

Merger-Driven Listing Dynamics

Internet Appendix

B. Espen Eckbo and Markus Lithell

Tuck School of Business at Dartmouth and Norwegian School of Economics (NHH)

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A Supplemental evidence on U.S. listings

B Supplemental evidence on the U.S. listing gap

C Supplemental evidence on international listing peaks

D Supplemental evidence on the economic contribution of U.S. listed firms

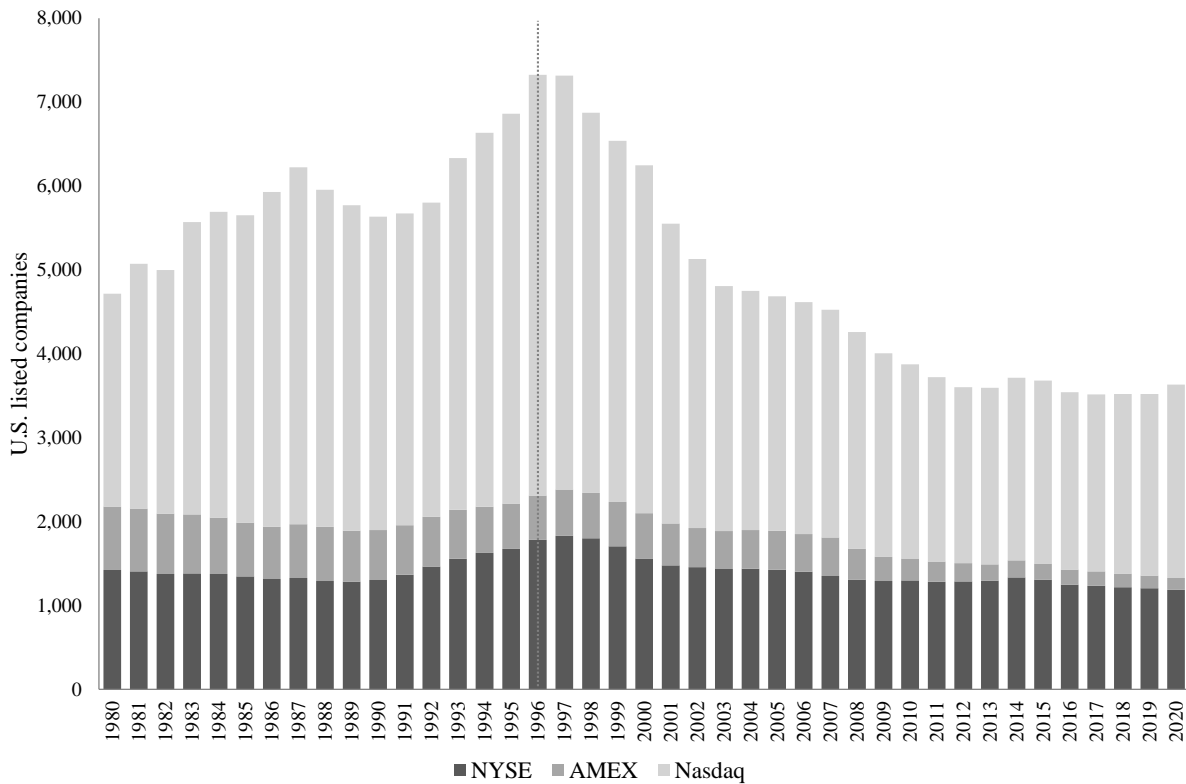
A Supplemental evidence on U.S. listings

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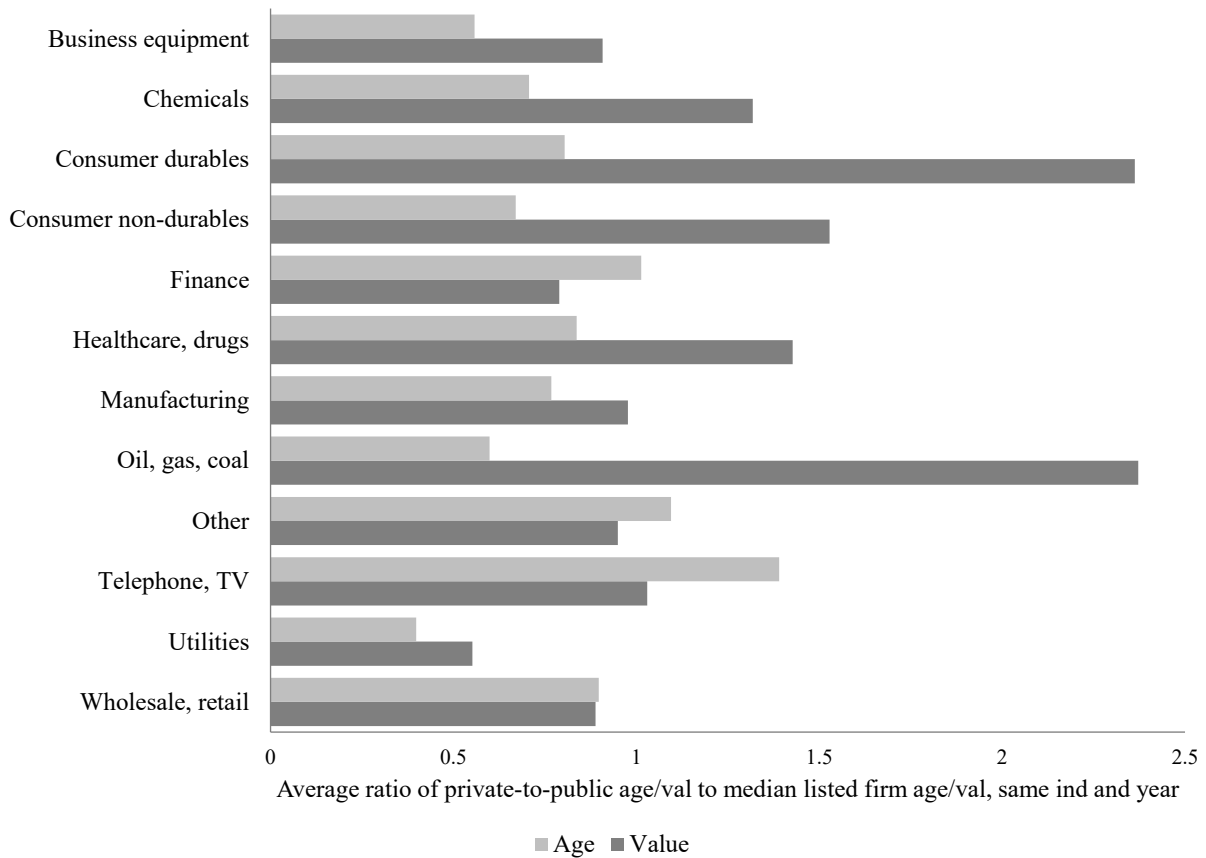
Internet Appendix Figure 1: Listing count by exchange and year

This figure plots the count of U.S. listed firms on NYSE, AMEX, and Nasdaq, represented as stacked bars. Counts are recorded annually at year-end, 1980–2020. The vertical dotted line in 1996 marks the year of the U.S. listing peak. Data are from CRSP.



