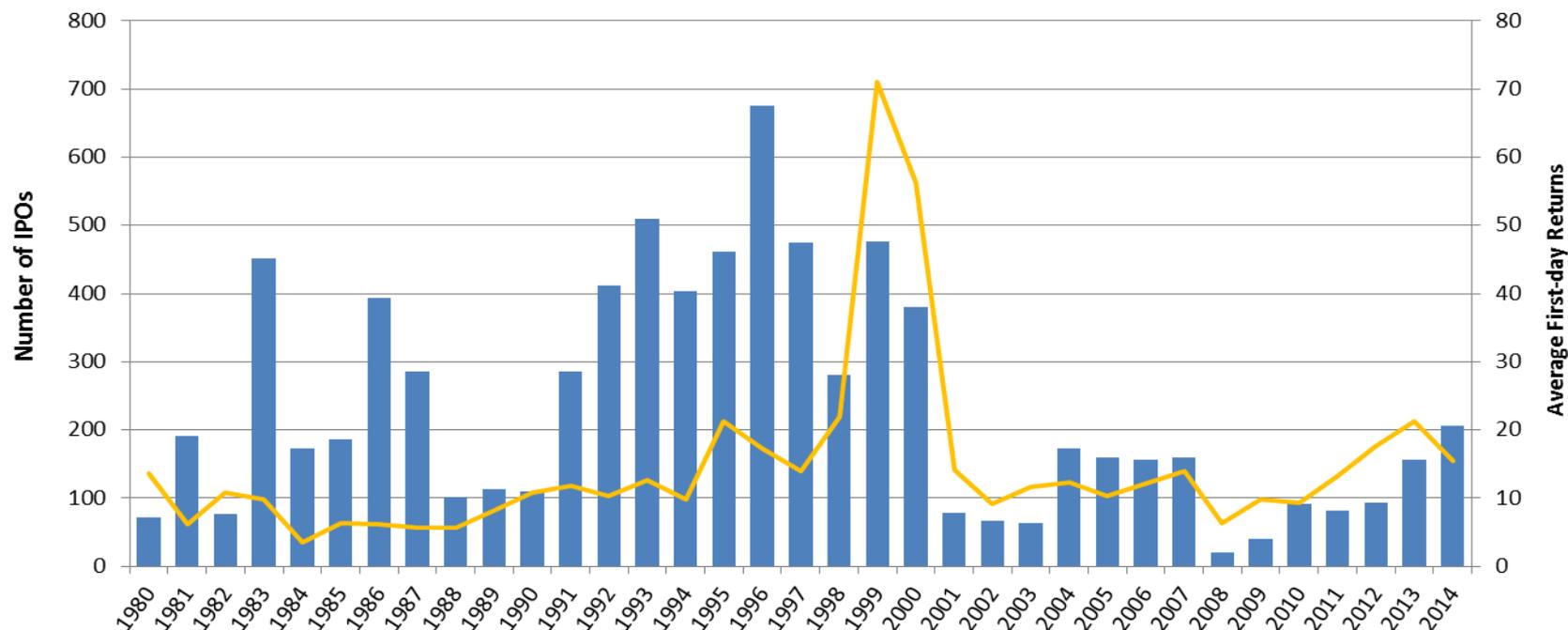


For 2015, the numbers are for January-November

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

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

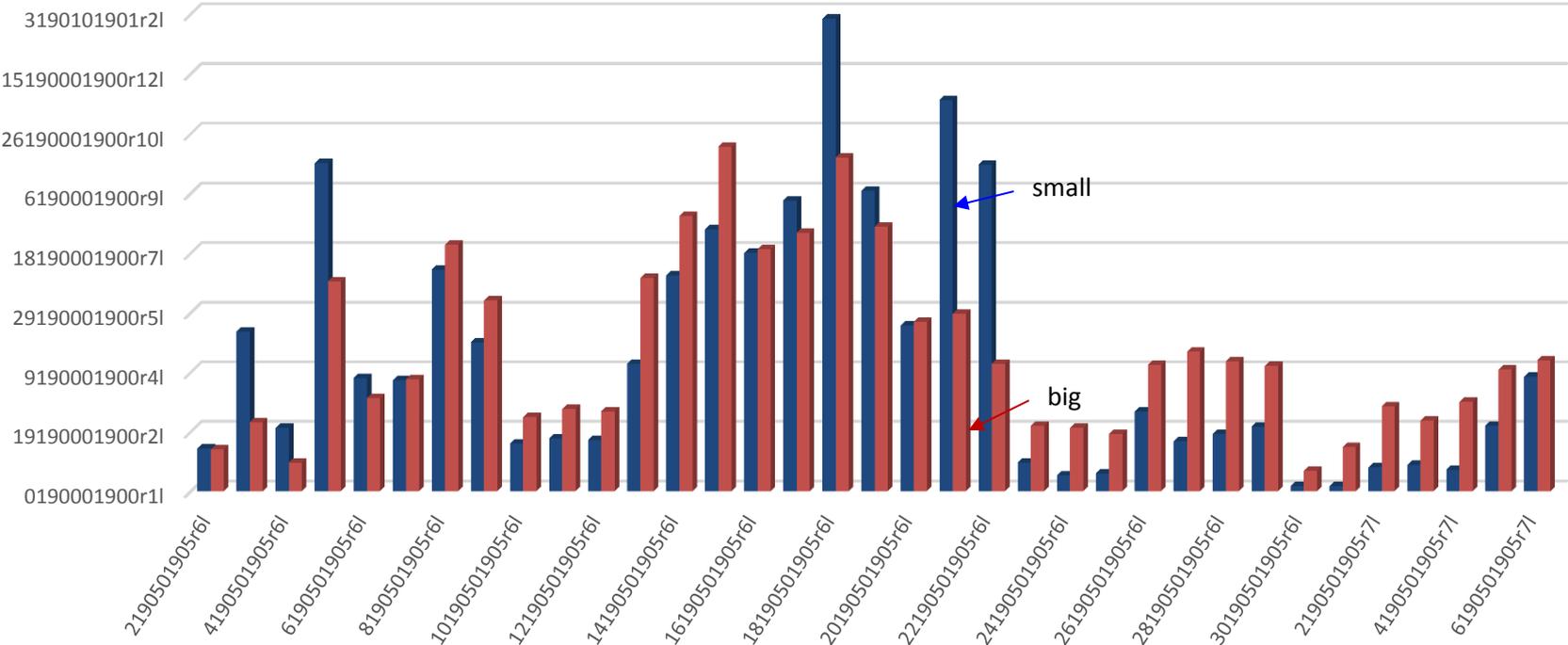
In 2001-2014, an average of **110** firms went public every year



