

Internet Appendix for  
“The Deregulation of the Private Equity Markets  
and the Decline in IPOs”

Michael Ewens and Joan Farre-Mensa\*

March 8, 2018

---

\*Ewens: California Institute of Technology (mewens@caltech.edu); Farre-Mensa: Cornerstone Research (jfarre@cornerstone.com).

## A1 Brief Legislative history of NSMIA

The passage of a federal law is rarely a surprise, particular to those agents most affected. Thus, one concern about our identification strategy using the passage of the National Security Markets Improvement Act (NSMIA) as a “shock” is that the timing was anticipated by the agents in our analysis or in response to market trends. Anticipation could lead to delayed or sped-up actions by firms and funds, confounding the parallel trends assumption. This section addresses this concern by describing the time-line of NSMIA’s passage.

The changes made by NSMIA in 1996 were part of the deregulation discussion beginning as far back as 1958. In that year, SEC chairman J. Armstrong Sinclair publicly highlighted the negative consequences of the “blue sky laws” that NSMIA eventually addressed. The first public discussion about specific components of NSMIA emerged in a 1992 SEC report titled “Protecting Investors: A Half Century of Investment Company Regulation.” This report proposes changes to the Investment Company Act that closely mirror the eventual Title II of NSMIA. The Act became a bill only after major political change in the U.S. capitol. In 1994, the Republican Party won a majority in both the Senate and House of Representatives, bringing with them a new deregulation agenda. In March of 1995, a subcommittee of the Commerce Committee in the house chaired by Rep. Mark Fields (R, TX) held a series of three hearings on two laws: Capital Markets Deregulation (H.R. 2131) and Investment Company Amendment Acts (H.R. 1495). During these hearings, congressional representatives, SEC leadership and invited industry speakers each mention the long time that it had taken to get these laws to the floor of the House.<sup>1</sup> During these hearings, the committee chairman Rep. Fields predicted that H.R. 2131 would be on the president’s desk by the end of 1995. Instead, both bills failed to leave committee that year.

In early 1996, a new bill emerged in the same committee: NSMIA. Two of its major sections – Titles II and III – have many overlapping features of the previous H.R. 1495 and H.R. 2131, suggesting that the committee repackaged it into a new bill. In 1996, NSMIA passed relatively quickly through the House and Senate by large majorities. Comments by the bill’s architect show that passage was nonetheless challenging. During its passage on the House floor, Tom Billey (R, VA) noted that the legislation was “the result of a long and difficult process”, while its sponsor Rep. Fields recalled that its passage “was a long process.”<sup>2</sup> Overall, NSMIA’s emergence as a law mirrored the histories of other

---

<sup>1</sup>See Committee on Commerce (1995b) and Committee on Commerce (1995a)

<sup>2</sup>Rep. Tom Billey (VA) and Rep. Mark Fields (TX). “National Securities Market Act.” Congressional Record 142:137 (September 28, 1996) p. H12037-12047

major federal regulations: multiple iterations over several years. Similarly, we found no evidence that the late 1996 passage was a response to any changes in the private equity or venture capital markets. Instead, the industry sources for testimony and politicians references to beneficiaries suggest that the mutual fund industry was a major advocate for change.<sup>3</sup> Overall, the timing of NSMIA's passage does not appear to have been driven by the startups or their investors, while the specific date of its passage was relatively random within the narrow window of our study.

---

<sup>3</sup>In fact, our review of the congressional hearings in 1995 – Committee on Commerce (1995b) – found no evidence that lobbyists tied to either industry played an open role in crafting of NSMIA.

## References

Committee on Commerce, 1995a, *Capital Markets Deregulation and Liberalization Act of 1995 : hearings before the Subcommittee on Telecommunications and Finance of the Committee on Commerce, House of Representatives, One Hundred Fourth Congress, first session, on H.R. 2131, November 14, 1995* (U.S. G.P.O.).