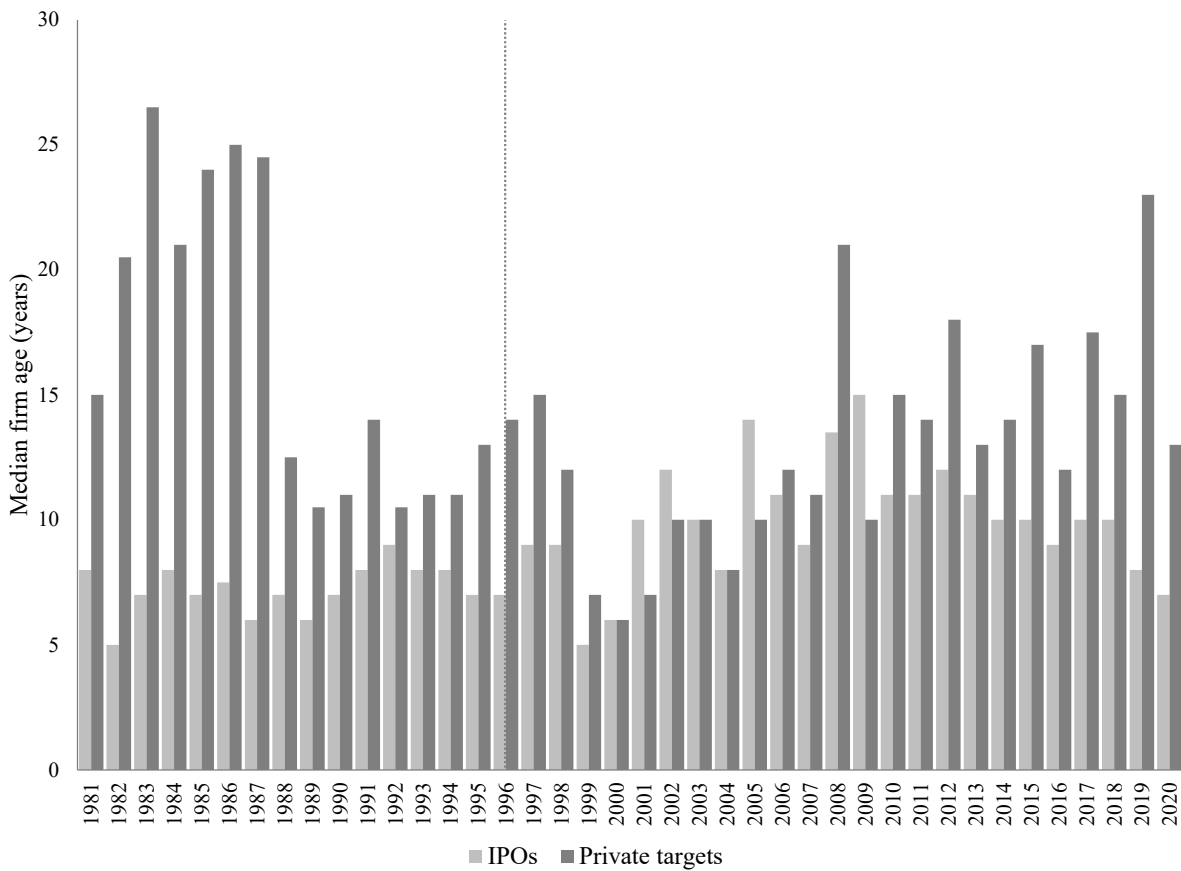
Internet Appendix Figure 2: Relative size of private targets and listed firms by industry

This figure shows the relative age and value of private-to-public targets compared to listed firms. The age (in years) or value (deal value) of each private-to-public target is first divided by the median age or value (market capitalization) of listed firms in the same Fama-French 12 industry and year. These ratios are then averaged by industry and plotted here. Sample period is 12/31/1980–12/31/2020. Data are from CRSP, SDC, Jay Ritter, and Capital IQ.



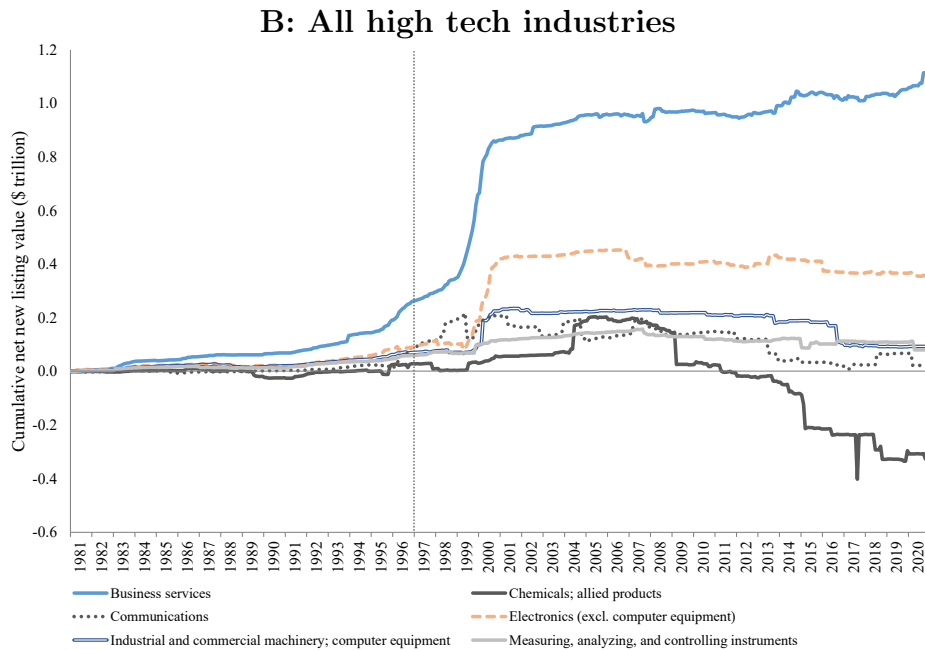
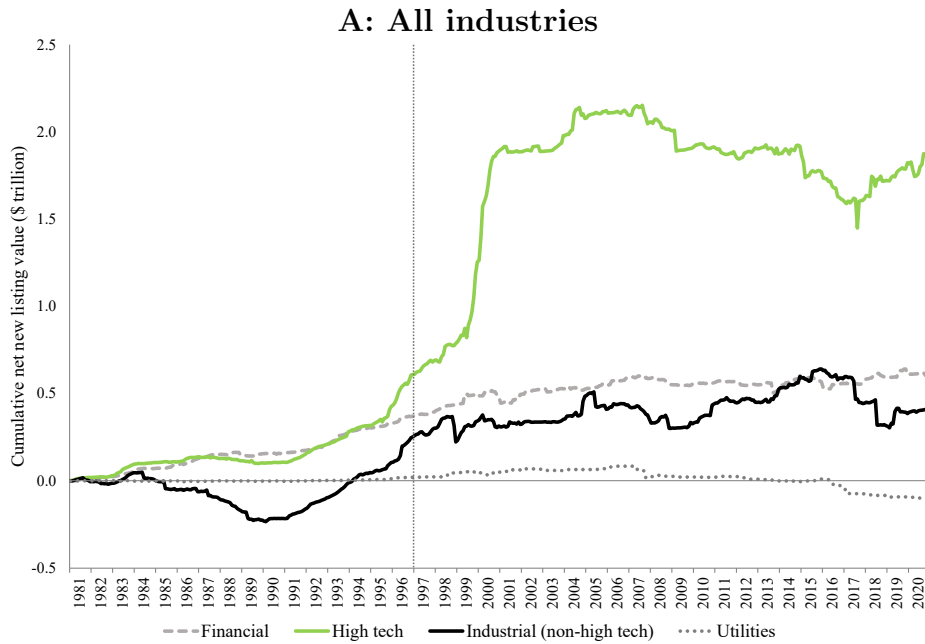
Internet Appendix Figure 3: Age of private targets and IPO firms by year

This figure plots the annual median age (since incorporation) of private-to-public targets at acquisition and IPO firms at listing. Due to data limitations, only U.S. private targets are included. The vertical dotted line in 1996 marks the year of the U.S. listing peak. Sample period is 12/31/1980–12/31/2020. Data are from CRSP, SDC, Jay Ritter, and Capital IQ.



Internet Appendix Figure 4: Cumulative net inflows of listing value by industry

This graph breaks down the cumulative net new listing value in Figure 4 by industry according to SIC codes. In Panel A, firms are divided into four categories. Financial firms are those with SIC codes 6000-6999 and utilities those with 4900-4999. High tech firms are defined by the American Electronic Association, as in Eckbo, Makaew, and Thorburn (2018). Remaining non-government firms are classified as industrial (non-high tech). Panel B further breaks down high tech firms by two-digit SIC codes. All values are inflation-adjusted to 2020 USD. The vertical dotted line indicates the date of the U.S. listing peak.



B Supplemental evidence on the U.S. listing gap

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- Internet Appendix Table 1: Listing gap estimation using a U.S. or non-U.S. dummy
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Internet Appendix Table 1: Listing gap estimation using a U.S. or non-U.S. dummy

The table reports coefficient estimates from the following regression specification:

$$\ln(Y_{it}) = \alpha + \delta_i + \tau_t + \beta D_{(N)US} + \Gamma(D_{(N)US} \times \tau_t) + \lambda X_{it} + \epsilon_{it}, \quad t = 1990, \dots, 2020, \quad i = 1, \dots, N,$$

where the dependent variable for country i in year t (Y_{it}) is the actual listing count (as in G1) per capita. G1 is defined in Eq. (10). δ_i and τ_t are country and year fixed effects, respectively. Country fixed effects are included in columns (3)–(4) below. $D_{(N)US}$ is a U.S. dummy variable in columns (1) and (3) with a value of one if the country is the U.S. and zero otherwise, and a non-U.S. dummy variable in columns (2) and (4) taking a value of zero if U.S. and one otherwise. X_{it} is a set of country-specific control variables (anti-self-dealing index, log(GDP/capita) and GDP growth) in year t . The regressions are run on the full sample of 74 countries. U.S. listing count data are from CRSP, foreign listing count data are from WDI, WFE, CEIC, and exchange homepages, and merger data are from SDC. Constant included but not shown. Standard errors are country-clustered (not shown). *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels.