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

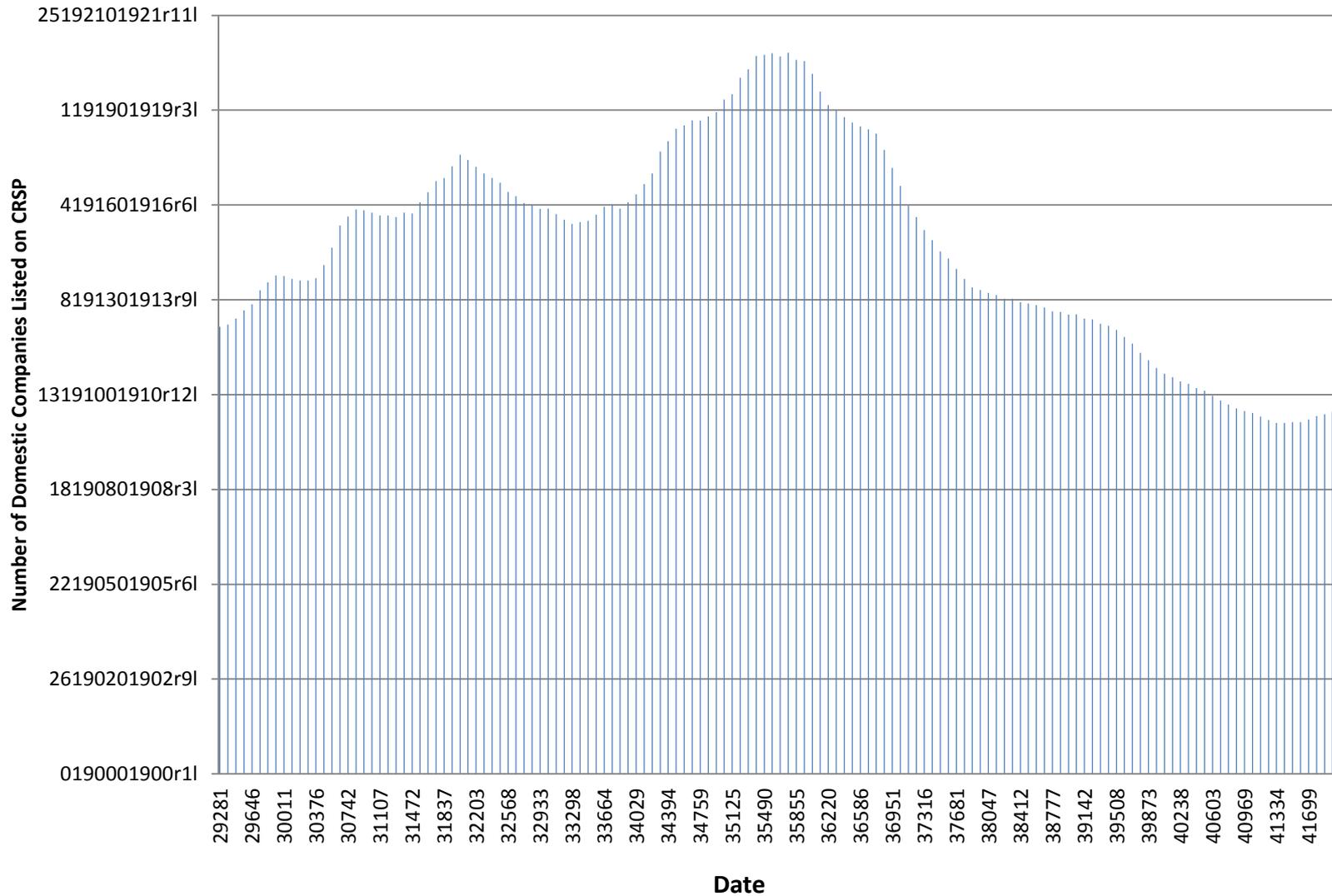
U.S. IPO Volume has been particularly low for small firms

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)

Number of U.S. Domestic Companies Listed on Nasdaq, the NYSE, and NYSE MKT



Note: Operating companies only (i.e., no limited partnerships, closed-end funds, REITs, ETFs) listed on Nasdaq, NYSE, and Amex (now NYSE MKT)
Source: University of Chicago Center for Research in Security Prices

Why Has IPO Volume Been So Low?

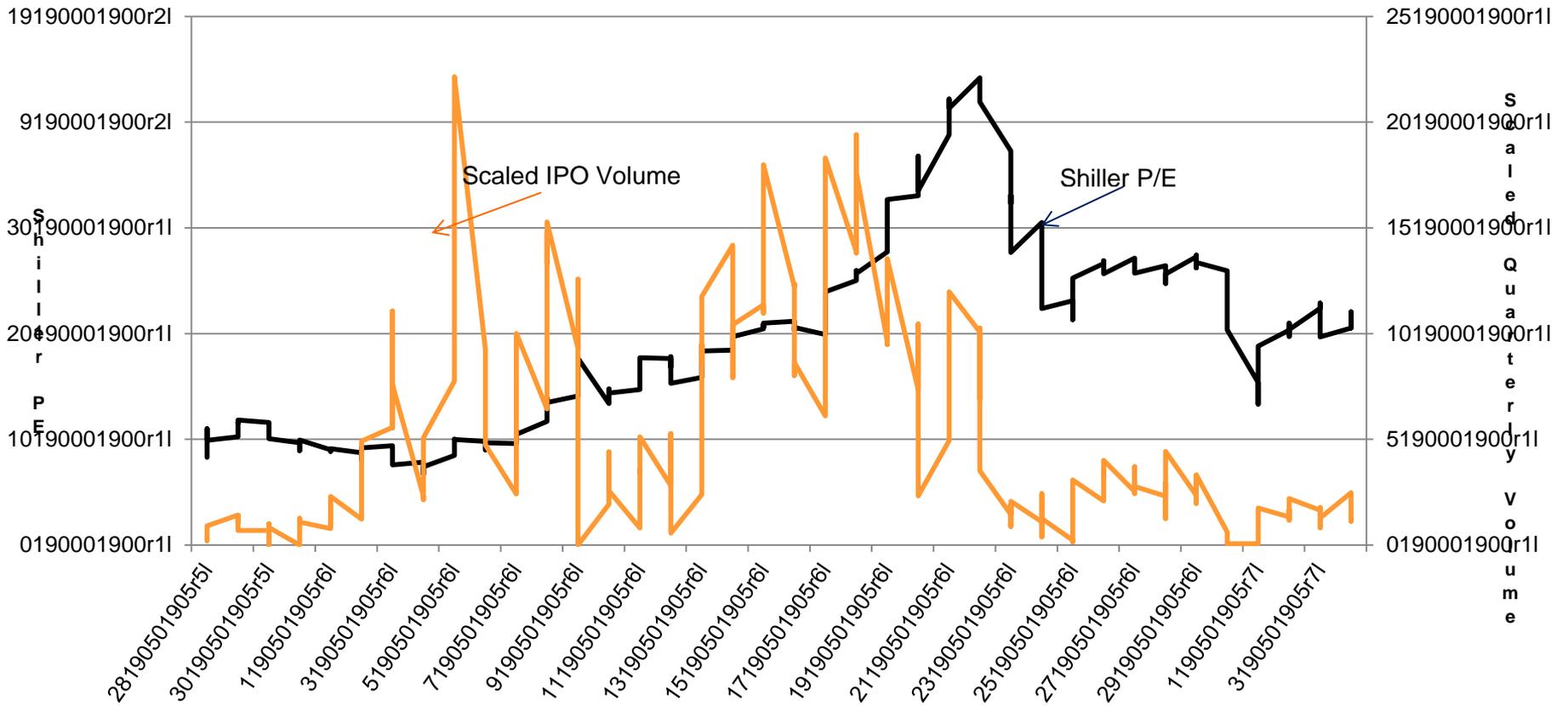
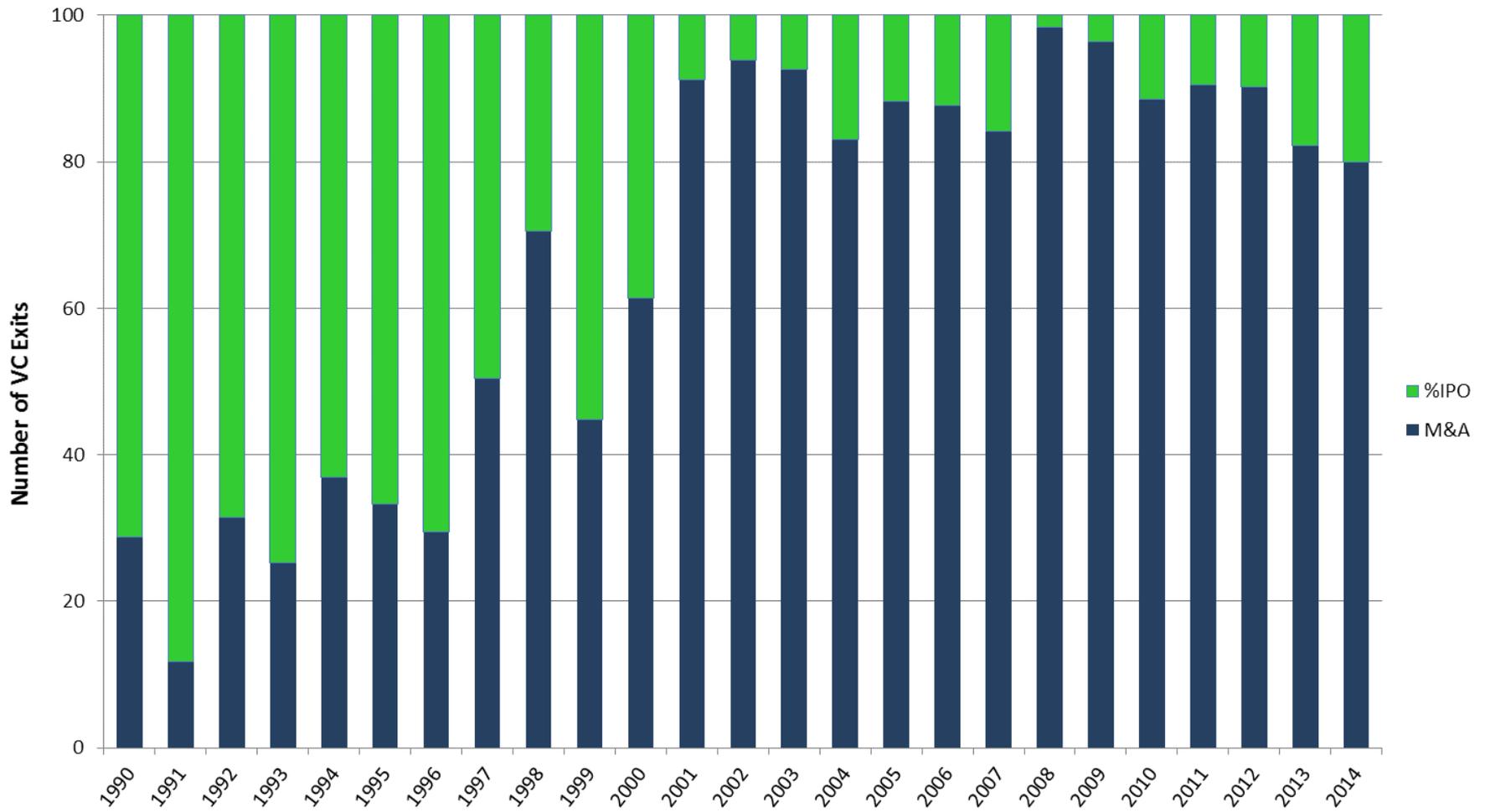


