The Age of Private Markets

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TPG

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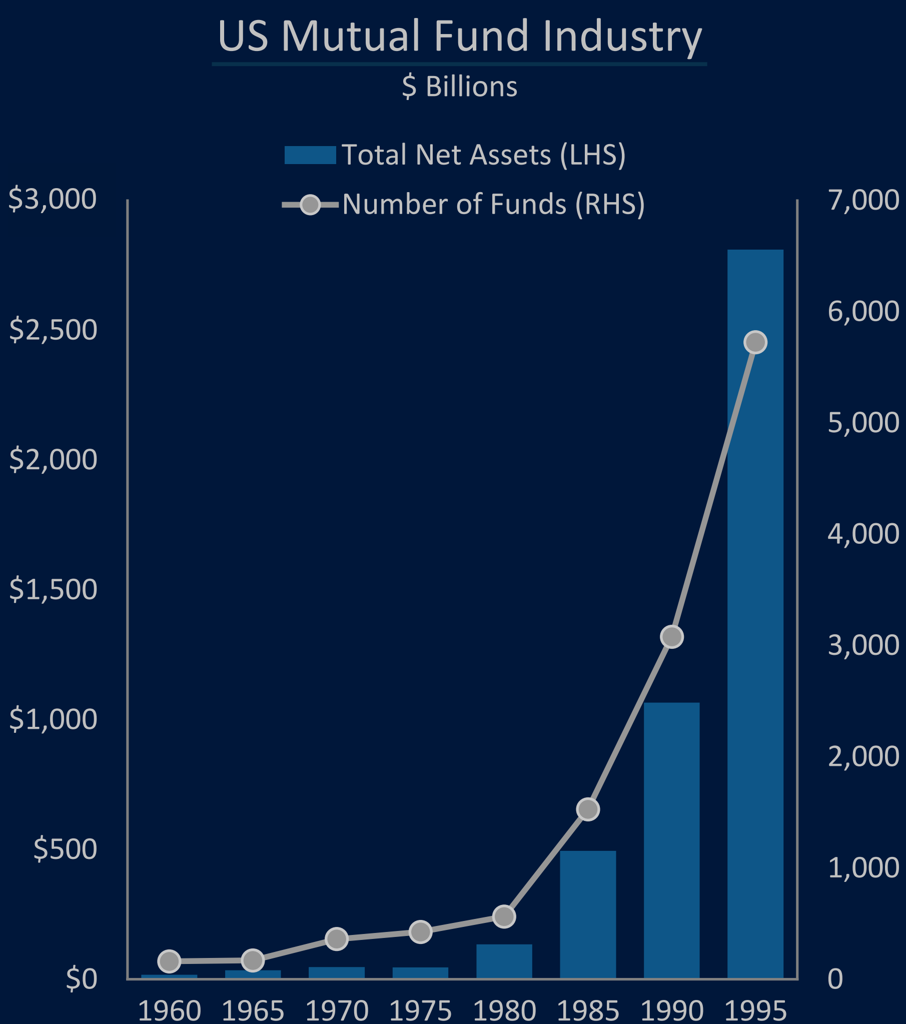
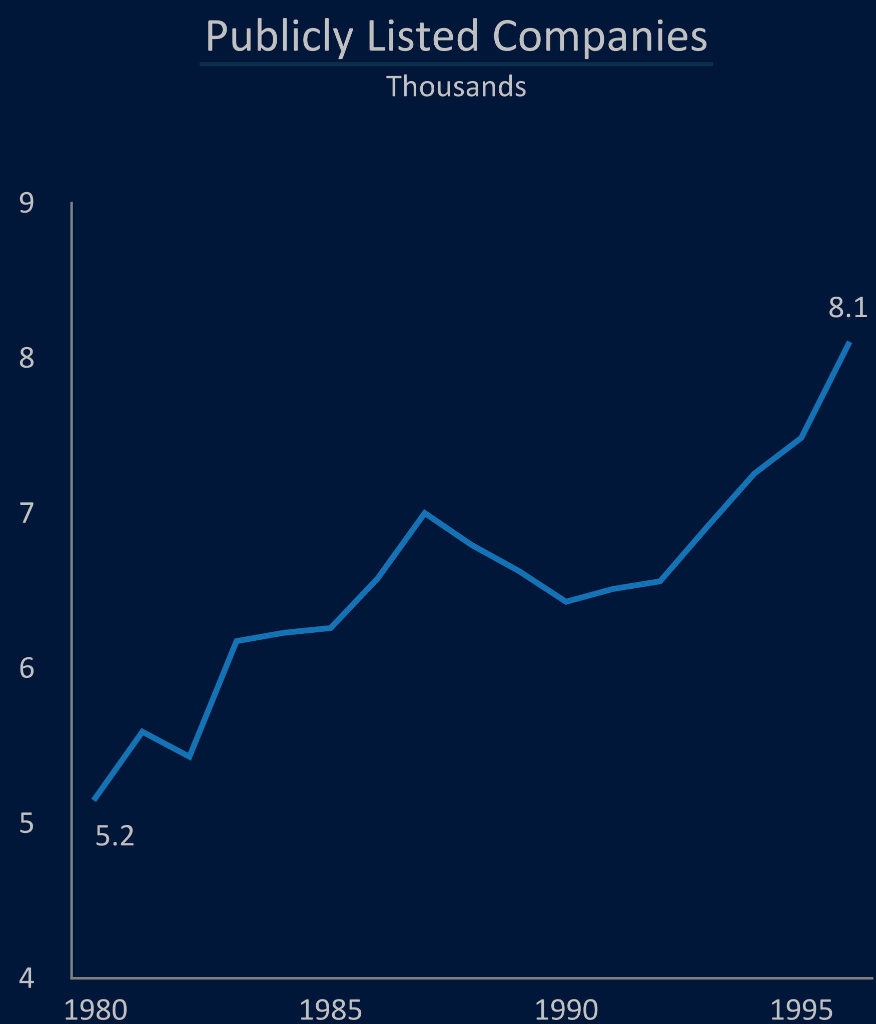
TPG

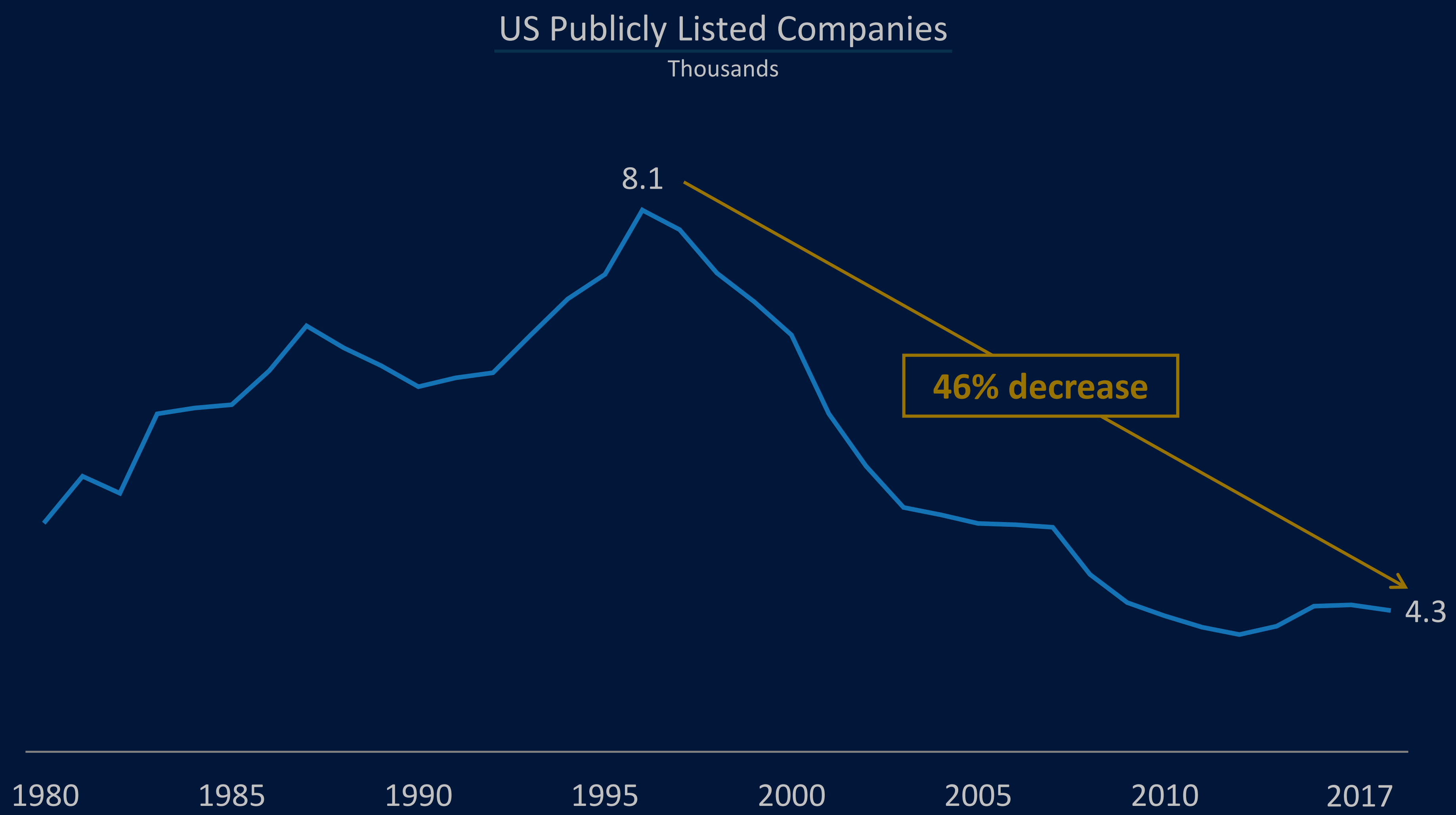
The mutual fund industry boomed as the public market expanded