———, 1995b, *The Investment Company Act Amendments of 1995 hearing before the Subcommittee on Telecommunications and Finance of the Committee on Commerce, House of Representatives, One Hundred Fourth Congress, first session, on H.R. 1495, October 31, 1995* (U.S. G.P.O.).

# A2 Figures and Tables

Figure A1: Probability of large financing round: late-stage vs. early-stage financings

The figure reports the coefficient estimates from the difference-in-difference estimator in Section 2. The dependent variable is an indicator that is equal to one if the startups financing is in the top quartile of size (real, 2009 dollars). The treatment variable is an indicator that is one if the financing is late-stage. The coefficients presented here are the interactions between this treatment variable that the time dummies for six month intervals from 1994 to 1998. The plot presents the point estimates and 95% confidence intervals where the standard errors are clustered at the startup.

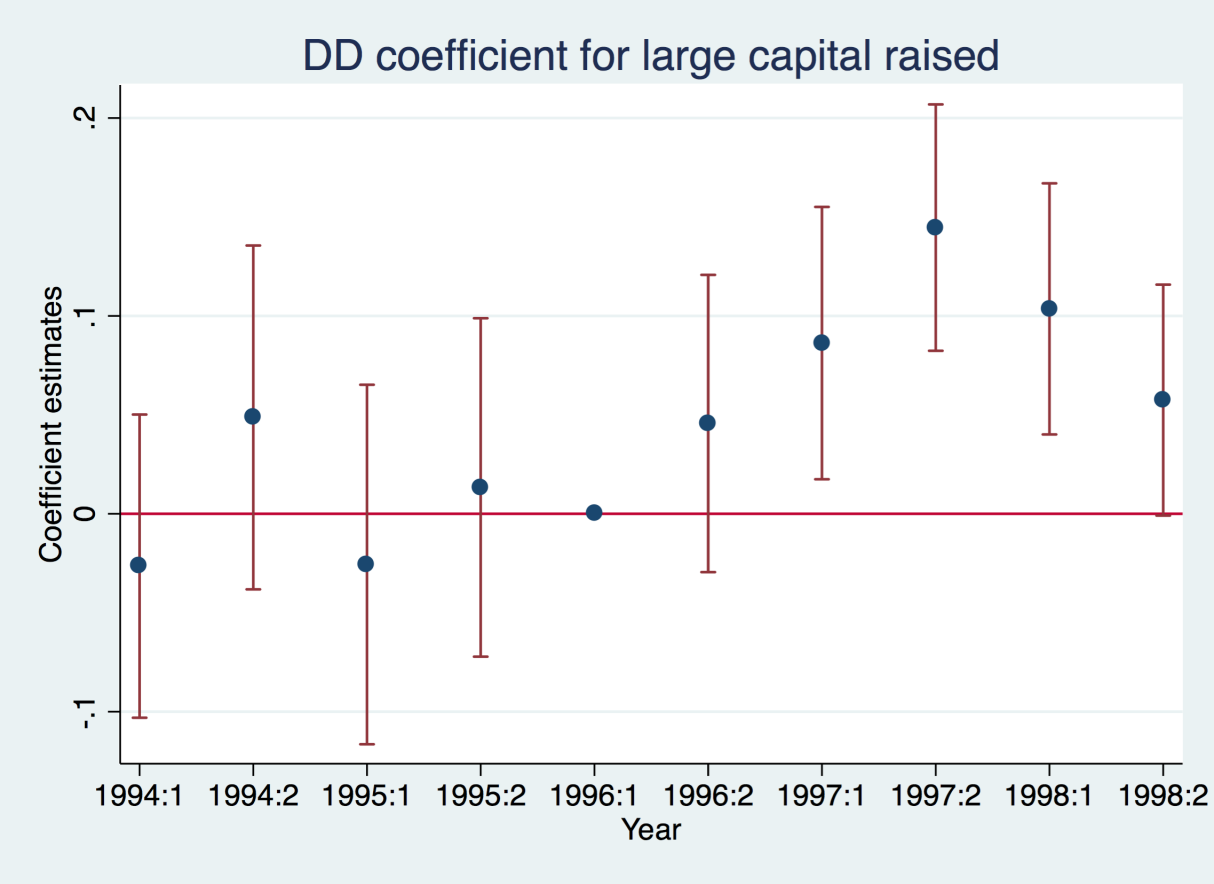


Figure A2: Exit status by first VC financing year, 10 years after first financing: IPO, acquisitions, failures and still private