Figure 2: The Shiller P/E ratio is taken from Robert Shiller’s website and is computed as the ratio of the S&P 500 index divided by the inflation-adjusted ten-year moving average of S&P 500 earnings. Scaled IPO volume is quarterly IPO volume divided by annual real GDP, in trillions of 2009 dollars.

IPO Exits for VC-backed Firms Have Been Limited



Source: NVCA 2015 Yearbook Figures 9 and 10

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

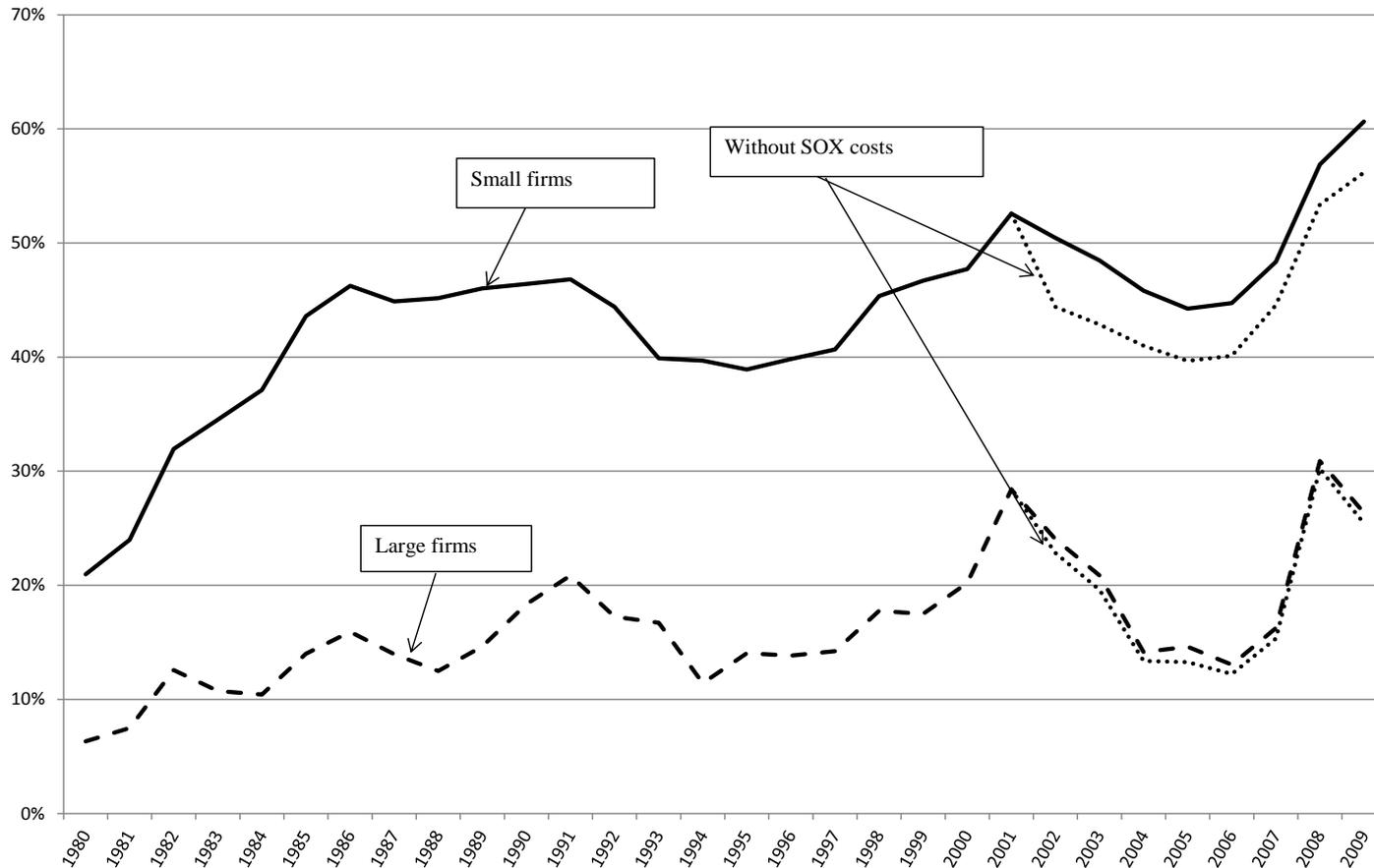
Getting big fast is more important than in the past