Source: Investment Company Institute, *2016 Investment Company Fact Book* (May 2016); The World Bank Group (September 2017)

Since 1996, the number of public companies has steadily declined



Source: The World Bank Group (September 2017)

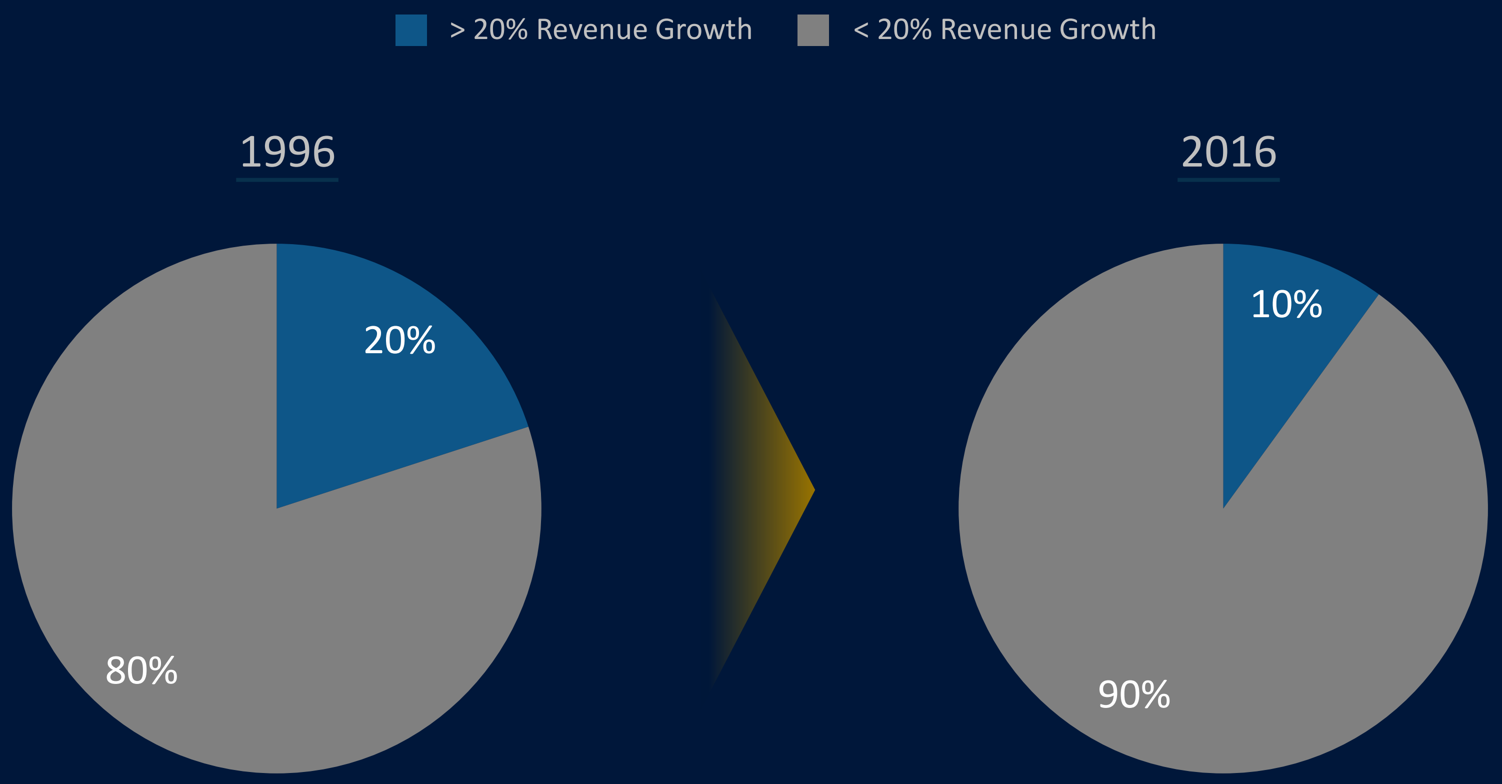
Being public is increasingly less attractive due to burden and scrutiny

- Increasing regulatory and reporting burden
- Market focus on short-term results
- Increasing scrutiny by shareholder service firms on management compensation
- Rising power of activists, even with small shares
- Market focus on bigger companies, leaving mid-sized companies as orphans
- Increasingly flexible private capital alternatives through both equity and debt