The figure reports the fraction of firms that have exited or remain private for each first financing year cohort. Startups that fail to raise a new round of capital five years after their last observed financing (as of 2016Q4) are set to failures. The exit state is measured here ten years after the firm's first financing event for each cohort (e.g. for 1998 firms, we ask what fraction exited in what way in 2008). Sample includes all startups described in Section 1.

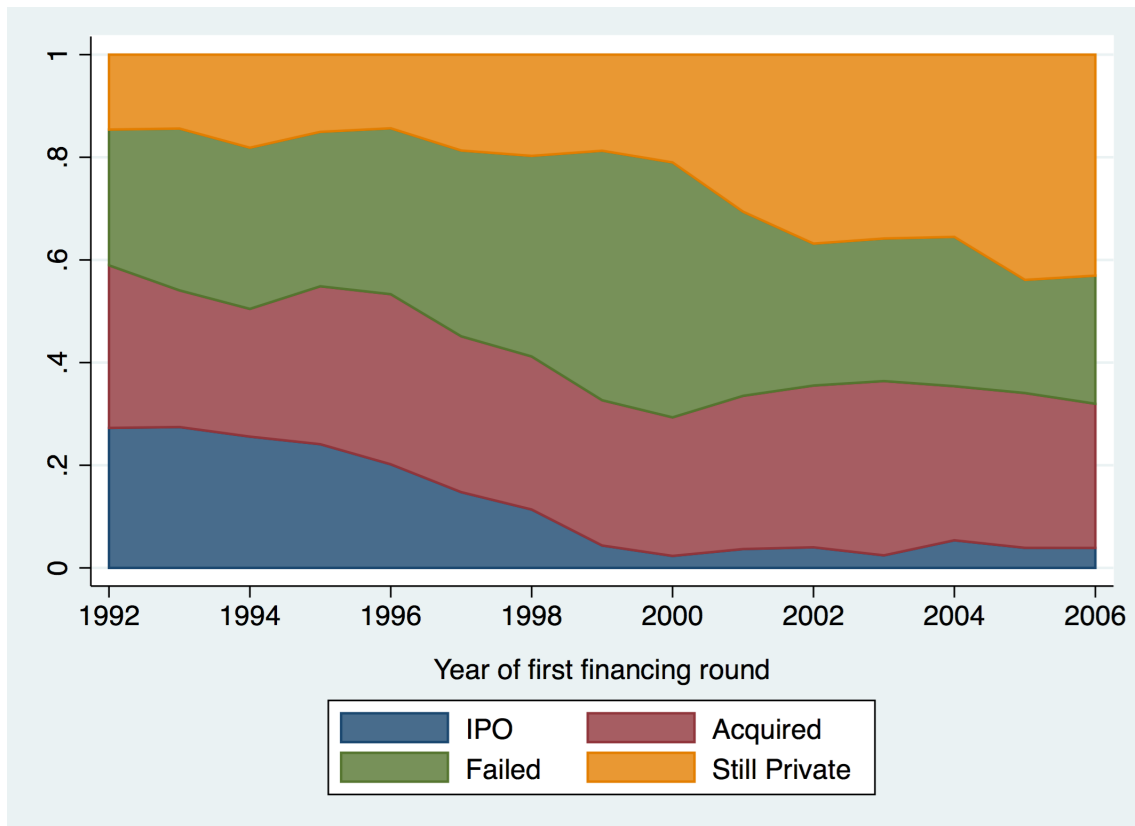


Figure A3: Number of firms raising with at least \$100m in sales seven years after first financing: public vs. private

The figure reports the number of startups that had at least \$100m in sales seven years after their first round of financing (measured using VentureSource, NETs and Compustat), split into two groups. “Private” is the count of firms that satisfy this criteria that were still private (i.e. no IPO, failure or acquisition) seven years after their first financing. “Public” are the set of firms that went public within seven years of their first financing event. Sales are measured either as a private firm or public firm, seven years after first financing.