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

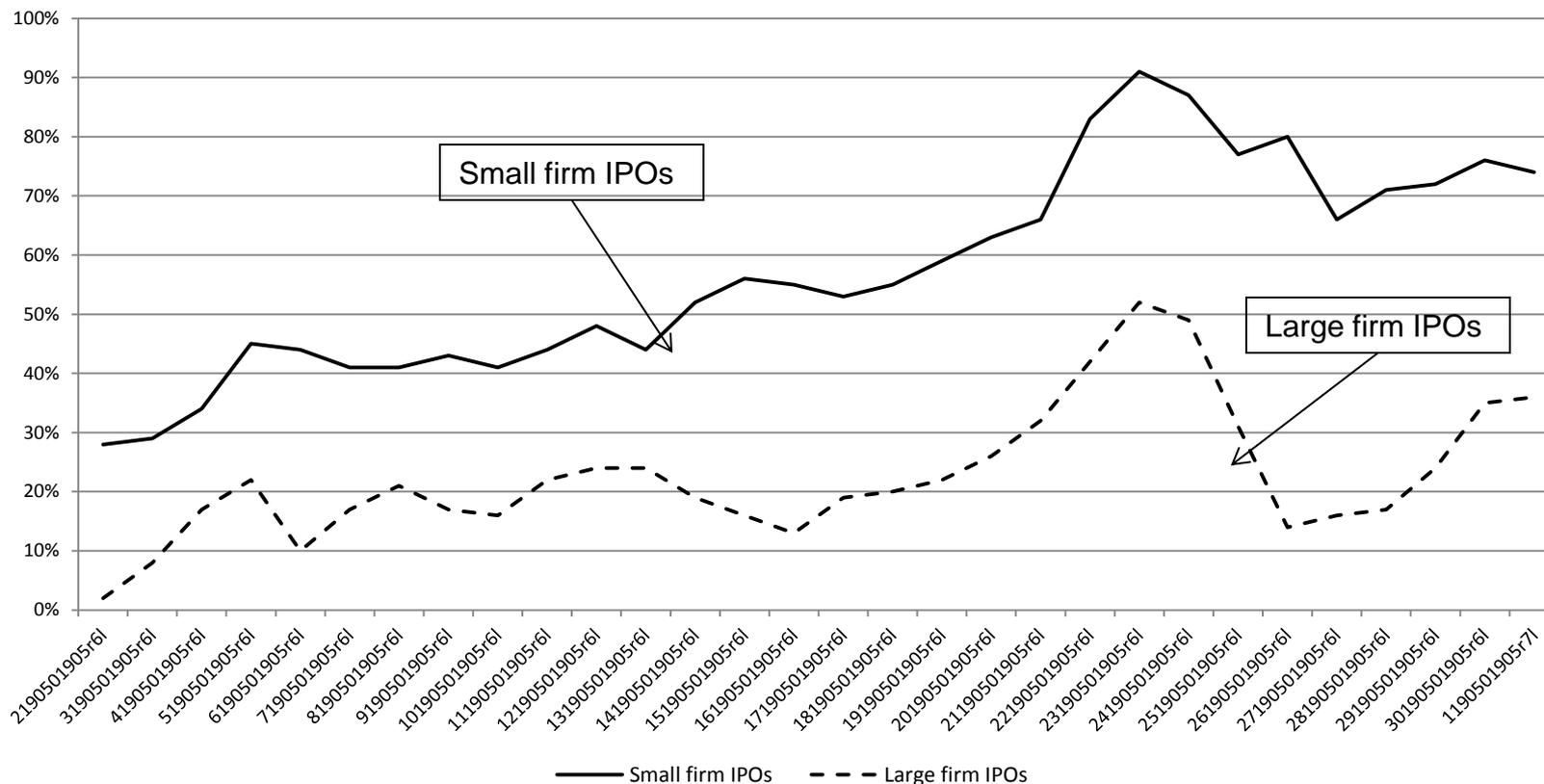
Evidence from the U.S.