As public companies have aged, overall growth profile has slowed

Growth Profile

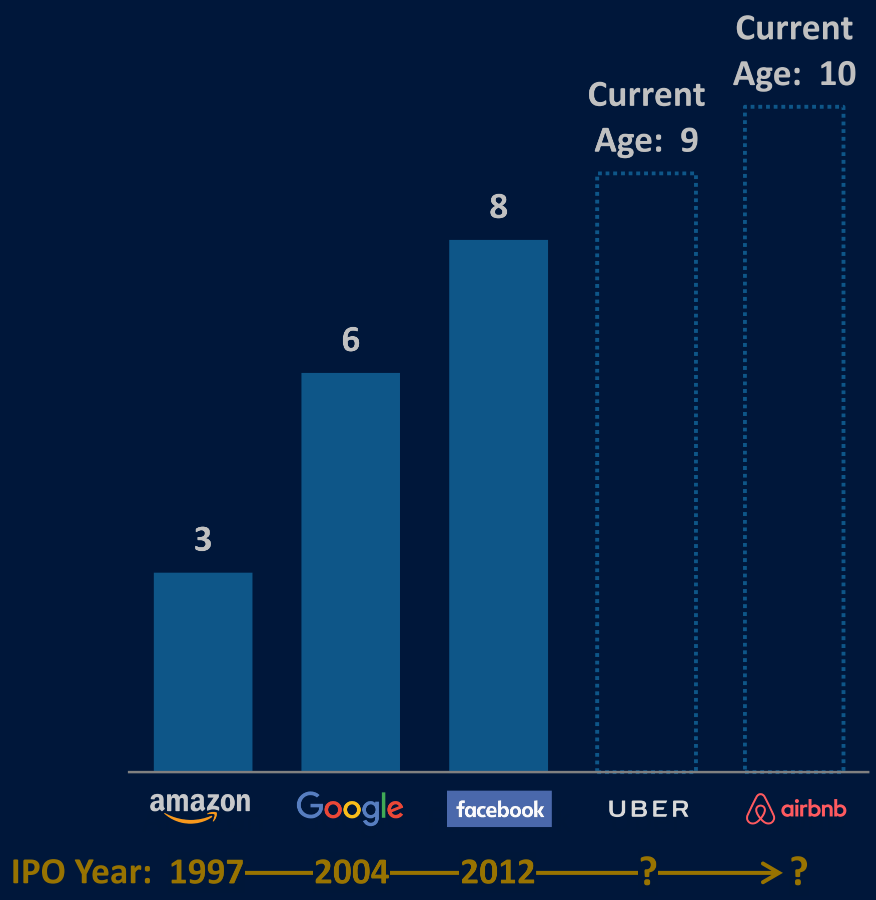
% of S&P 500 Constituents



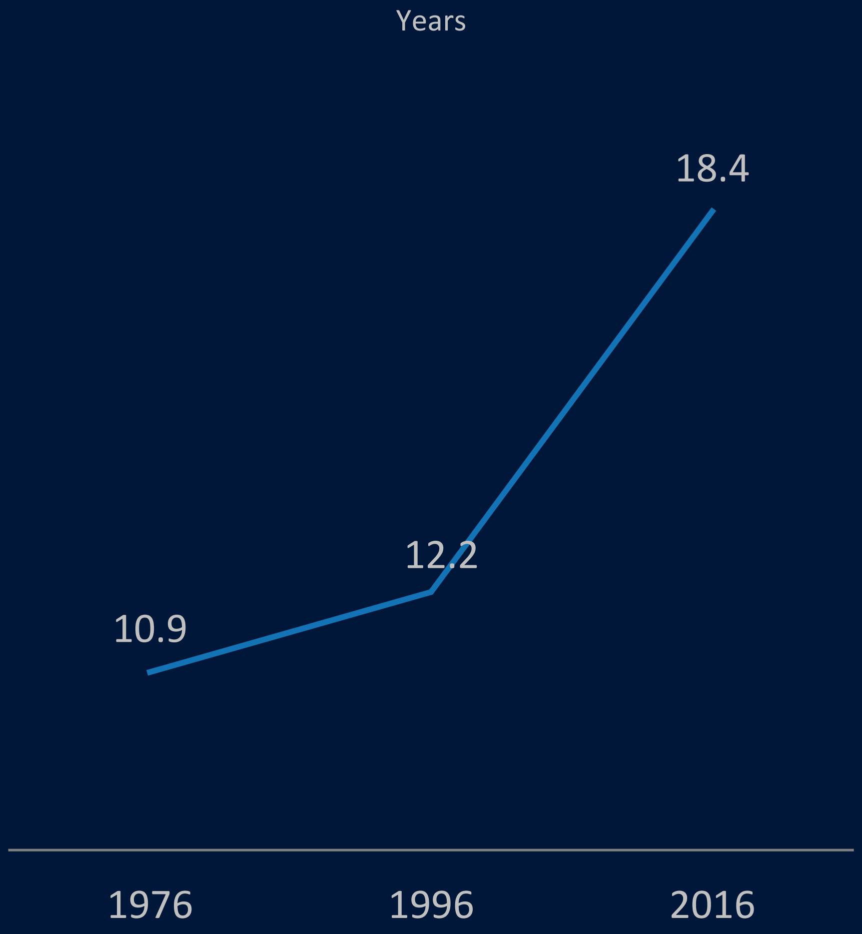
Source: Pantheon, *The Shrinking Public Market and Why It Matters* (June 2017)

Companies are delaying their IPOs, driving an aging market

Age at IPO for Most Valuable Companies



Average Age of Listed Companies



Source: Credit Suisse, *The Incredible Shrinking Universe of Stocks* (March 2017); Capital IQ (September 2017)

Companies are staying private for longer

260 Unicorns at $839B cumulative valuation today

Source: Sutherland Global; CB Insights

Companies are staying private for longer

260 Unicorns at $839B cumulative valuation today

Why are private companies choosing to stay private?

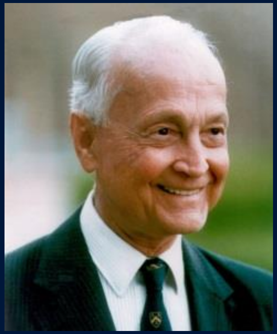
- ✓ Increasingly more capital and alternatives for private capital throughout the life of a company
- ✓ Flexibility to pursue growth strategy with a long-term focus, including heavy investments and losses if part of the strategy
- ✓ Less burdened by quarterly reporting focus of the market
- ✓ Less burdened by public disclosure and regulatory requirements
- ✓ More flexibility in management and employee compensation plans
- ✓ More flexibility to concentrate control as desired