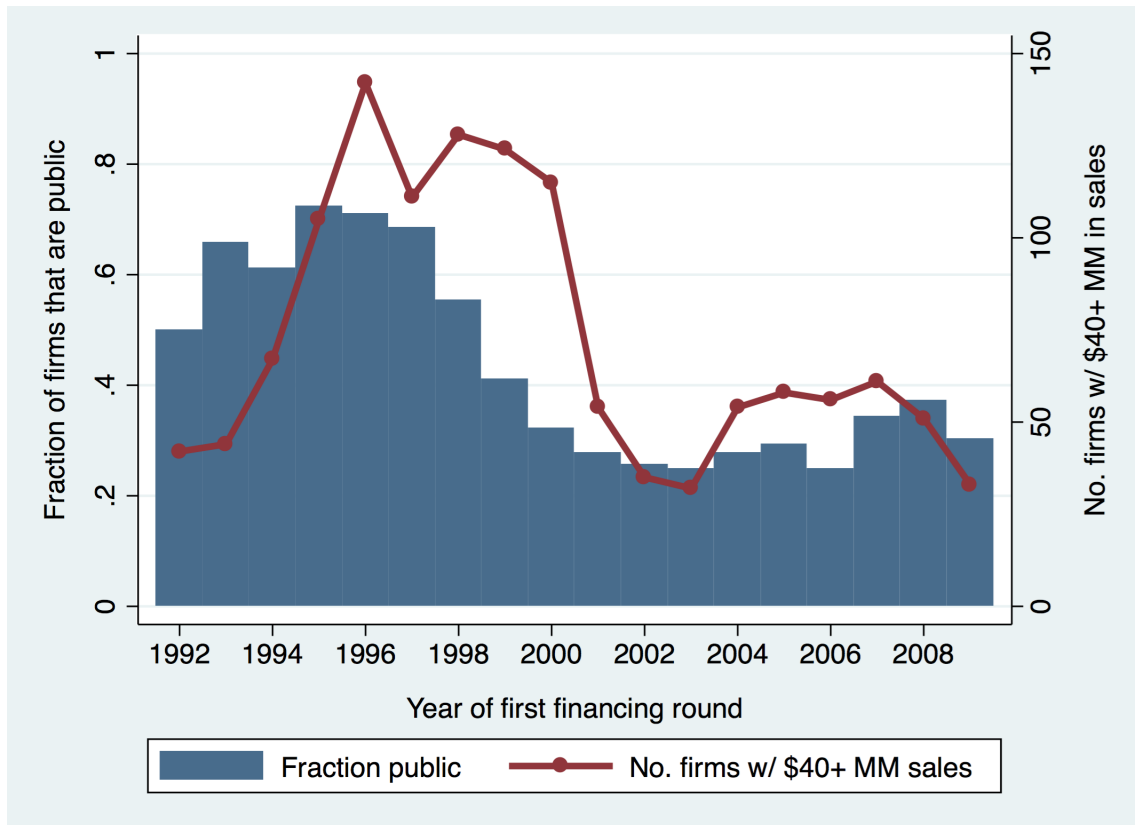


Figure A4: Year fixed effect estimates for relationship between seven year total sales and IPO probability

The figure plots the coefficient estimates (and their 95% confidence intervals) from the follow regression:

$$Y_{7it} = \beta_t \times \ln S_{7it} + \gamma_t + \eta_s + \theta_j + \varepsilon_{it}$$

where  $i$  indexes firms and  $t$  indexes the year the firm raised its first funding round.  $Y_7$  is an indicator equal to one if the firm went public during the seven years following its first funding round;  $S_7$  is log of total sales for the firm during these seven years; and  $\gamma_t$ ,  $\eta_s$ , and  $\theta_j$  capture first-funding year, state, and industry fixed effects, respectively. The dependent variable is one if the startup had an IPO within 7 years of its first financing event. Robust standard errors are used to construct the 95% confidence intervals.