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*

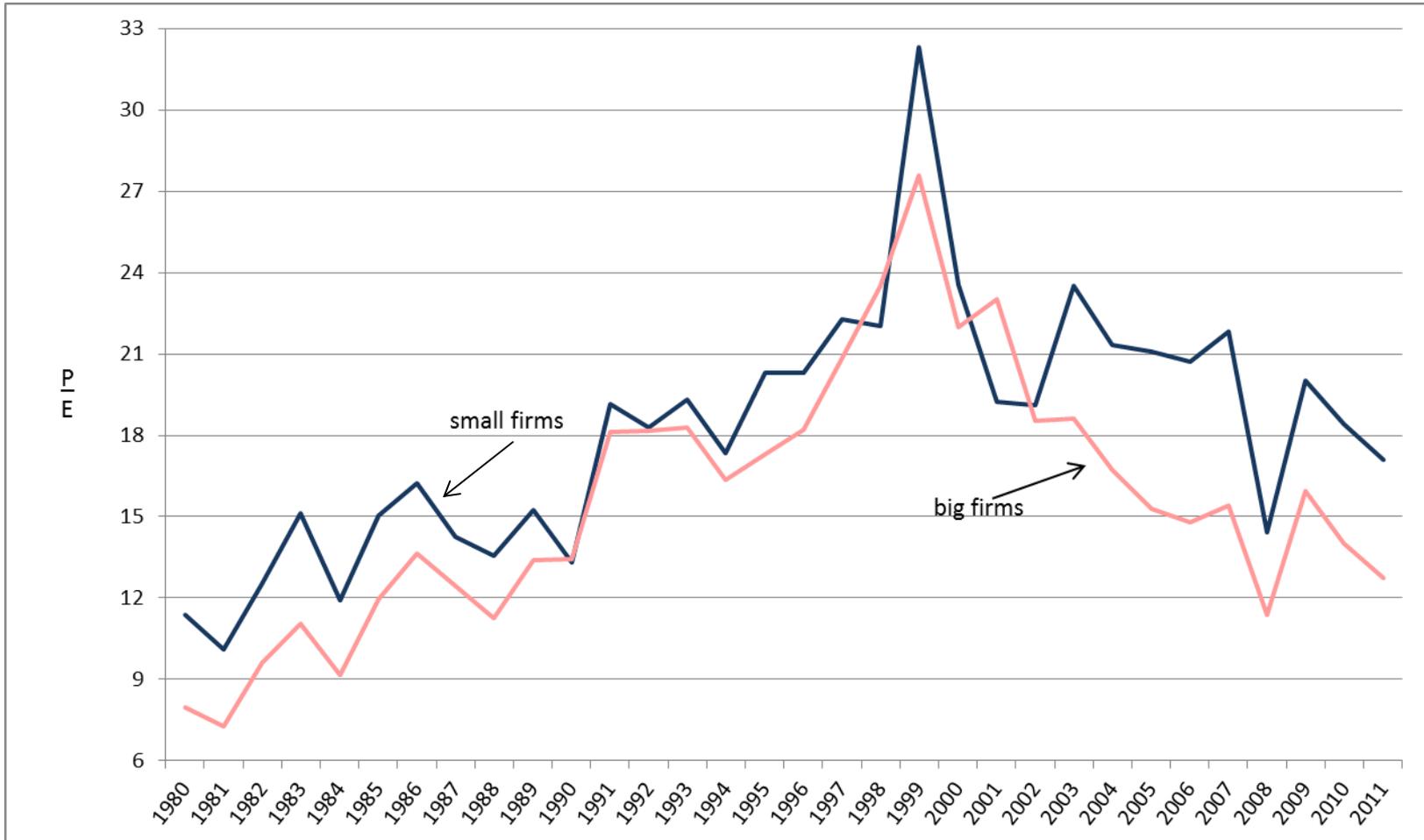
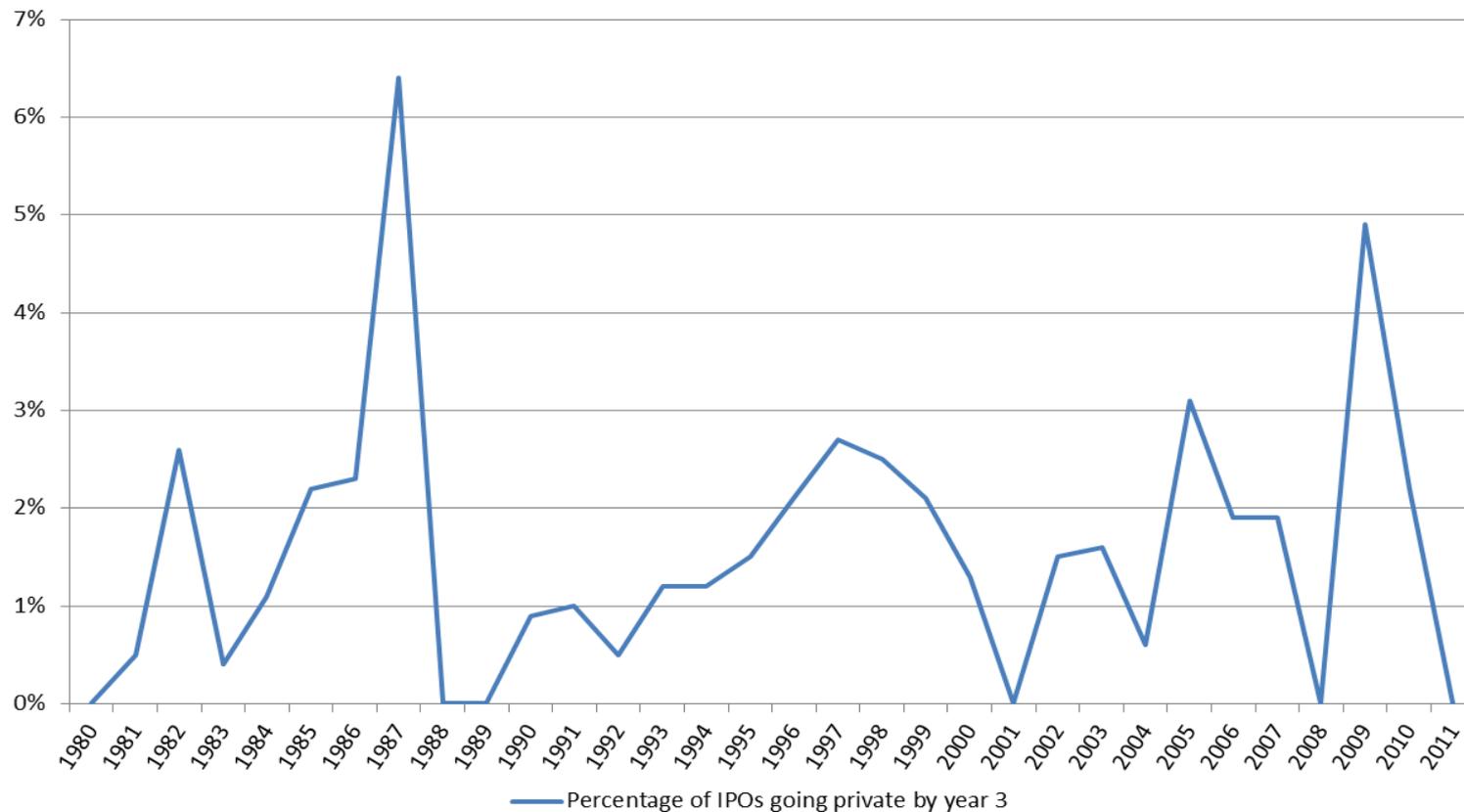


Figure 2. Price-earnings ratio of small company (annual sales less than \$1 billion, 2011 purchasing power) and big company stocks with positive EPS (Before extraordinary items) traded on the Amex, Nasdaq, or NYSE with Compustat EPS data available. The price-earnings ratios are computed as the sum of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

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

Family businesses are more likely to sell out, possibly in a cross-border transaction, than remain independent and go public

Technology has resulted in greater economies of scope and scale

Cheaper transportation costs and lower tariffs have resulted in more globalization

Is going public too costly?

Fees paid to investment bankers

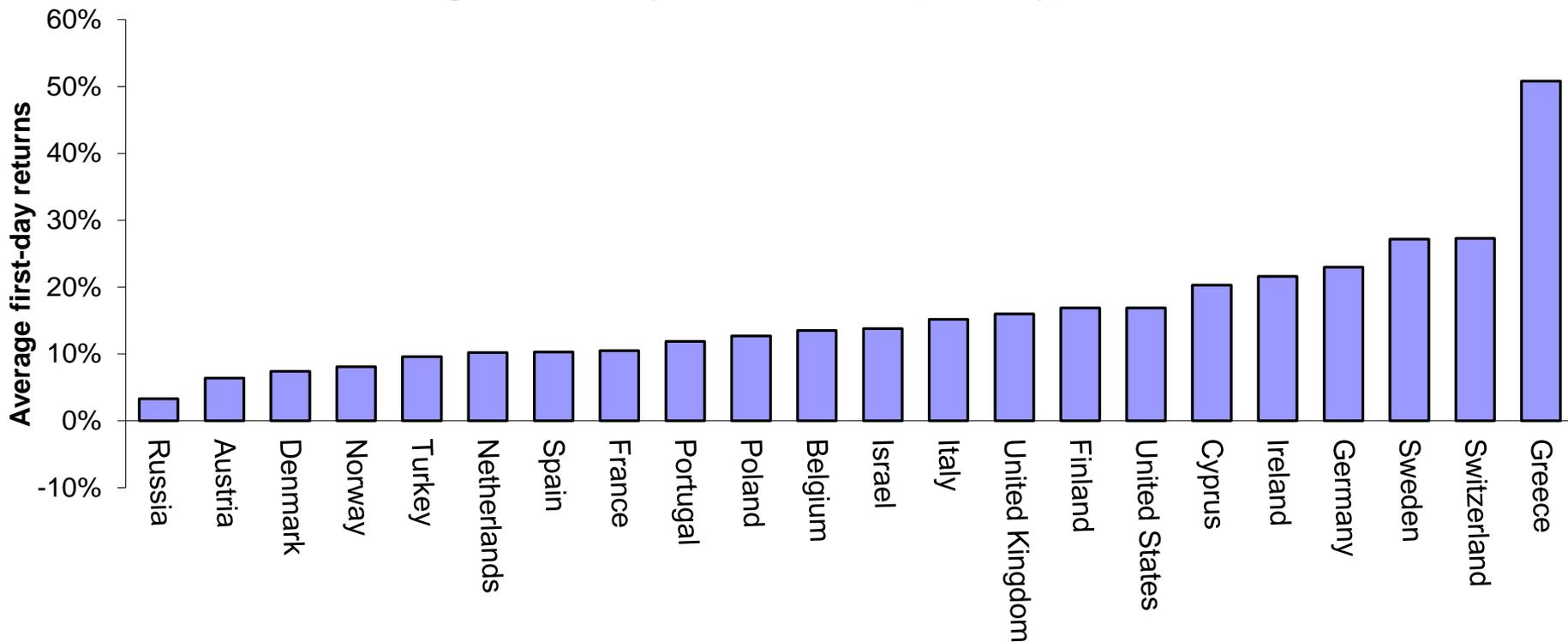
Regulatory costs including auditing costs