Source: Sutherland Global; CB Insights

Active managers have rarely achieved long-term outperformance

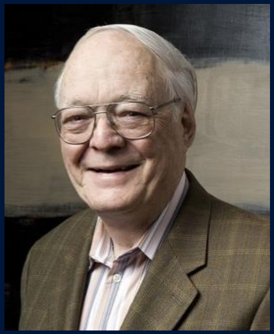
Heroes of Active Management

Peter Lynch



Sir John Templeton

Benjamin Graham

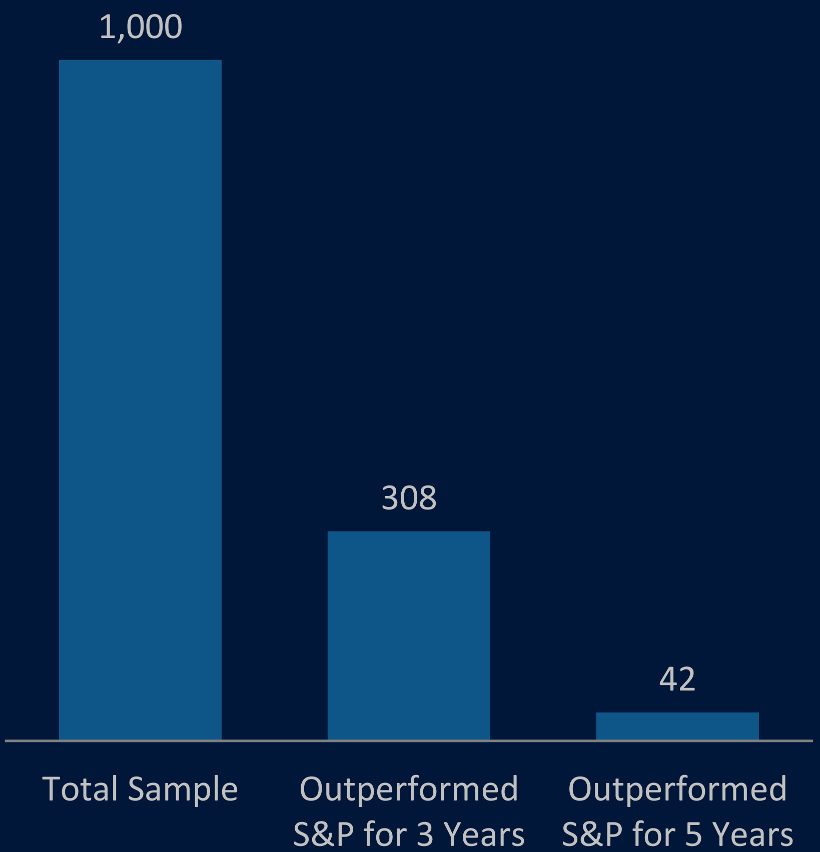


John Neff

Outperformance is Incredibly Difficult

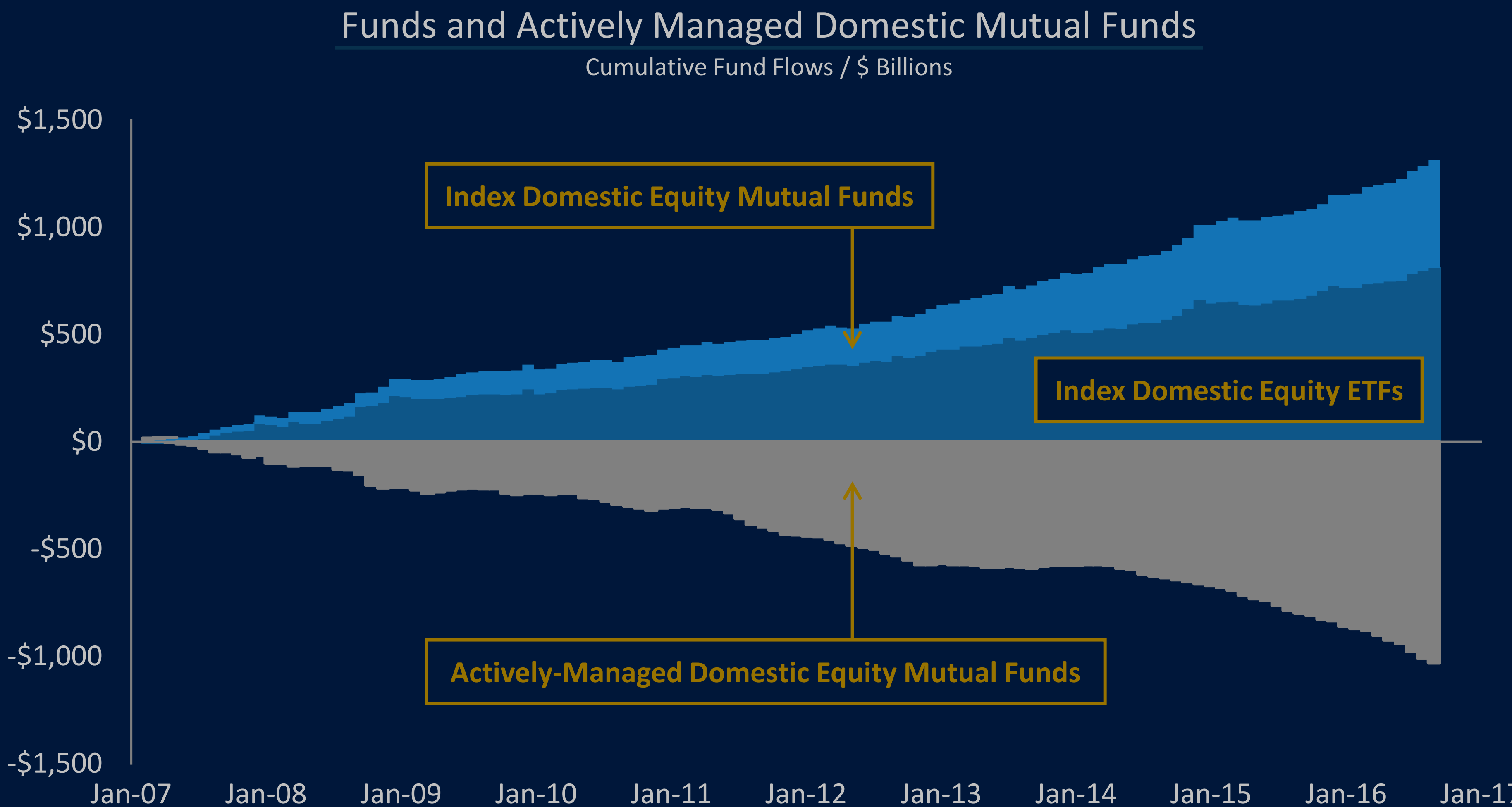
Active Managers Outperforming the S&P

Illustrative Sample | March 2000 – September 2016



Note: Illustrative calculation based on CNBC reporting found that 31% of large-cap active fund managers outperform the S&P 500 for three straight years, and just 4% outperformed the S&P 500 for five straight years
Source: CNBC; *Active managers rarely beat their benchmarks year after year* (February 2017)

Markets are increasingly skewed towards passive investing

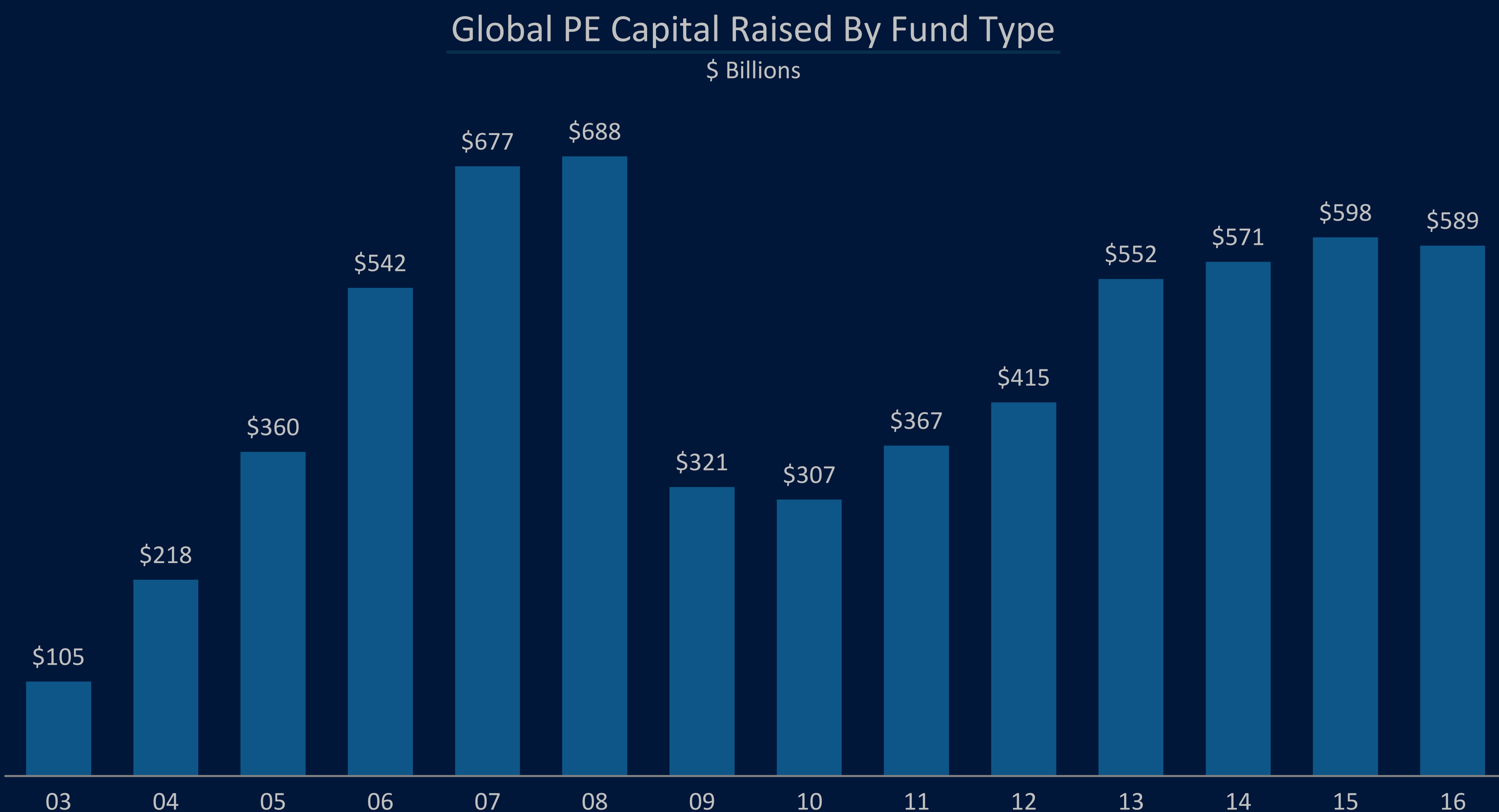


"Stocks have benefitted from forced buying on the part of passive vehicles, which don't have the option to refrain from buying a stock just because it's overpriced."