Regressors	U.S. dummy		Non-U.S. dummy		U.S. dummy		Non-U.S. dummy	
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
Anti-self-dealing index	1.375***	1.375***			Continued from left			
Log(GDP/capita)	0.634***	0.634***	0.299**	0.299**	1991 dummy	-0.039	0.004	-0.013
GDP growth	-0.003	-0.003	-0.001	-0.001	1992 dummy	-0.052	0.016*	0.005
(Non-)U.S. dummy	-0.401**	0.401**			1993 dummy	-0.079	0.083***	-0.001
(Non-)U.S. 1991 dummy	0.043	-0.043	0.012	-0.012	1994 dummy	0.074	0.108***	0.045
(Non-)U.S. 1992 dummy	0.068	-0.068	0.002	-0.002	1995 dummy	0.051	0.119***	0.057
(Non-)U.S. 1993 dummy	0.162*	-0.162*	0.080	-0.080	1996 dummy	-0.016	0.166***	0.099
(Non-)U.S. 1994 dummy	0.034	-0.034	0.063	-0.063	1997 dummy	0.054	0.140***	0.156***
(Non-)U.S. 1995 dummy	0.069	-0.069	0.069	-0.069	1998 dummy	0.096	0.049***	0.073***
(Non-)U.S. 1996 dummy	0.182	-0.182	0.076	-0.076	1999 dummy	0.203	-0.030**	0.004
(Non-)U.S. 1997 dummy	0.086	-0.086	-0.009	0.009	2000 dummy	0.253*	-0.101***	0.310***
(Non-)U.S. 1998 dummy	-0.047	0.047	-0.131	0.131	2001 dummy	0.269*	-0.234***	0.268***
(Non-)U.S. 1999 dummy	-0.232*	0.232*	-0.277***	0.277***	2002 dummy	0.233*	-0.323***	0.227**
(Non-)U.S. 2000 dummy	-0.355**	0.355**	-0.369***	0.369***	2003 dummy	0.176	-0.404***	0.191*
(Non-)U.S. 2001 dummy	-0.502***	0.502***	-0.456***	0.456***	2004 dummy	0.046	-0.439***	0.148
(Non-)U.S. 2002 dummy	-0.556***	0.556***	-0.504***	0.504***	2005 dummy	-0.026	-0.478***	-0.384***
(Non-)U.S. 2003 dummy	-0.580***	0.580***	-0.547***	0.547***	2006 dummy	-0.094	-0.515***	-0.415***
(Non-)U.S. 2004 dummy	-0.485***	0.485***	-0.532***	0.532***	2007 dummy	-0.120	-0.552***	-0.444***
(Non-)U.S. 2005 dummy	-0.452***	0.452***	-0.511***	0.511***	2008 dummy	-0.195	-0.615***	-0.477***
(Non-)U.S. 2006 dummy	-0.421***	0.421***	-0.491***	0.491***	2009 dummy	-0.240	-0.669***	-0.604***
(Non-)U.S. 2007 dummy	-0.433***	0.433***	-0.506***	0.506***	2010 dummy	-0.256*	-0.707***	-0.646***
(Non-)U.S. 2008 dummy	-0.421***	0.421***	-0.529***	0.529***	2011 dummy	-0.311**	-0.758***	-0.694***
(Non-)U.S. 2009 dummy	-0.429***	0.429***	-0.569***	0.569***	2012 dummy	-0.353**	-0.802***	-0.736***
(Non-)U.S. 2010 dummy	-0.451***	0.451***	-0.585***	0.585***	2013 dummy	-0.383**	-0.819***	-0.749***
(Non-)U.S. 2011 dummy	-0.447***	0.447***	-0.617***	0.617***	2014 dummy	-0.417**	-0.805***	-0.729***
(Non-)U.S. 2012 dummy	-0.448***	0.448***	-0.631***	0.631***	2015 dummy	-0.373**	-0.837***	-0.754***
(Non-)U.S. 2013 dummy	-0.436***	0.436***	-0.611***	0.611***	2016 dummy	-0.328**	-0.895***	-0.804***
(Non-)U.S. 2014 dummy	-0.387**	0.387**	-0.577***	0.577***	2017 dummy	-0.385**	-0.916***	-0.821***
(Non-)U.S. 2015 dummy	-0.464***	0.464***	-0.638***	0.638***	2018 dummy	-0.420**	-0.932***	-0.832***
(Non-)U.S. 2016 dummy	-0.567***	0.567***	-0.686***	0.686***	2019 dummy	-0.420**	-0.950***	-0.842***
(Non-)U.S. 2017 dummy	-0.531***	0.531***	-0.672***	0.672***	2020 dummy	-0.409**	-0.915***	-0.807***
(Non-)U.S. 2018 dummy	-0.511***	0.511***	-0.667***	0.667***	Year FE	Yes	Yes	Yes
(Non-)U.S. 2019 dummy	-0.530***	0.530***	-0.657***	0.657***	Country FE	No	No	Yes
(Non-)U.S. 2020 dummy	-0.506***	0.506***	-0.636***	0.636***	R^2	0.490	0.490	0.933
Continued on right					N	1,775	1,775	2,057

Internet Appendix Table 2: Listing gap estimates with an unscaled dependent variable

The table reports coefficient estimates from the following regression specification:

$$\ln(L_{it}) = \alpha + \delta_i + \tau_t + \beta D_{US} + \Gamma(D_{US} \times \tau_t) + \lambda K_{it} + \epsilon_{it}, \quad t = 1990, \dots, 2020, \quad i = 1, \dots, N,$$

where the dependent variable for country i in year t (L_{it}) varies by column: unadjusted listing count (G1) (1–2, 7–8), public-to-public merger-adjusted listing count (G2) (3–4, 9–10), and all-merger-adjusted listing count (G3) (5–6, 11–12). G1–G3 are defined in Eq. (10). δ_i and τ_t are country and year fixed effects, respectively. Country fixed effects are only included in the even-numbered columns below. D_{US} is a dummy variable taking a value of one if the country is the U.S. and zero otherwise, and K_{it} is a set of country-specific control variables (anti-self-dealing index, log(GDP), log(population) and GDP growth) in year t . Note two differences with the regressions in Table 3 and Table 4: the dependent variable L_{it} is not scaled like Y_{it} , and the control variables K_{it} are not the same as X_{it} . The regressions are run on the full sample of 74 countries in columns (1)–(6) and 33 advanced economies in columns (7)–(12). U.S. listing count data are from CRSP, foreign listing count data are from WDI, WFE, CEIC, and exchange homepages, and merger data are from SDC. A constant is included but not shown. Parentheses display country-clustered standard errors. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels.