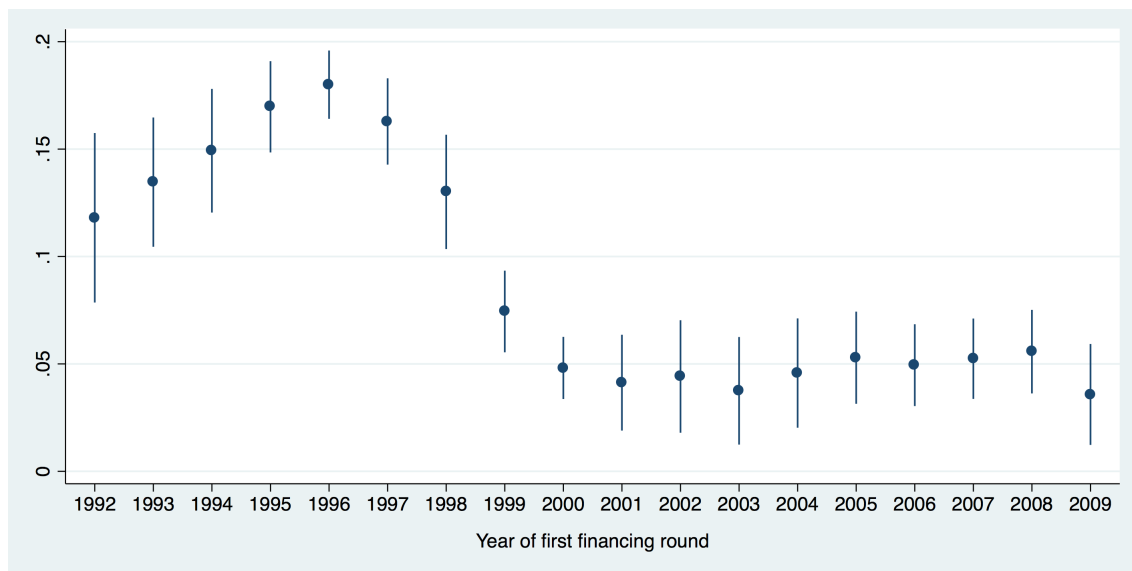




Figure A5: Founder equity three years after first financing

The figure reports the average equity stakes held by non-investors – founders and holders of options – three years after the first round of VC financing. To compute this equity stake, we require the premoney valuation  $V$  and capital raised  $K$  in the financing. The founders are assumed to have  $1 - \frac{K}{K+V}$  after the financing, where each new financing event dilutes their equity stake. As is typical in these calculations, we assume common equity so this is an upper bound on the founders' equity position.