— Howard Marks

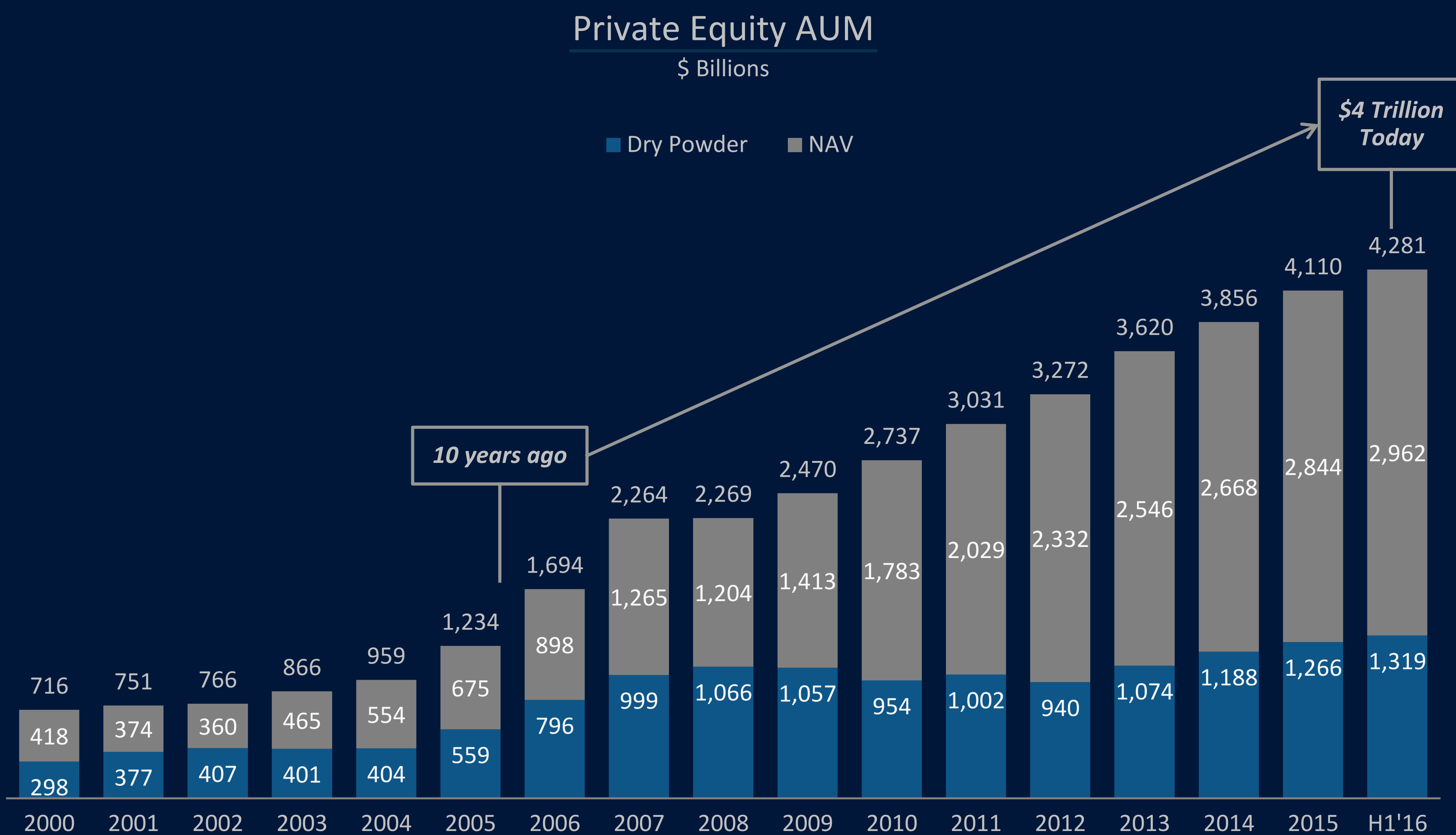
Note: As of 9/30/16
Source: Investment Company Institute (ICI), Goldman Sachs Global Investment Research

Over last 25 years, private equity has boomed



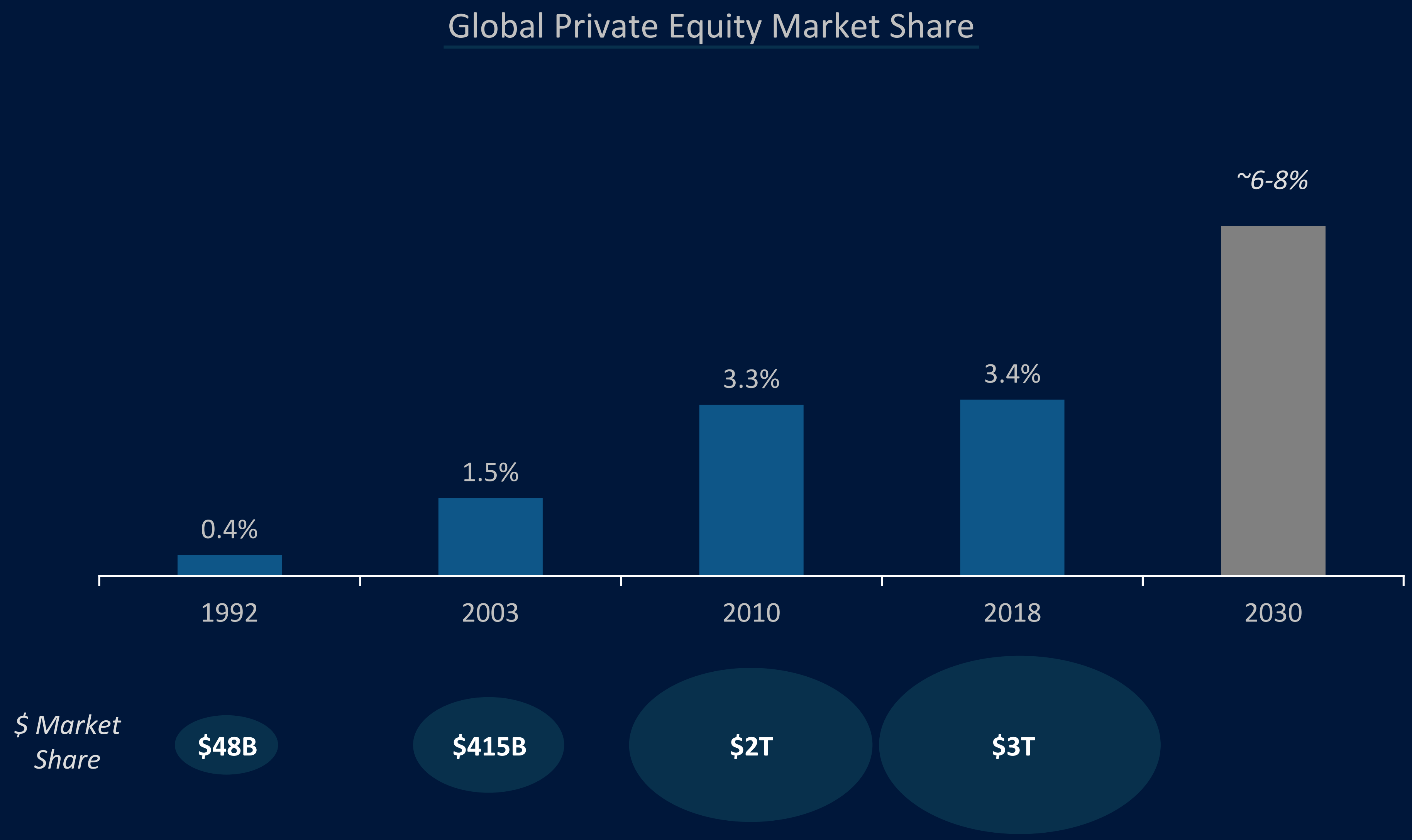
Notes: Includes buyout funds with a final close; represents year funds held their final close
Source: Preqin