Regressors	Sample: All economies						Sample: Advanced economies					
	L_{it} : Unadjusted listing count (G1) (1)	L_{it} : Unadjusted listing count (G1) (2)	L_{it} : Pub-to-pub merger-adj listing count (G2) (3)	L_{it} : Pub-to-pub merger-adj listing count (G2) (4)	L_{it} : All-merger-adj listing count (G3) (5)	L_{it} : All-merger-adj listing count (G3) (6)	L_{it} : Unadjusted listing count (G1) (7)	L_{it} : Unadjusted listing count (G1) (8)	L_{it} : Pub-to-pub merger-adj listing count (G2) (9)	L_{it} : Pub-to-pub merger-adj listing count (G2) (10)	L_{it} : All-merger-adj listing count (G3) (11)	L_{it} : All-merger-adj listing count (G3) (12)
Log(Population)	0.240*** (0.090)	0.114 (0.295)	0.225** (0.090)	0.088 (0.295)	0.169* (0.091)	0.030 (0.318)	0.198 (0.255)	0.982 (0.586)	0.184 (0.253)	0.988 (0.617)	0.074 (0.240)	1.052 (0.729)
Log(GDP)	0.451*** (0.097)	0.285** (0.130)	0.474*** (0.097)	0.267** (0.131)	0.553*** (0.097)	0.128 (0.136)	0.623** (0.227)	-0.108 (0.176)	0.651*** (0.227)	-0.176 (0.182)	0.787*** (0.225)	-0.342* (0.183)
GDP growth	-0.005** (0.002)	-0.001 (0.001)	-0.006** (0.002)	-0.001 (0.001)	-0.007*** (0.002)	-0.000 (0.001)	-0.004 (0.005)	0.001 (0.002)	-0.004 (0.005)	0.002 (0.002)	-0.005 (0.005)	0.003* (0.002)
Anti-self-dealing index	1.631*** (0.395)	1.672*** (0.393)	1.672*** (0.393)	1.672*** (0.393)	1.717*** (0.388)	2.083*** (0.504)	2.083*** (0.504)	2.109*** (0.498)	2.109*** (0.498)	2.109*** (0.498)	2.144*** (0.468)	2.144*** (0.468)
U.S dummy	0.493 (0.305)	0.493 (0.305)	0.439 (0.307)	0.274 (0.307)	0.439 (0.306)	0.029 (0.359)	0.029 (0.359)	-0.030 (0.360)	-0.030 (0.360)	-0.165 (0.352)	-0.165 (0.352)	-0.165 (0.352)
U.S 1991 dummy	0.069 (0.054)	0.012 (0.048)	0.084 (0.053)	0.019 (0.047)	0.107** (0.051)	0.015 (0.044)	-0.005 (0.060)	-0.073 (0.046)	0.009 (0.060)	-0.072 (0.046)	0.034 (0.057)	-0.079 (0.048)
U.S 1992 dummy	0.088 (0.057)	0.003 (0.049)	0.118** (0.057)	0.025 (0.048)	0.170*** (0.055)	0.048 (0.047)	0.038 (0.067)	-0.050 (0.056)	0.067 (0.067)	-0.037 (0.055)	0.119* (0.064)	-0.026 (0.055)
U.S 1993 dummy	0.216** (0.085)	0.081 (0.084)	0.261*** (0.085)	0.115 (0.083)	0.345*** (0.083)	0.169** (0.082)	0.064 (0.114)	-0.011 (0.068)	0.106 (0.115)	0.014 (0.068)	0.187* (0.109)	0.054 (0.068)
U.S 1994 dummy	0.149* (0.089)	0.078 (0.088)	0.214** (0.085)	0.133 (0.086)	0.299*** (0.086)	0.198** (0.084)	0.044 (0.081)	0.013 (0.081)	0.104 (0.081)	0.063 (0.085)	0.198** (0.076)	0.137 (0.082)
U.S 1995 dummy	0.149* (0.088)	0.080 (0.090)	0.230** (0.089)	0.157* (0.089)	0.346*** (0.090)	0.244*** (0.089)	0.118 (0.080)	0.035 (0.087)	0.200** (0.079)	0.107 (0.086)	0.330*** (0.079)	0.204** (0.084)
U.S 1996 dummy	0.297*** (0.096)	0.088 (0.096)	0.408*** (0.097)	0.186* (0.095)	0.561*** (0.099)	0.294*** (0.095)	0.176 (0.116)	-0.027 (0.101)	0.283** (0.118)	0.059 (0.101)	0.427*** (0.118)	0.160 (0.101)
U.S 1997 dummy	0.228** (0.106)	0.006 (0.095)	0.375*** (0.108)	0.138 (0.094)	0.560*** (0.111)	0.281*** (0.095)	0.112 (0.157)	-0.083 (0.105)	0.253 (0.160)	0.038 (0.105)	0.419** (0.158)	0.169 (0.108)
U.S 1998 dummy	0.120 (0.115)	-0.109 (0.096)	0.313*** (0.116)	0.069 (0.095)	0.531*** (0.121)	0.265*** (0.095)	-0.055 (0.149)	-0.198* (0.100)	0.130 (0.153)	-0.023 (0.101)	0.322** (0.155)	0.160 (0.106)
U.S 1999 dummy	-0.050 (0.118)	-0.258*** (0.093)	0.212* (0.125)	-0.019 (0.093)	0.445*** (0.131)	0.209** (0.094)	-0.191 (0.141)	-0.300*** (0.102)	0.024 (0.145)	-0.080 (0.102)	0.220 (0.149)	0.130 (0.108)

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Internet Appendix Table 2: Continued (page 2 of 2)

Regressors	Sample: All economies					Sample: Advanced economies					
	L_{it} : Unadjusted listing count (G1) (1)	L_{it} : Pub-to-pub merger-adj listing count (G2) (2)	L_{it} : Pub-to-pub merger-adj listing count (G2) (3)	L_{it} : Pub-to-pub merger-adj listing count (G2) (4)	L_{it} : All-merger-adj listing count (G3) (5)	L_{it} : Unadjusted listing count (G1) (7)	L_{it} : Unadjusted listing count (G1) (8)	L_{it} : Pub-to-pub merger-adj listing count (G2) (9)	L_{it} : Pub-to-pub merger-adj listing count (G2) (10)	L_{it} : All-merger-adj listing count (G3) (11)	L_{it} : All-merger-adj listing count (G3) (12)
U.S 2000 dummy	-0.158 (0.122)	-0.350*** (0.093)	0.146 (0.128)	-0.071 (0.093)	0.390*** (0.135)	-0.343** (0.168)	-0.409*** (0.106)	-0.083 (0.172)	-0.148 (0.106)	0.115 (0.174)	0.078 (0.113)
U.S 2001 dummy	-0.296** (0.124)	-0.437*** (0.095)	0.057 (0.130)	-0.108 (0.094)	0.303** (0.136)	-0.491*** (0.156)	-0.514*** (0.115)	-0.186 (0.160)	-0.200* (0.114)	0.006 (0.164)	0.039 (0.120)
U.S 2002 dummy	-0.363*** (0.122)	-0.484*** (0.099)	-0.014 (0.124)	-0.140 (0.099)	0.238* (0.131)	-0.550*** (0.128)	-0.567*** (0.121)	-0.220 (0.131)	-0.225* (0.120)	-0.024 (0.140)	0.023 (0.124)
U.S 2003 dummy	-0.430*** (0.116)	-0.527*** (0.102)	-0.050 (0.117)	-0.154 (0.101)	0.207** (0.122)	-0.556*** (0.117)	-0.634*** (0.127)	-0.196 (0.118)	-0.265** (0.126)	0.013 (0.128)	-0.024 (0.128)
U.S 2004 dummy	-0.368*** (0.119)	-0.512*** (0.105)	0.019 (0.118)	-0.128 (0.104)	0.296** (0.124)	-0.437*** (0.150)	-0.661*** (0.129)	-0.104 (0.141)	-0.282** (0.127)	0.127 (0.146)	-0.059 (0.127)
U.S 2005 dummy	-0.312** (0.124)	-0.497*** (0.109)	0.097 (0.125)	-0.098 (0.107)	0.384*** (0.131)	-0.399** (0.171)	-0.619*** (0.136)	-0.004 (0.173)	-0.238* (0.133)	0.233 (0.174)	-0.032 (0.132)
U.S 2006 dummy	-0.295** (0.127)	-0.483*** (0.111)	0.127 (0.128)	-0.071 (0.109)	0.409*** (0.135)	-0.376** (0.176)	-0.610*** (0.136)	0.031 (0.179)	-0.219 (0.133)	0.254 (0.182)	-0.030 (0.131)
U.S 2007 dummy	-0.346*** (0.126)	-0.503*** (0.116)	0.086 (0.127)	-0.084 (0.114)	0.368*** (0.133)	-0.415** (0.168)	-0.682*** (0.135)	0.002 (0.169)	-0.282** (0.132)	0.222 (0.174)	-0.108 (0.129)
U.S 2008 dummy	-0.347*** (0.126)	-0.534*** (0.120)	0.108 (0.127)	-0.097 (0.119)	0.400*** (0.133)	-0.407** (0.184)	-0.750*** (0.138)	0.032 (0.186)	-0.339** (0.135)	0.259 (0.191)	-0.191 (0.131)
U.S 2009 dummy	-0.318** (0.135)	-0.572*** (0.124)	0.163 (0.138)	-0.120 (0.122)	0.468*** (0.146)	-0.441* (0.222)	-0.791*** (0.143)	0.016 (0.226)	-0.370** (0.137)	0.233 (0.227)	-0.245* (0.134)
U.S 2010 dummy	-0.377*** (0.128)	-0.592*** (0.124)	0.113 (0.130)	-0.125 (0.123)	0.400*** (0.138)	-0.471** (0.197)	-0.786*** (0.145)	-0.005 (0.201)	-0.347** (0.140)	0.192 (0.205)	-0.223 (0.136)
U.S 2011 dummy	-0.391*** (0.129)	-0.628*** (0.128)	0.109 (0.130)	-0.149 (0.127)	0.396*** (0.137)	-0.472** (0.191)	-0.807*** (0.150)	0.004 (0.193)	-0.359** (0.145)	0.195 (0.198)	-0.244* (0.141)
U.S 2012 dummy	-0.359** (0.136)	-0.642*** (0.131)	0.160 (0.138)	-0.151 (0.129)	0.453*** (0.146)	-0.474** (0.224)	-0.822*** (0.155)	0.017 (0.227)	-0.365** (0.149)	0.201 (0.227)	-0.268* (0.145)
U.S 2013 dummy	-0.360** (0.135)	-0.626*** (0.133)	0.162 (0.136)	-0.129 (0.130)	0.439*** (0.144)	-0.466** (0.204)	-0.781*** (0.160)	0.025 (0.206)	-0.316** (0.155)	0.185 (0.208)	-0.225 (0.150)
U.S 2014 dummy	-0.308** (0.138)	-0.595*** (0.133)	0.181 (0.140)	-0.112 (0.131)	0.452*** (0.149)	-0.439** (0.212)	-0.747*** (0.163)	0.041 (0.215)	-0.294* (0.157)	0.191 (0.217)	-0.213 (0.152)
U.S 2015 dummy	-0.338** (0.148)	-0.655*** (0.131)	0.160 (0.151)	-0.163 (0.128)	0.427*** (0.159)	-0.507** (0.246)	-0.761*** (0.165)	-0.021 (0.250)	-0.299* (0.158)	0.111 (0.248)	-0.220 (0.155)
U.S 2016 dummy	-0.465*** (0.137)	-0.708*** (0.129)	0.083 (0.142)	-0.184 (0.126)	0.326** (0.151)	-0.647*** (0.192)	-0.780*** (0.167)	-0.081 (0.203)	-0.275* (0.161)	0.023 (0.206)	-0.188 (0.159)
U.S 2017 dummy	-0.442*** (0.138)	-0.696*** (0.130)	0.079 (0.139)	-0.172 (0.127)	0.310** (0.147)	-0.571*** (0.196)	-0.760*** (0.169)	-0.062 (0.199)	-0.260 (0.164)	0.030 (0.203)	-0.186 (0.161)
U.S 2018 dummy	-0.419*** (0.140)	-0.694*** (0.133)	0.106 (0.141)	-0.167 (0.129)	0.330** (0.149)	-0.554*** (0.199)	-0.755*** (0.175)	-0.042 (0.201)	-0.255 (0.169)	0.040 (0.205)	-0.197 (0.165)
U.S 2019 dummy	-0.413*** (0.146)	-0.684*** (0.134)	0.130 (0.147)	-0.162 (0.131)	0.346** (0.155)	-0.540** (0.224)	-0.739*** (0.177)	-0.034 (0.228)	-0.247 (0.171)	0.032 (0.229)	-0.205 (0.166)
U.S 2020 dummy	-0.383** (0.148)	-0.663*** (0.134)	0.135 (0.149)	-0.164 (0.131)	0.331** (0.157)	-0.516** (0.212)	-0.689*** (0.179)	-0.037 (0.216)	-0.218 (0.172)	0.006 (0.219)	-0.188 (0.168)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country FE	No	Yes	No	Yes	No	No	Yes	No	Yes	No	Yes
R ²	0.630	0.946	0.641	0.949	0.663	0.738	0.962	0.749	0.965	0.774	0.969
N	1,775	2,057	1,791	2,079	1,791	927	975	930	979	930	979