Money left on the table due to underpricing

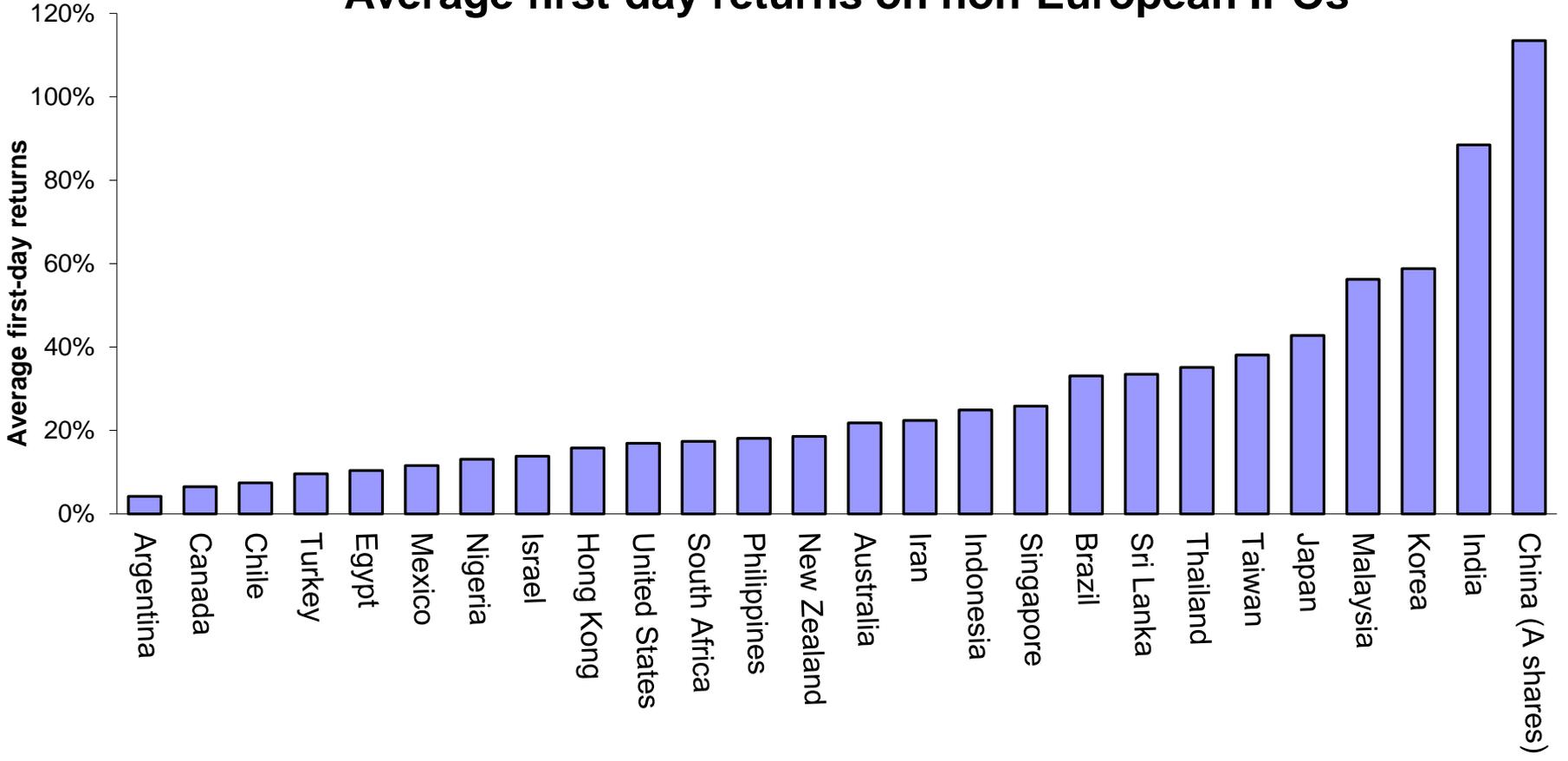
IPOs are underpriced in every country

In the U.S. from 1980-2014, the average first-day return is 18%

Average first-day returns on (mostly) European IPOs



Average first-day returns on non-European IPOs



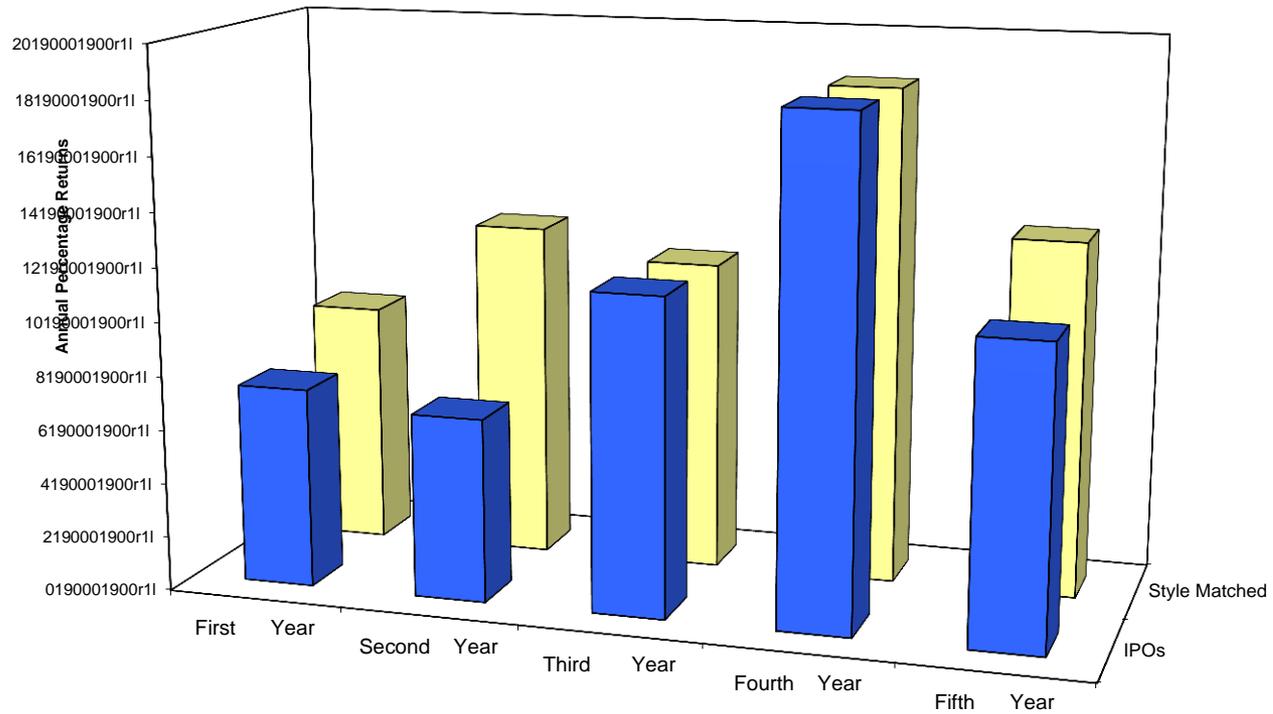
Should there be a separate market for small companies?