Over $4T of assets are controlled by PE firms, with $1T+ of dry powder



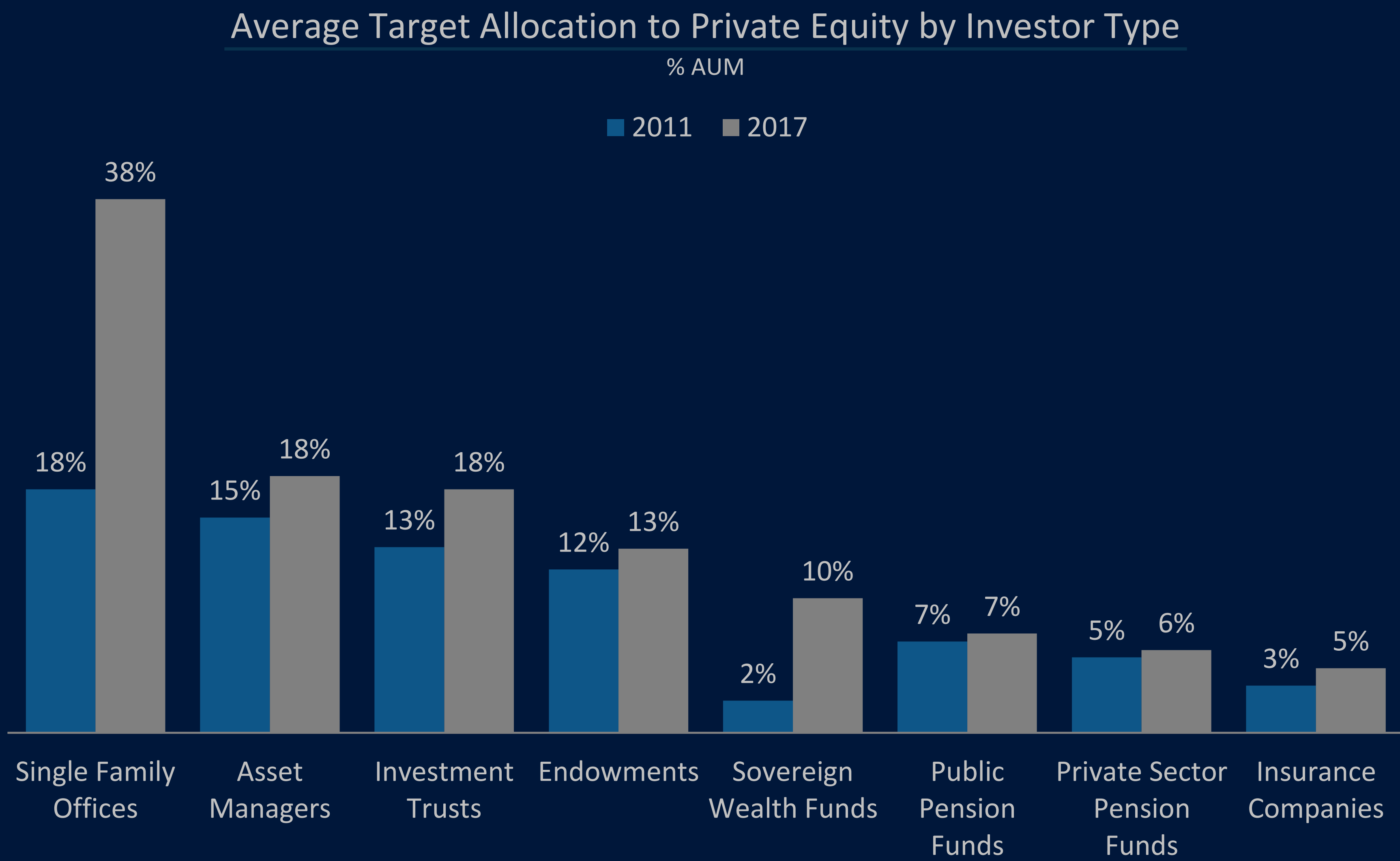
Source: Hamilton Lane

Private equity is expected to roughly double in market share by 2030



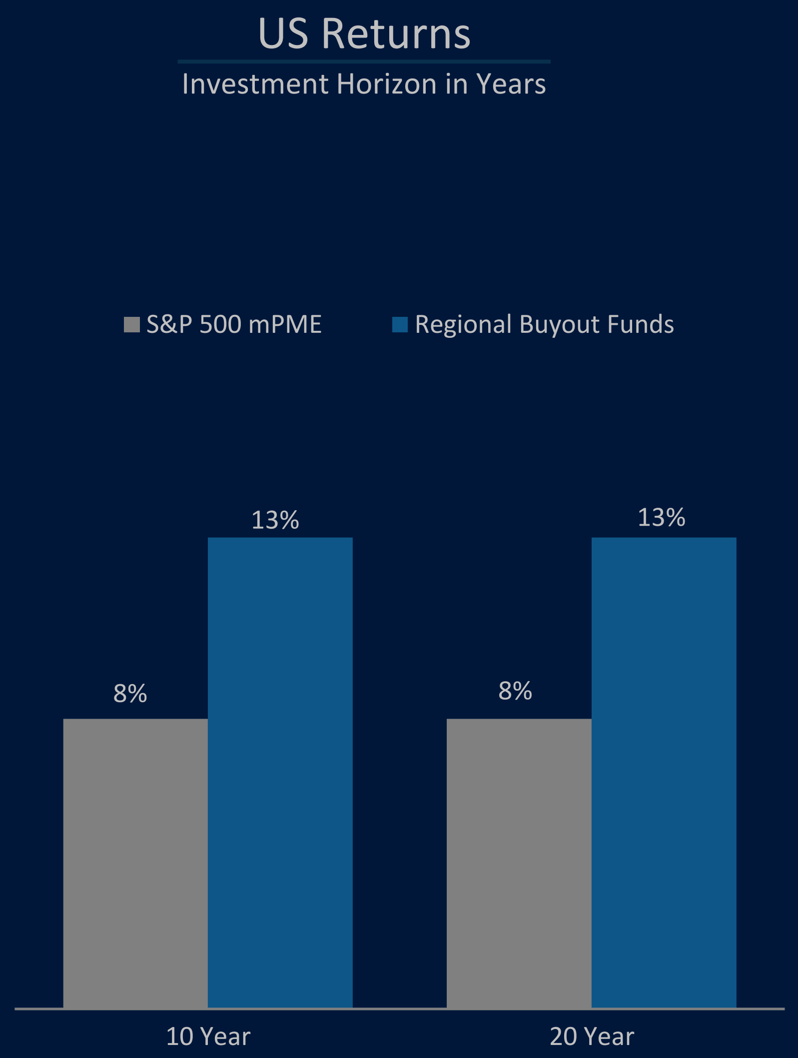
Note: Assumes market growth of 6% annually between 2018-2030E; Estimates are inherently uncertain and subject to change. Actual results may vary.
Source: Hamilton Lane, *Investment Database* (October 2015); NYSE, *NYX Data* (September 2018); World Federation of Exchanges, *2017 Full Year Market Highlights* (February 2018); TPG Analysis (October 2018)

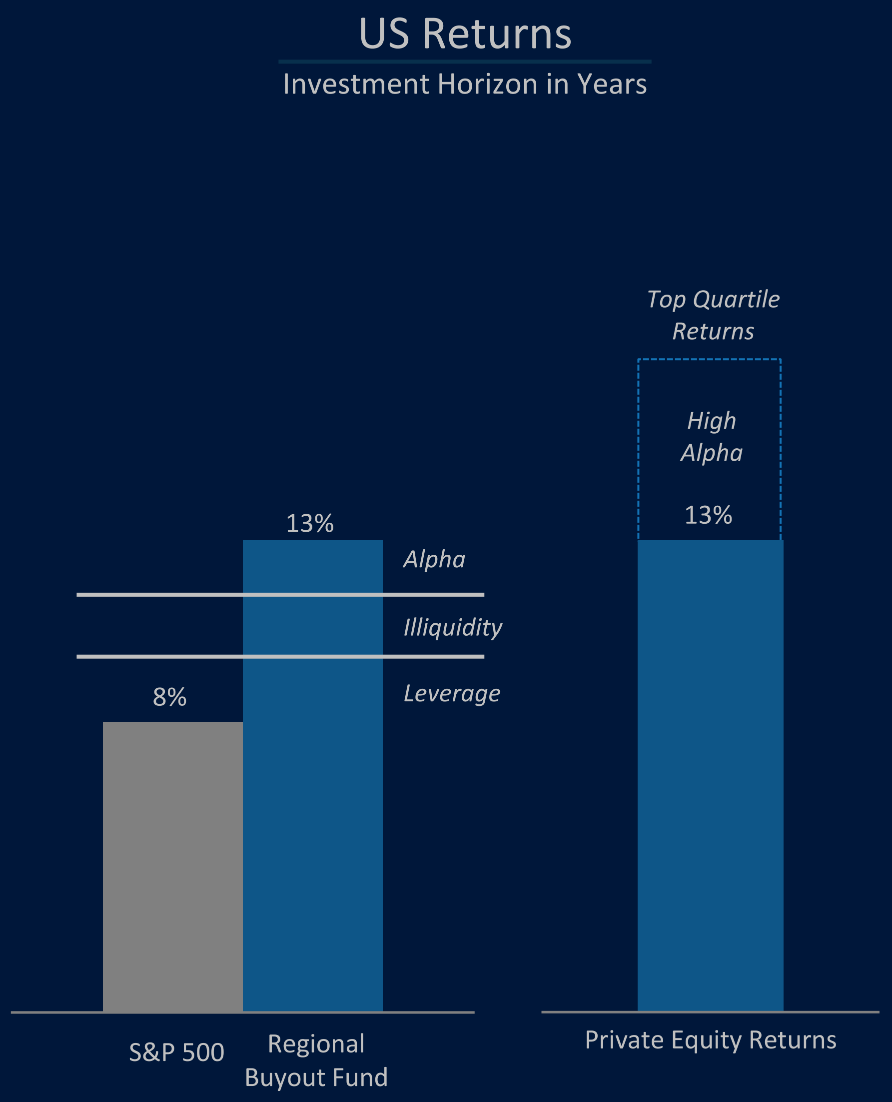
Investors have increasingly shifted their allocation to private equity



Source: Preqin (January 2017)