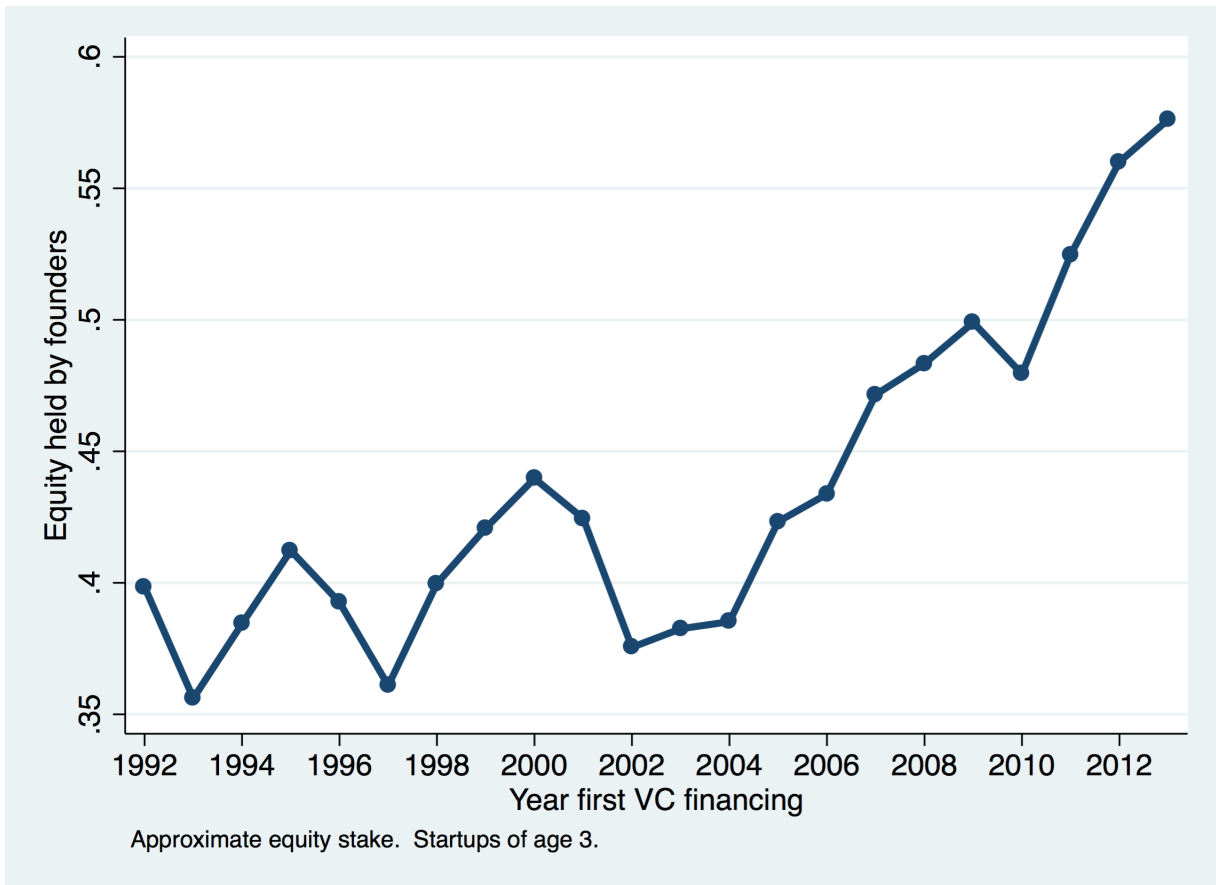


Table A1: Placebo tests for large financing probabilities post-NSMIA

Notes: The table repeats the main “big financing round” (Table 4) after moving the “treatment” quarter back two years (Columns 2) and back one year (Column 3). Specifications are otherwise identical to that reported in Column 1 of Table 4. Column 2 here reports the four year window 1992–1996 rather than the 1994–1998 in the original specification (the sample is 1993–1997 for Column 3). Standard errors clustered at the startup are reported in parentheses. “FE” are all the fixed effects reported in Table 4. Significance: \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

	Big financing rounds?		
	Original (1)	Post > Oct. 1994 (2)	Post > Oct. 1993 (3)
Late stage X Post	0.062** (0.026)		
Post (Oct. 1994) X Late-stage		0.028 (0.024)	
Post (Oct. 1993) X Late-stage			0.017 (0.032)
Late stage round	0.155*** (0.020)	0.147*** (0.026)	0.157*** (0.026)
Constant	0.392** (0.195)	0.262*** (0.028)	0.267*** (0.031)
Financings	8006	5373	4555
$R^2$	0.079	0.052	0.050
Sample	1994–1998	1992–1996	1993–1997
FE?	Y	Y	Y