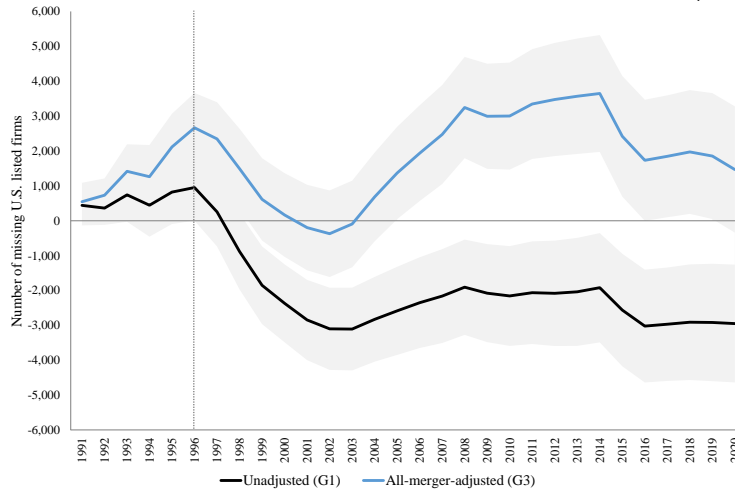
Internet Appendix Figure 5: GDP-scaled unadjusted and merger-adjusted U.S. listing gaps

This figure shows the unadjusted (G1, black line) and two merger-adjusted U.S. listing gaps, estimated as follows:

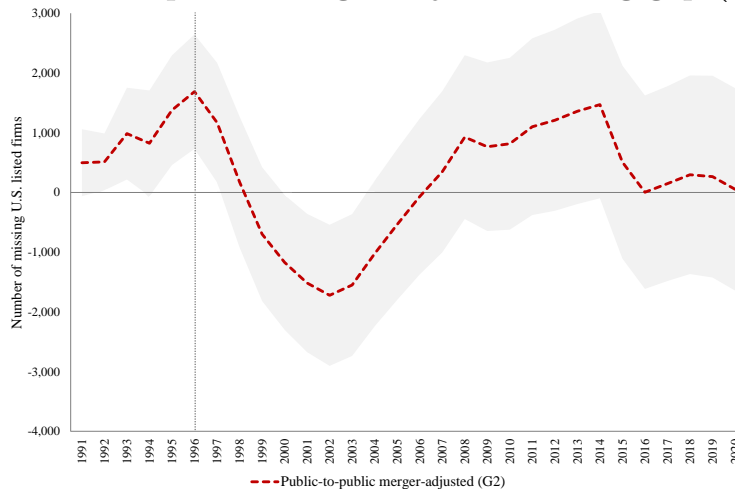
$$\ln(L/GDP_{it}) = \alpha + \delta_i + \tau_t + \beta D_{US} + \Gamma(D_{US} \times \tau_t) + \lambda X_{it} + \epsilon_{it}, \quad t = 1990, \dots, 2020, \quad i = 1, \dots, N.$$

$\ln(L/GDP_{it})$ is the natural logarithm of the unadjusted or merger-adjusted listing count of country i in year t , scaled with GDP and specified as follows. In Panel A, the listing count is adjusted by adding one to the listing count for each public- and minimum-sized private-to-public merger (G3, blue line). In Panel B, the listing count is adjusted by adding back one for each domestic public-to-public merger (G2, broken red line). Additionally, the U.S. merger-adjusted listing series tracks net firm outflows via the acquisition index N_{it} , as well as spinoffs and subsidiary divestitures. Listing gaps G1, G2, and G3 are defined in Eq. (10). δ_i and τ_t are country and year fixed effects, respectively. D_{US} is a dummy variable that takes a value of one if country i is the U.S. and zero otherwise, and X_{it} is a vector of three country-specific control variables: country i 's anti-self-dealing index, $\log(\text{GDP}/\text{capita})$ and GDP growth. Standard errors are clustered at the country-level. The U.S. listing gap in year t is computed as $L/GDP_{US,1990} \times GDP_{US,t} \times (e^{\gamma_t} - 1)$, where γ_t is the annual parameter in the vector Γ . The sample consists of 74 countries and covers 1990–2020. U.S. listing data are from CRSP, non-U.S. listing data are from WDI, WFE, CEIC, and exchange homepages, and merger data are from SDC. The vertical dotted line indicates the year of the U.S. listing peak. The shaded grey area displays 90% confidence intervals.