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.

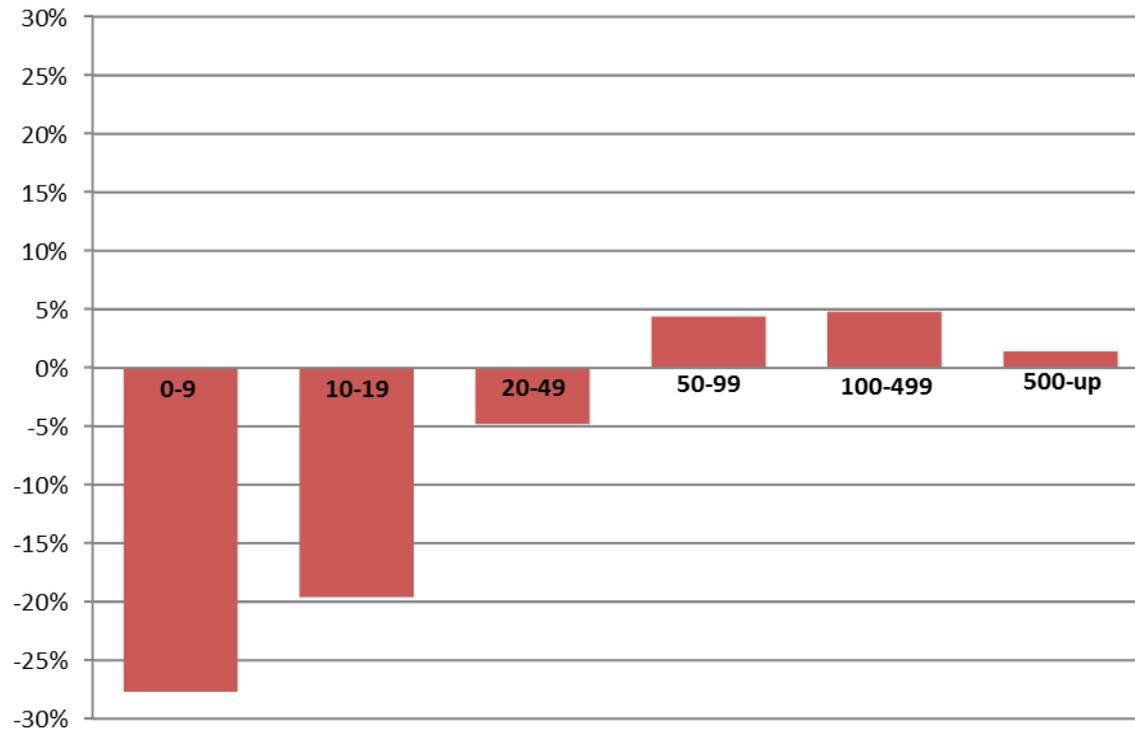
Buy-and-hold stock returns are skewed: there are some big winners, but most stocks underperform. This is especially true with young companies, where there is even greater right skewness.



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

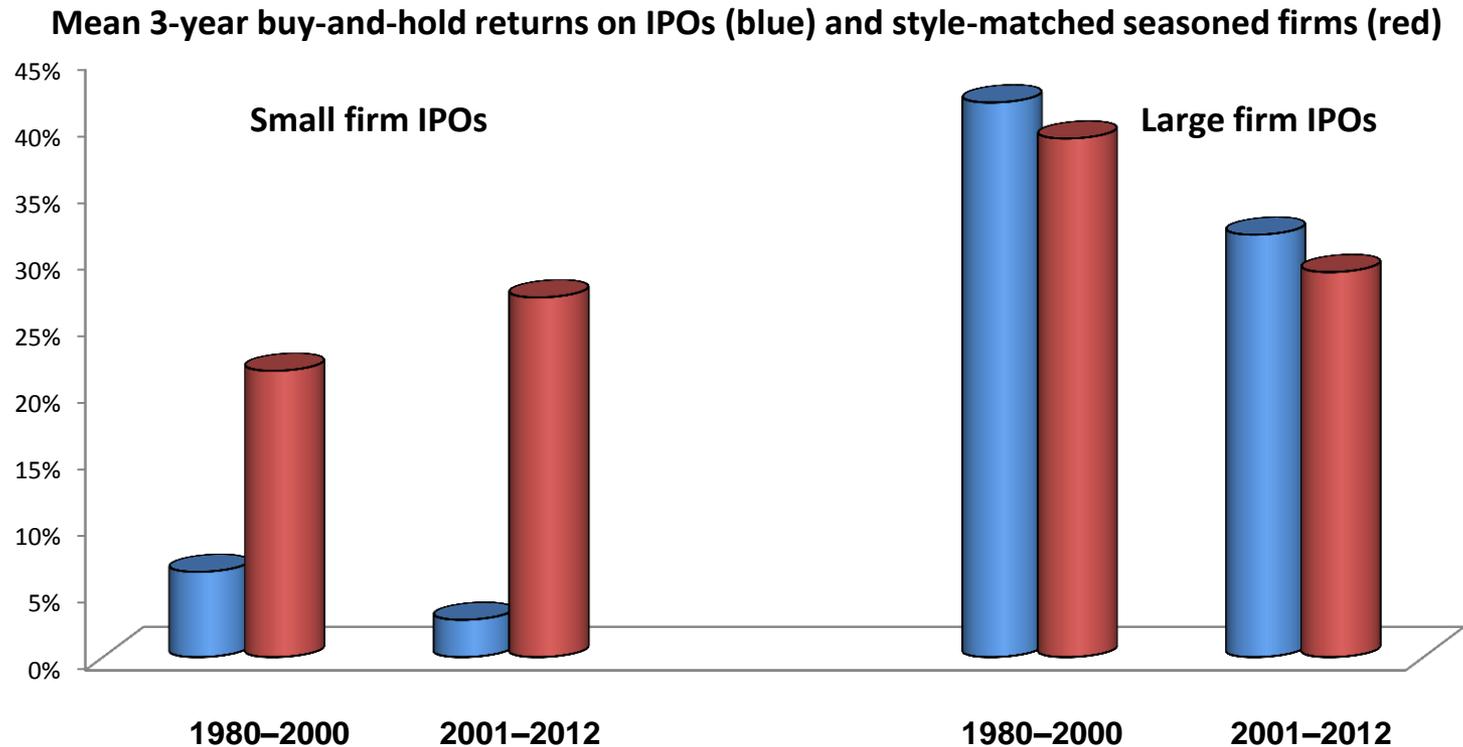
7,700 U.S. IPOs from 1980-2012. Style-adjusted returns exclude the opening day return
Style controls for market capitalization and book-to-market