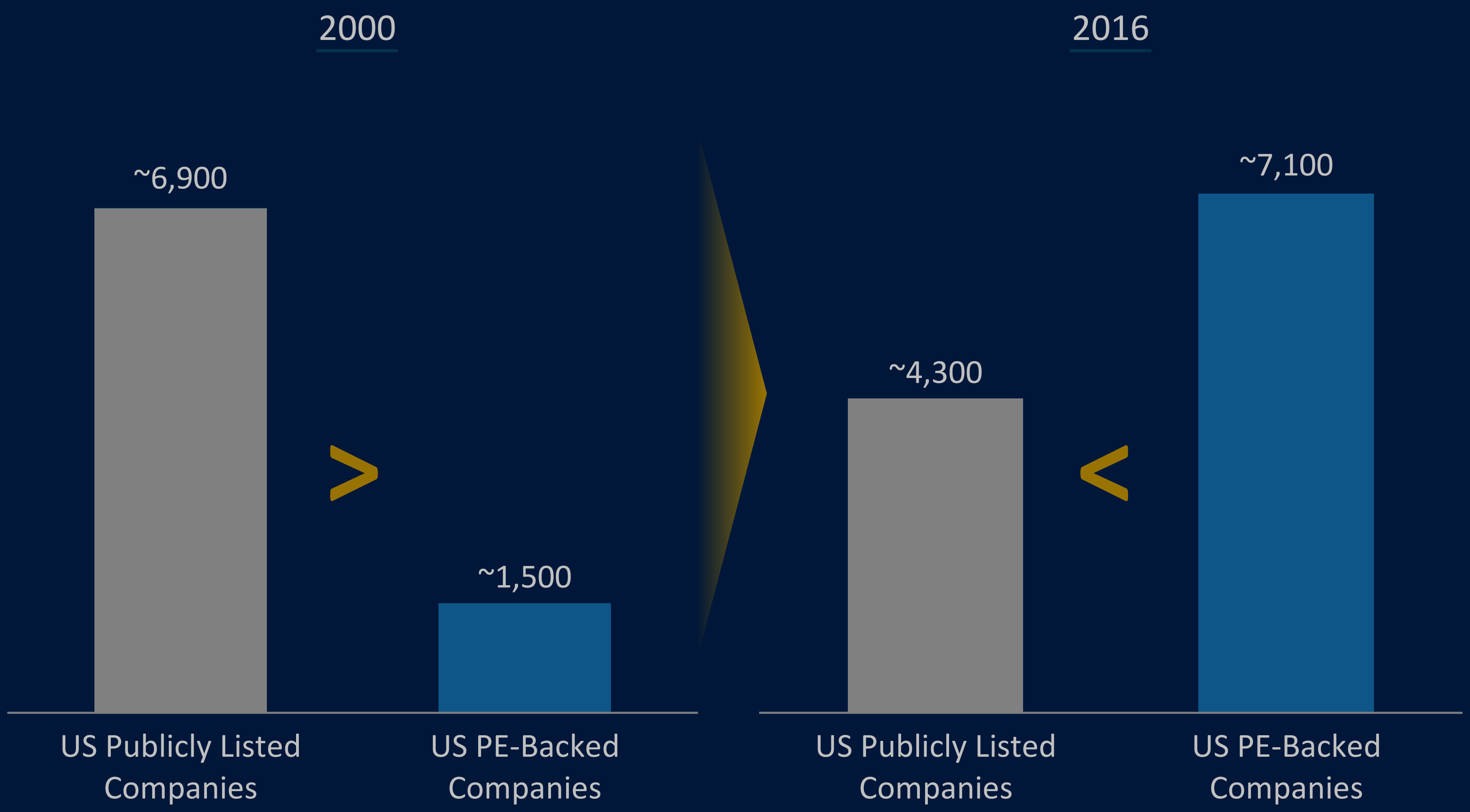
Private equity outperforms other asset classes on a risk-adjusted basis





Note: Pension Fund Required Return is the average targeted return of CalPERS, Washington State Investment Board, Pennsylvania State ERS and New York City Retirement Systems
Source: Hamilton Lane, *Form S-1* (February 2017)

Private markets offer a greater breadth of investable opportunities

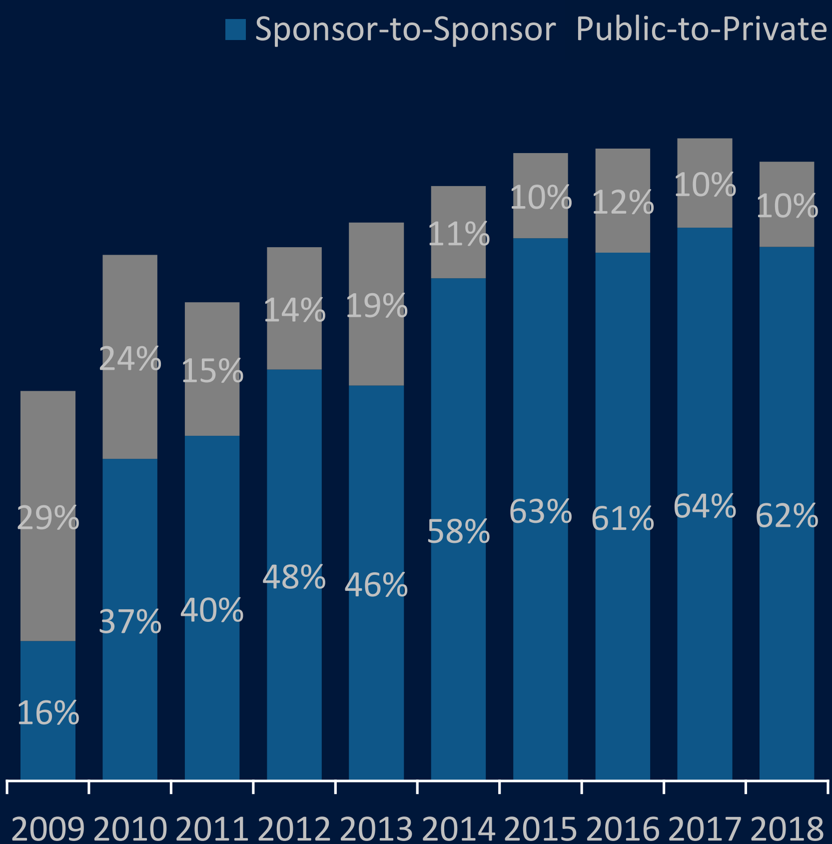


Source: PitchBook (September 2017); World Bank (September 2017)

Sponsors are increasingly buying and selling within the private markets

Sponsor Purchases

% Total Sponsor Deals



Source: S&P Global, *Leveraged Buyout Review* (2Q 2017)