A: Unadjusted and merger-adjusted listing gaps (G1, G3)



B: Public-to-public merger-adjusted listing gap (G2)



C Supplemental evidence on international listing peaks

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- Internet Appendix Table 3: Listing-count changes in event time around the peak year
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- Internet Appendix Table 5: International sample selection process
- Internet Appendix Figure 6: Annual number of global listing peaks, 1975–2019

Internet Appendix Table 3: Listing-count changes in event time around the peak year

This table shows the change in actual listing count L for countries with a listing peak, 10 and 5 years before and after the peak. The countries, sorting, and data sources in this table are as in Table 5 in the main text.

Country	Peak year -10		Peak year -5		Peak year	Peak year +5		Peak year +10	
	L	% change	L	% change	L	L	% change	L	% change
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
A: Advanced countries that have peaked									
Denmark	247	11%	210	30%	274	260	-5%	237	-14%
New Zealand	–	–	–	–	339	139	-59%	132	-61%
Luxembourg	73	375%	88	294%	347	59	-83%	56	-84%
Portugal	38	316%	25	532%	158	89	-44%	76	-52%
Austria	62	81%	75	49%	112	101	-10%	109	-3%
Ireland	–	–	–	–	93	68	-27%	57	-39%
United States	5,930	24%	5,672	29%	7,325	5,550	-24%	4,616	-37%
Canada	1,856	7%	1,673	19%	1,991	1,239	-38%	1,409	-29%
Czech Republic	–	–	3	2,967%	92	37	-60%	19	-79%
Estonia	–	–	–	–	25	14	-44%	18	-28%
Latvia	–	–	–	–	67	56	-16%	36	-46%
Lithuania	–	–	–	–	60	45	-25%	41	-32%
Belgium	190	46%	162	72%	278	235	-15%	165	-41%
Finland	73	116%	73	116%	158	133	-16%	123	-22%
France	443	167%	710	67%	1,185	749	-37%	617	-48%
Israel	216	207%	652	2%	664	579	-13%	596	-10%
Netherlands	260	51%	184	113%	392	237	-40%	150	-62%
Slovenia	–	–	45	236%	151	100	-34%	66	-56%
Greece	135	151%	246	38%	339	289	-15%	248	-27%
Switzerland	215	34%	232	25%	289	253	-12%	236	-18%
Singapore	250	126%	328	72%	564	461	-18%	483	-14%
United Kingdom	2,041	43%	2,438	19%	2,913	2,001	-31%	1,794	-38%
Germany	700	9%	715	6%	761	665	-13%	450	-41%
Norway	214	-2%	160	31%	209	173	-17%	175	-16%
Slovakia	11	45%	14	14%	16	13	-19%	13	-19%
Spain	3,290	10%	3,310	9%	3,623	2,695	-26%	–	–
Australia	1,913	5%	1,959	3%	2,013	–	–	–	–
Average	1,003	63%	993	50%	993	698	-24%	535	-32%
(excluding Czech Republic, Luxembourg, and Portugal due to outliers)									
B: Developing/emerging countries that have peaked									
Argentina	–	–	–	–	321	277	-14%	226	-30%
South Africa	507	49%	464	63%	754	615	-18%	650	-14%
Brazil	404	47%	522	13%	592	548	-7%	478	-19%
Mexico	271	44%	188	107%	390	185	-53%	175	-55%
Costa Rica	16	94%	–	–	31	21	-32%	22	-29%
India	1,911	214%	2,556	135%	5,999	5,795	-3%	4,796	-20%
Pakistan	360	117%	542	44%	782	747	-4%	651	-17%
Chile	211	39%	244	20%	294	245	-17%	238	-19%
Colombia	–	–	83	54%	128	110	-14%	90	-30%
Peru	–	–	235	5%	246	195	-21%	201	-18%
Romania	–	–	–	–	126	57	-55%	62	-51%
Hungary	–	–	40	60%	64	47	-27%	42	-34%
Panama	–	–	97	56%	151	27	-82%	34	-77%
Egypt	–	–	654	76%	1,150	435	-62%	234	-80%
Iran	142	187%	285	43%	408	369	-10%	318	-22%
Oman	114	106%	208	13%	235	114	-51%	116	-51%
Malaysia	615	66%	804	27%	1,021	932	-9%	893	-13%
Croatia	77	366%	67	436%	359	211	-41%	155	-57%
Bahrain	38	18%	38	18%	45	43	-4%	43	-4%
Bulgaria	–	–	326	24%	404	381	-6%	–	–
Morocco	53	45%	52	48%	77	75	-3%	75	-3%
Jordan	163	70%	201	38%	277	228	-18%	180	-35%
Nigeria	–	–	215	0%	215	183	-15%	177	-18%
Kuwait	78	176%	164	31%	215	196	-9%	–	–
Russia	–	–	–	–	292	230	-21%	–	–
Poland	234	273%	570	53%	872	784	-10%	–	–
Turkey	257	53%	263	49%	392	366	-7%	–	–
Ghana	29	28%	29	28%	37	–	–	–	–
Kenya	52	25%	58	12%	65	–	–	–	–
Tunisia	50	64%	71	15%	82	–	–	–	–
Sri Lanka	235	26%	289	3%	297	–	–	–	–
Average	287	87%	354	40%	532	508	-22%	462	-30%
(excluding Croatia due to outliers)									

Internet Appendix Table 4: Country-specific effects on post-peak listing count rate of decline

This table shows β coefficient estimates from the regression specification:

$$Decline_i = \alpha + \beta D_{country} + \lambda Z_i + \epsilon_i, \quad i = 1, \dots, N,$$

where variable definitions are as in Table 6 except for $D_{country}$, which replaces D_{US} . Each row shows the β coefficient estimates that results from setting $D_{country}$ to equal one if country i is the country indicated in the first column. Columns (1)–(12) and data sources are as in Table 6. Regression standard errors are robust but not shown in the table. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels.

Event time: Sampled countries: Regressors	<i>Decline: Unadjusted listing count</i>			<i>Decline: Public-to-public merger-adj. count</i>			<i>Decline: All-merger-adj. listing count</i>					
	± 5 years All (1)	± 3 years All (2)	± 3 years Adv. (3)	± 5 years All (4)	± 5 years Adv. (5)	± 3 years All (6)	± 3 years Adv. (7)	± 5 years All (8)	± 5 years Adv. (9)	± 3 years All (10)	± 3 years Adv. (11)	± 3 years Adv. (12)
Advanced economies												
Australia												
Canada	0.032***	0.040***	0.070***	-0.052*	0.023**	0.021*	-0.053*	-0.074**	0.007	0.002	-0.049*	-0.064*
Finland	-0.017	-0.031*	-0.008	-0.033	-0.017	-0.029	-0.010	-0.032	-0.042*	-0.050*	-0.020	-0.030
France	0.026***	0.019*	0.062***	0.063***	0.029***	0.024**	0.064***	0.066***	0.035***	0.034**	0.066***	0.066***
Germany	0.003	0.027	-0.019	0.003	0.026	0.058**	0.004	0.027	0.055*	0.077**	0.030	0.045
Greece	-0.020	-0.033*	-0.002	-0.020	-0.021*	-0.034**	-0.004	-0.021	-0.024*	-0.048***	-0.004	-0.028
Israel	-0.009	-0.013	0.000	-0.015	-0.000	-0.003	0.010	-0.003	0.014	0.007	0.029**	0.017
Latvia				-0.096	-0.000	-0.189*	-0.094	-0.172**			-0.065	-0.111
Netherlands	0.024**	0.018	0.067***	0.062***	0.024**	0.021	0.065***	0.061***	0.021	0.027	0.057***	0.057***
Norway	-0.034	-0.040	-0.094*	-0.074	-0.021	-0.023	-0.077*	-0.047	0.005	-0.000	-0.053	-0.007
Singapore	-0.067	0.011	0.050	-0.025	-0.081	-0.057	0.033	-0.083	-0.092	-0.114	0.014	-0.141
Slovakia	0.014	0.002	0.008	-0.018	0.017	-0.002	0.012	-0.004	0.028	0.011	0.029	0.027
Slovenia	0.004	0.004	-0.025*	-0.037	0.008	0.016	-0.021*	-0.032	0.041	0.054	-0.008	-0.029
Spain	0.000	-0.012	0.009	-0.013	0.007	-0.002	0.013	-0.006	0.014	0.012	0.020	0.003
Switzerland	-0.033***	-0.029**	-0.015	-0.019	-0.025*	-0.019*	-0.009	-0.013	-0.022*	-0.014	-0.003	-0.005
UK	0.028***	0.014	0.038***	0.040	0.026***	0.014	0.033**	0.037	0.009	0.012	0.008	0.009
U.S.	0.013	0.009	-0.014	-0.007	-0.022**	-0.026**	-0.049***	-0.042***	-0.036***	-0.041**	-0.068***	-0.064***
Developing/emerging economies												
Bulgaria				-0.091*	-0.046*		-0.088*		-0.042		-0.078*	
Chile	0.002			-0.014	0.003		-0.012		-0.001		-0.016	
Colombia	-0.007			0.103***	-0.014		0.100***		-0.013		0.099***	
Costa Rica				0.040*			0.042**				0.047**	
Egypt	0.091***			0.075***	0.093***		0.078***		0.095***		0.078***	
Hungary	0.008			0.046***	0.011		0.048***		0.016		0.052***	
India	-0.057***			-0.042**	-0.055***		-0.040**		-0.051**		-0.040***	
Iran	-0.033*			-0.000	-0.029*		0.001		-0.028*		0.002	
Jordan	-0.007			-0.000	-0.008		-0.000		-0.005		0.004	
Kenya				-0.021			-0.024				-0.023	
Malaysia	-0.035			-0.041**	-0.038		-0.042**		-0.052		-0.055***	
Morocco	-0.034**			-0.043***	-0.035**		-0.045***		-0.041***		-0.052***	
Pakistan	-0.032*			-0.046***	-0.030*		-0.030*		-0.030*		-0.043***	
Panama	0.131***			0.130***	0.130***		0.130***		0.134***			
Peru	0.011			0.011	0.008		0.007				0.002	
Poland	-0.025**			-0.031***	-0.022*		-0.028**		-0.022*		-0.028**	
Russia				-0.003			-0.002				-0.012	
Tunisia				-0.044***			-0.043***				-0.040***	
Turkey	-0.029**			-0.038***	-0.031***		-0.037***		-0.032**		-0.038***	
Average R^2	0.112	0.508	0.057	0.215	0.128	0.532	0.065	0.268	0.186	0.535	0.166	0.413
N	30	15	35	17	30	15	35	17	30	15	35	17