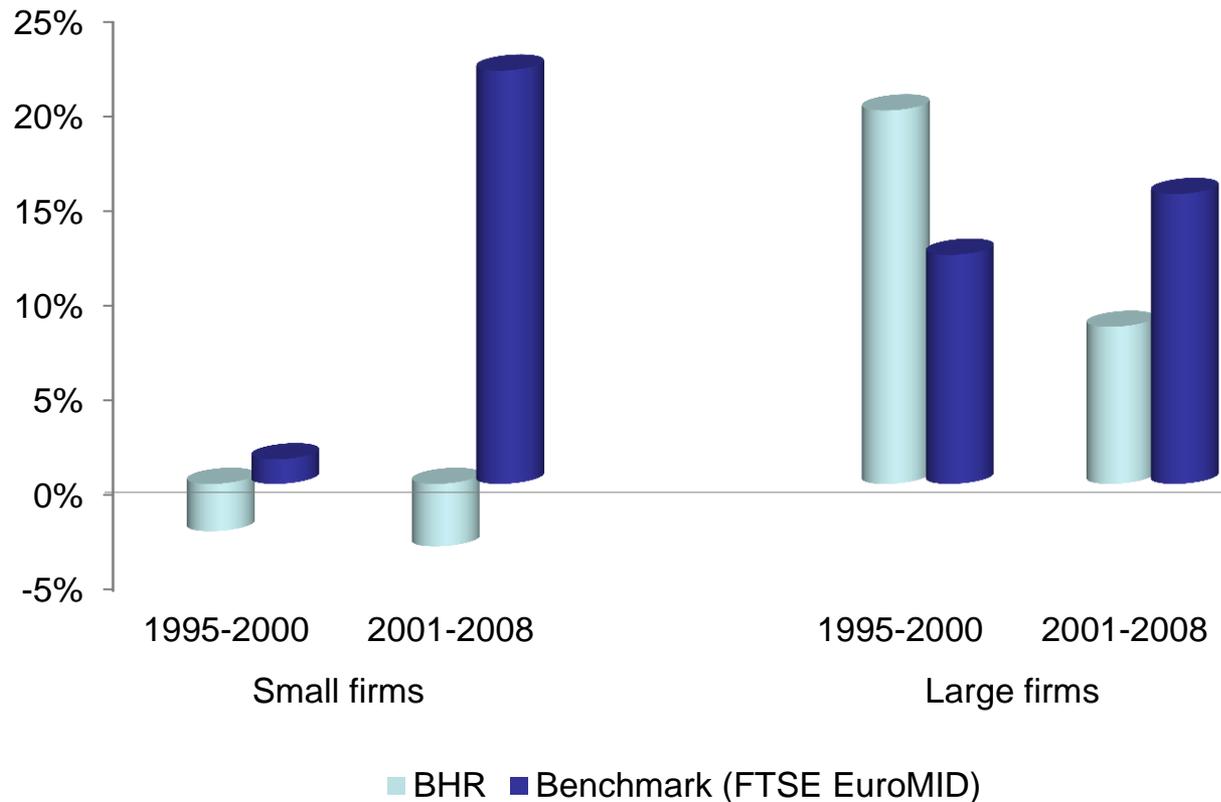
Annual Sales, \$millions (2005 purchasing power)

US small firm IPO returns have been disappointing

(\$60 million in pre-IPO annual sales cutoff, returns not including first-day return and ending in Dec. 2014)

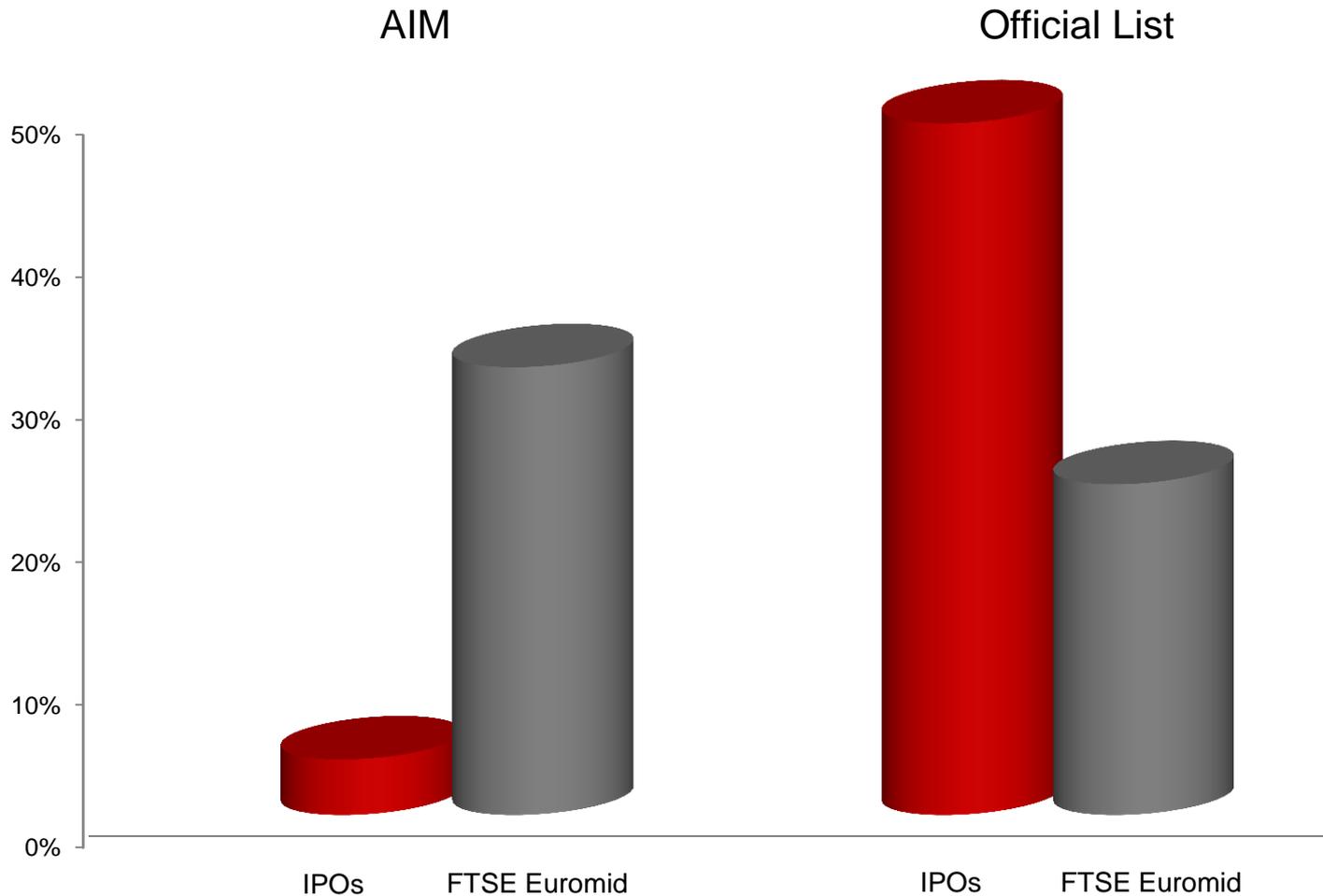


European small firm IPOs returns have also been low



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*

Markets for Small and Medium Enterprises (SMEs)

Small company IPOs rarely achieve success with large expansions of profits, disappointing investors

Efficient Allocation of Capital Benefits an Economy

Investors in publicly traded firms must have the power to remove managers that are not acting in the best interest of shareholders

U.S. firms in the S&P 500 paid \$375 billion in dividends in 2014, and about twice that in share repurchases (\$1 trillion total)

Russian firms paid out almost nothing

The market cap of Russia is less than that of Apple