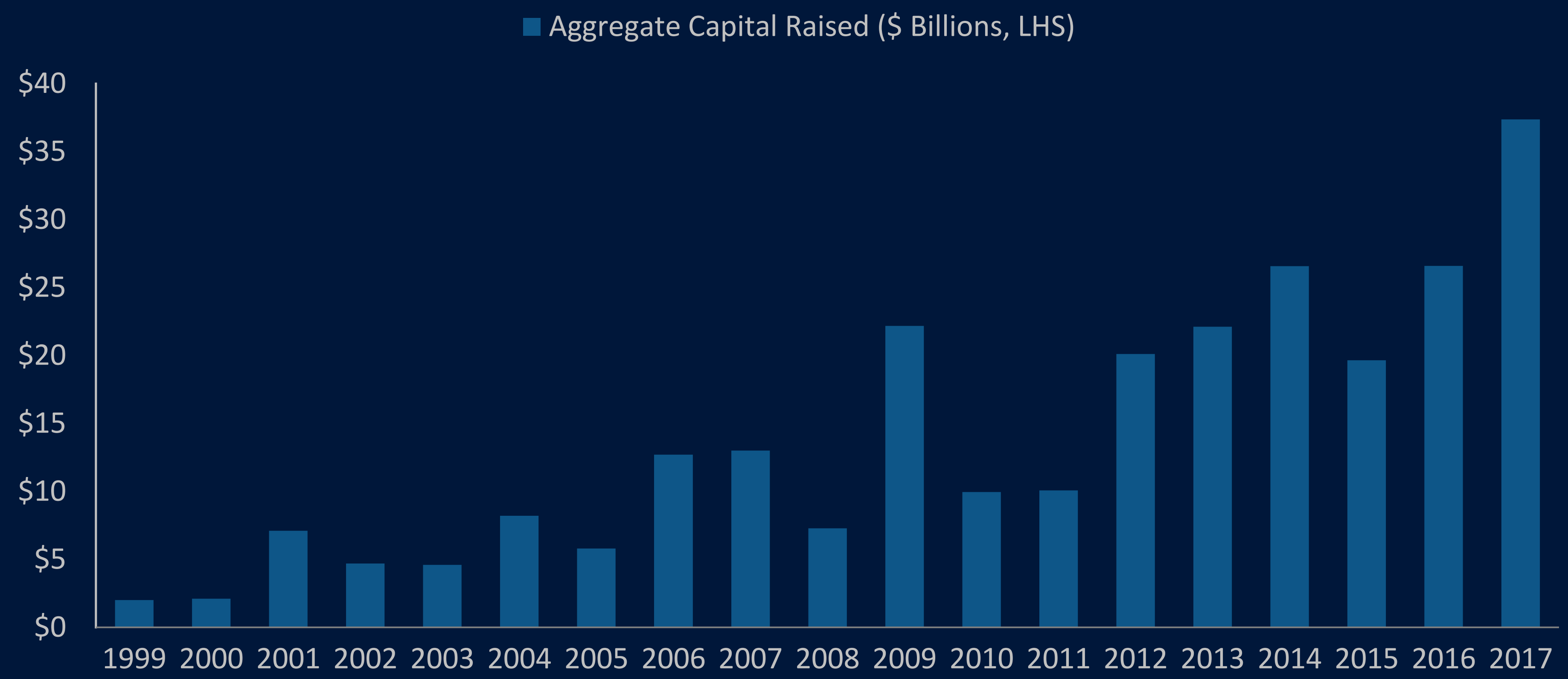
Private Equity Ownership Evolution

USI	Goldman Sachs (2007)	ONEX (2012)	CDPQ, KKR (2017)
CCC Information Services Inc.	Investcorp (2005)	TPG, LGP (2012)	Advent International Global Private Equity (2017)
MultiPlan	BC Partners, Silver Lake (2010)	Starr Investment Holdings, Partners Group (2014)	Hellman & Friedman LLC, LGP, GIC (2016)
petco where the healthy pets go	TPG, LGP (2000)	TPG, LGP (2006)	CVC Capital Partners, CPP Investment Board (2015)

The rise of the secondary market has provided liquidity for PE LPs

Secondaries

$ Billions



Source: Preqin, *Global Private Equity & Venture Capital Report* (January 2018); lender estimates; TPG research (October 2018)

While public markets are based on outside-in public information…

Public Market

- "Buy" decision
  - Public Information
- Hedge strategies
- Activism
- "Sell" decision
  - Public information

…private markets offer a greater toolkit to drive returns

Public Market

- "Buy" decision
  - Public Information
- Hedge strategies
- Activism
- "Sell" decision
  - Public information

Private Equity

- "Buy" decision
  - Full inside due diligence
- Control
  - Choose CEO, COO, CFO
- Financial leverage
- Management change
- Strategic redirection
- Operational involvement
  - Lean 6 Sigma
  - Cash Management
  - Supply Chain
  - Procurement, etc.
- "Sell" decision

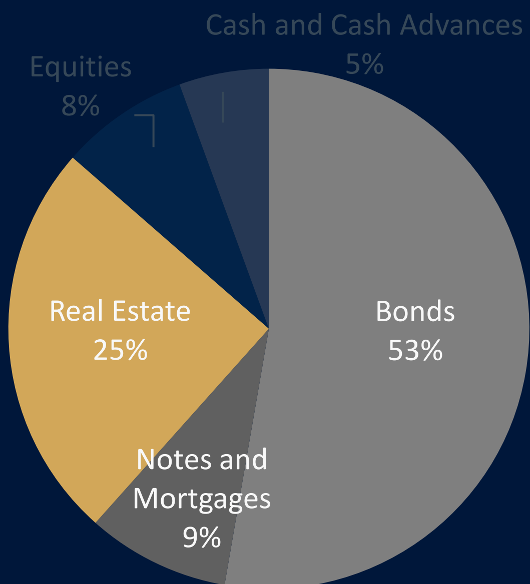
Private equity has matured, with a full range of investable opportunities

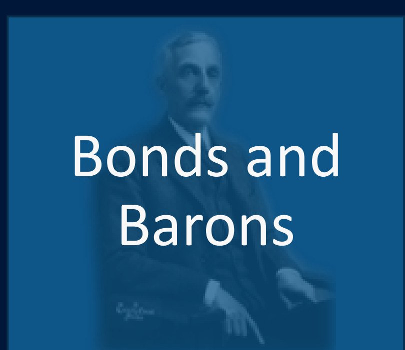
1994	Today
1 Limited GP universe	1 Diverse GP universe
2 Mysterious with limited reliable data	2 Significant increase in available data
3 Short track records	3 Long track records across full economic cycles
4 No liquidity	4 Liquid secondary market
5 Private markets for a period	5 Perpetually private
6 Small investment universe	6 More diverse universe than the public markets

LP allocations have shifted over time in response

Harvard General Investments

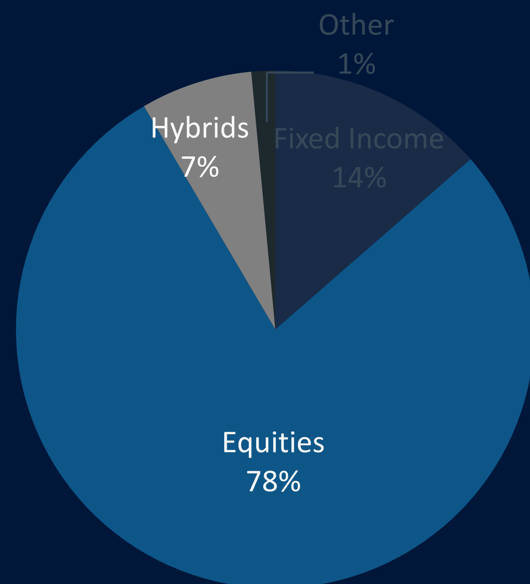
1901 Portfolio Allocation





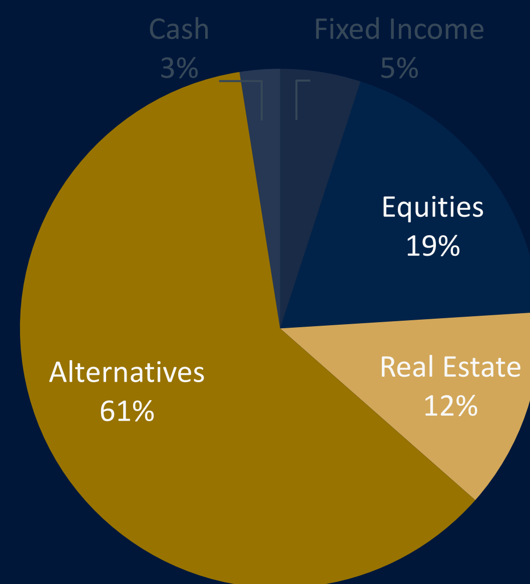
Ford Foundation

1972 Portfolio Allocation (ex. Ford Stock)



The Swensen Model

Yale 2016 Target Allocations



Source: Annual Reports of the President and the Treasurer of Harvard College 1900-01 (1902); The Ford Foundation, *Annual Report* (1972); Yale Endowment Report (2016)

In the new world, investors turn to private markets to seek alpha

Old Paradigm	New Paradigm
T. Rowe Price, Fidelity, Legg Mason Global Asset Management, Capital Group	Vanguard, State Street, BlackRock
α & β *Public Markets*	**β** *Public Markets*
Invesco, Allianz, Waddell & Reed Financial, Inc., American Funds From Capital Group	**α** *Private Markets*
	Silver Lake, TPG, KKR, Blackstone, Vista Private Equity, Apollo

Potential long-term implications for large investment managers

Context	Implications
Composition of public markets is fundamentally shifting as companies age and growth profile slows	Manage public and private equities as a cohesive pool to evaluate risk/reward, sector exposure, beta, and alpha across both types
Companies are staying private for longer – sponsor-to-sponsor transactions have become the dominant form of private transactions	Market, geography, FX, and sector hedging across combined exposures
The private equity asset class is driving superior returns, even on a liquidity-adjusted basis – particularly top quartile funds	Private equities geared to alpha and public equities geared towards beta
Increasing investing optionality in private markets – the number of private companies now exceeds the number of public companies – with flexibility to drive change and value creation	Significant opportunity for outperformance in choosing top quartile managers in PE
Secondaries as a rising established market to provide liquidity to private equity investors	Reduce JCurve fee structure elements of PE with new fee approaches and longer fund horizons for best managers
	Actively use secondary markets to manage PE exposure at key points in cycle