Internet Appendix Table 5: International sample selection process

This table shows the countries included in each step of the sample selection process, starting with the 100 countries and territories with the largest GDP as of 2020 per the IMF.

100 highest GDP countries and territories in 2020 according to IMF (1)	Listing count data are available (2)	Listing count data are available for 2020 (3)	At least 10 years of listing count data are available (4)
Algeria	–	–	–
Angola	–	–	–
Argentina	Argentina	Argentina	Argentina
Australia	Australia	Australia	Australia
Austria	Austria	Austria	Austria
Azerbaijan	Azerbaijan	–	–
Bahrain	Bahrain	Bahrain	Bahrain
Bangladesh	Bangladesh	Bangladesh	Bangladesh
Belarus	Belarus	–	–
Belgium	Belgium	Belgium	Belgium
Bolivia	–	–	–
Brazil	Brazil	Brazil	Brazil
Bulgaria	Bulgaria	Bulgaria	Bulgaria
Cameroon	Cameroon	–	–
Canada	Canada	Canada	Canada
Chile	Chile	Chile	Chile
China	China	China	China
Colombia	Colombia	Colombia	Colombia
Costa Rica	Costa Rica	Costa Rica	Costa Rica
Croatia	Croatia	Croatia	Croatia
Czech Republic	Czech Republic	Czech Republic	Czech Republic
DR Congo	–	–	–
Denmark	Denmark	Denmark	Denmark
Dominican Republic	–	–	–
Ecuador	Ecuador	–	–
Egypt	Egypt	Egypt	Egypt
Estonia	Estonia	Estonia	Estonia
Ethiopia	–	–	–
Finland	Finland	Finland	Finland
France	France	France	France
Germany	Germany	Germany	Germany
Ghana	Ghana	Ghana	Ghana
Greece	Greece	Greece	Greece
Guatemala	–	–	–
Hong Kong	Hong Kong	Hong Kong	Hong Kong
Hungary	Hungary	Hungary	Hungary
India	India	India	India
Indonesia	Indonesia	Indonesia	Indonesia
Iran	Iran	Iran	Iran
Iraq	–	–	–
Ireland	Ireland	Ireland	Ireland
Israel	Israel	Israel	Israel
Italy	Italy	Italy	Italy
Ivory Coast	–	–	–
Japan	Japan	Japan	Japan
Jordan	Jordan	Jordan	Jordan
Kazakhstan	Kazakhstan	Kazakhstan	Kazakhstan
Kenya	Kenya	Kenya	Kenya
Kuwait	Kuwait	Kuwait	Kuwait
Latvia	Latvia	Latvia	Latvia

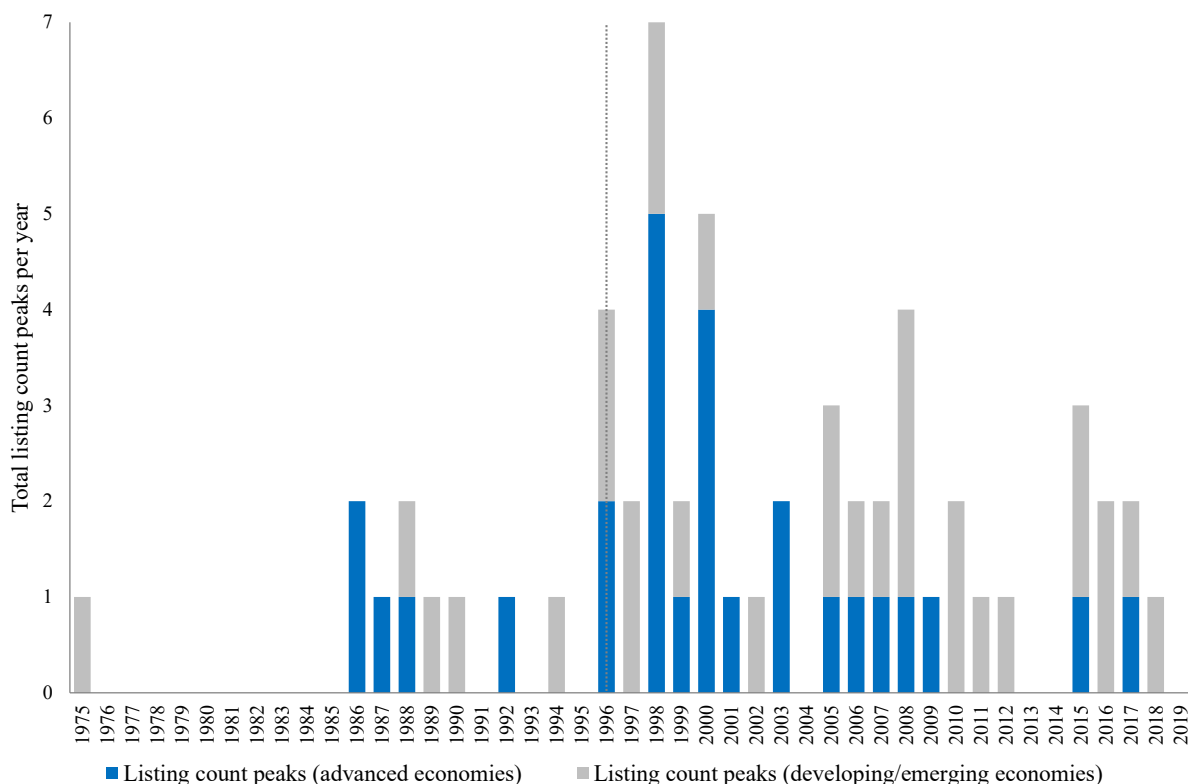
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Internet Appendix Table 5: Continued (page 2 of 2)

100 highest GDP countries and territories in 2020 according to IMF (1)	Listing count data are available (2)	Listing count data are available for 2020 (3)	At least 10 years of listing count data are available (4)
Lithuania	Lithuania	Lithuania	Lithuania
Luxembourg	Luxembourg	Luxembourg	Luxembourg
Malaysia	Malaysia	Malaysia	Malaysia
Mexico	Mexico	Mexico	Mexico
Morocco	Morocco	Morocco	Morocco
Myanmar	Myanmar	Myanmar	–
Nepal	–	–	–
Netherlands	Netherlands	Netherlands	Netherlands
New Zealand	New Zealand	New Zealand	New Zealand
Nigeria	Nigeria	Nigeria	Nigeria
Norway	Norway	Norway	Norway
Oman	Oman	Oman	Oman
Pakistan	Pakistan	Pakistan	Pakistan
Panama	Panama	Panama	Panama
Paraguay	Paraguay	–	–
Peru	Peru	Peru	Peru
Philippines	Philippines	Philippines	Philippines
Poland	Poland	Poland	Poland
Portugal	Portugal	Portugal	Portugal
Puerto Rico	–	–	–
Qatar	Qatar	Qatar	Qatar
Romania	Romania	Romania	Romania
Russia	Russia	Russia	Russia
Saudi Arabia	Saudi Arabia	Saudi Arabia	Saudi Arabia
Serbia	–	–	–
Singapore	Singapore	Singapore	Singapore
Slovakia	Slovakia	Slovakia	Slovakia
Slovenia	Slovenia	Slovenia	Slovenia
South Africa	South Africa	South Africa	South Africa
South Korea	South Korea	South Korea	South Korea
Spain	Spain	Spain	Spain
Sri Lanka	Sri Lanka	Sri Lanka	Sri Lanka
Sudan	–	–	–
Sweden	Sweden	Sweden	Sweden
Switzerland	Switzerland	Switzerland	Switzerland
Taiwan	Taiwan	Taiwan	Taiwan
Tanzania	Tanzania	–	–
Thailand	Thailand	Thailand	Thailand
Tunisia	Tunisia	Tunisia	Tunisia
Turkey	Turkey	Turkey	Turkey
Turkmenistan	–	–	–
Uganda	–	–	–
Ukraine	Ukraine	–	–
UAE	UAE	UAE	UAE
UK	UK	UK	UK
U.S.	U.S.	U.S.	U.S.
Uruguay	Uruguay	–	–
Uzbekistan	–	–	–
Venezuela	Venezuela	–	–
Vietnam	Vietnam	Vietnam	Vietnam
<i>Number of countries and territories in sample</i>			
100	84	75	74

Internet Appendix Figure 6: Annual number of global listing peaks, 1975–2019

This figure shows the annual number of listing peaks (economies with fewer listed firms in 2020 than earlier, at peak) around the world. The peak in 1975 is Argentina. Blue bars designate advanced economies and grey bars designate developing and emerging economies. 57 of 74 sampled countries and territories are represented in the figure. The U.S. listing count is from CRSP and consists of firms with common stock listed on NYSE, AMEX, or Nasdaq. Non-U.S. listing counts are found using data from WDI, the WFE, CEIC, and individual stock exchange home-pages. Investment companies, mutual funds, real estate investment trusts, and other collective investment vehicles are excluded. See Appendix A.3 for further details on data selection. The vertical dotted line in 1996 marks the year of the U.S. listing peak.



D Supplemental evidence on the economic contribution of U.S. listed firms

Contents:

- Internet Appendix Table 6: Listed firms' employment, GDP, R&D spending, and patents granted, 1982–2018

Internet Appendix Table 6: Listed firms' employment, GDP, R&D spending, and patents granted, 1982–2018

This table shows the total annual amount of employment (in millions of people), value added (in USD trillion), research and development spending (in USD billion), and patents granted (in thousands) for U.S. public firms, all U.S. organizations or entities (public and private firms, government, universities, and individuals), and majority-owned foreign affiliates (MOFAs). To calculate the series shown in Figure 10, U.S. public firm output is divided by the sum of output from all U.S. firms and all MOFAs (except for patents). All monetary values are expressed in 2020 USD. MOFA R&D spending prior to 1989 is estimated and marked with * below. Data are from the BEA, BLS, Compustat, GCPD, IMF, OECD, and USPTO. Details in Appendix A.2.

Year (1)	Employees (m)			Gross product (USD tn)			R&D spending (USD bn)			Patents granted (k)	
	U.S. pub. firms (2)	All U.S. org. (3)	All MOFA (4)	U.S. pub. firms (5)	All U.S. org. (6)	All MOFA (7)	U.S. pub. firms (8)	All U.S. org. (9)	All MOFA (10)	U.S. pub. firms (11)	All U.S. ent. (12)
1982	26.9	89.4	5.0	2.7	8.9	0.6	95.8	216.4	13.1*	12.5	33.9
1983	27.0	92.9	4.9	2.7	9.4	0.6	102.9	233.5	12.3*	12.3	32.9
1984	28.0	96.8	4.8	2.9	10.0	0.5	114.7	254.7	12.0*	14.5	38.4
1985	28.0	99.4	4.8	2.9	10.4	0.5	118.1	275.5	11.6*	14.8	39.6
1986	27.4	101.3	4.7	2.8	10.7	0.5	123.4	282.9	12.0*	13.5	38.1
1987	27.7	104.5	4.7	2.9	11.0	0.6	126.0	286.8	13.5*	15.3	43.5
1988	27.5	107.7	4.8	3.1	11.4	0.6	133.1	291.9	14.3*	14.3	40.5
1989	27.3	109.7	5.1	3.0	11.7	0.7	137.0	295.1	14.6	17.3	50.2
1990	27.4	110.0	5.4	2.9	11.7	0.7	138.6	300.0	20.1	16.3	47.4
1991	27.5	109.1	5.4	2.8	11.6	0.7	142.3	304.8	17.7	18.2	51.2
1992	28.1	110.3	5.3	2.9	12.0	0.7	149.9	304.0	20.3	19.5	52.3
1993	28.6	113.1	5.2	3.1	12.2	0.6	153.2	295.9	19.5	20.8	53.2
1994	29.5	117.0	5.7	3.3	12.6	0.7	157.8	294.4	20.6	21.9	56.1
1995	30.7	119.1	5.9	3.6	12.9	0.8	179.2	310.7	21.2	22.2	55.7
1996	32.7	122.0	6.1	3.8	13.2	0.8	189.4	324.4	23.0	24.9	61.1
1997	34.6	125.4	6.5	4.1	13.7	0.8	215.4	340.9	23.4	26.1	61.7
1998	35.6	128.4	6.8	4.1	14.3	0.8	229.0	358.1	23.1	34.4	80.3
1999	36.3	131.6	7.8	4.4	14.9	0.9	227.2	379.2	28.0	35.4	83.9
2000	36.8	133.5	8.2	4.5	15.3	0.9	255.1	402.6	30.6	37.5	85.1
2001	36.1	131.8	8.2	4.1	15.4	0.9	259.7	407.1	28.6	40.0	87.6
2002	35.5	131.2	8.3	4.0	15.6	0.9	243.3	400.3	30.1	40.8	87.0
2003	35.2	131.4	8.2	4.2	16.0	1.0	242.1	410.9	31.9	42.7	87.9
2004	36.3	133.4	8.7	4.5	16.6	1.1	252.9	416.3	35.2	42.5	84.3
2005	36.6	136.0	9.1	4.7	17.2	1.2	255.5	432.2	36.4	37.8	74.6
2006	37.5	138.1	9.6	5.3	17.6	1.3	282.6	450.9	37.7	44.9	89.8
2007	37.1	139.3	10.0	5.4	17.9	1.4	288.9	471.8	42.7	39.5	79.5
2008	36.1	135.7	10.0	4.6	17.6	1.4	290.1	486.6	49.8	40.2	77.5
2009	34.1	130.7	10.8	4.2	17.3	1.4	247.9	473.4	47.0	41.9	82.4
2010	35.1	131.6	11.3	4.9	17.7	1.5	269.4	465.7	47.1	54.3	107.8
2011	36.3	133.7	11.9	5.2	17.8	1.6	283.1	472.9	51.1	55.6	108.6
2012	36.8	135.9	12.1	5.2	18.1	1.6	295.6	466.8	50.4	62.0	121.0
2013	37.3	138.3	12.4	5.3	18.5	1.5	304.6	479.8	54.4	70.0	133.6
2014	38.2	141.3	14.1	5.8	19.0	1.6	326.0	491.6	60.1	76.6	144.6
2015	39.0	144.0	14.1	5.8	19.8	1.5	341.0	510.4	60.9	71.3	141.0
2016	38.1	146.3	14.3	5.8	20.1	1.4	355.0	521.4	58.2	71.4	143.7
2017	38.5	148.5	14.4	6.1	20.5	1.5	377.7	535.1	60.7	–	151.0
2018	39.2	150.8	14.4	6.4	21.1	1.5	420.5	552.3	59.7	–	144.4
Avg.	33.3	124.3	8.3	4.2	14.9	1.0	225.0	383.7	32.2	35.0	79.8