

Executive Summary

NYPPEX estimates that unrealized value has increased for 9 consecutive years to over \$1.6 trillion in private equity funds worldwide. Private equity funds' aged 15 years or more now comprise approximately 24% of private equity funds worldwide compared to 16% as of December 31, 2013. Together, we believe these trends are **causing significantly lower returns for older private equity funds**. Based on our analysis of 2001 to 2017 vintage private equity funds worldwide, NYPPEX estimates that private equity funds' aged 13-15 years generated an annualized return of only **-0.24%** on average for the 12 month period ended September 30, 2017. **We believe, general partners can manage investor fiduciary risk by implementing active fund life-cycle management.**

Performance Trends

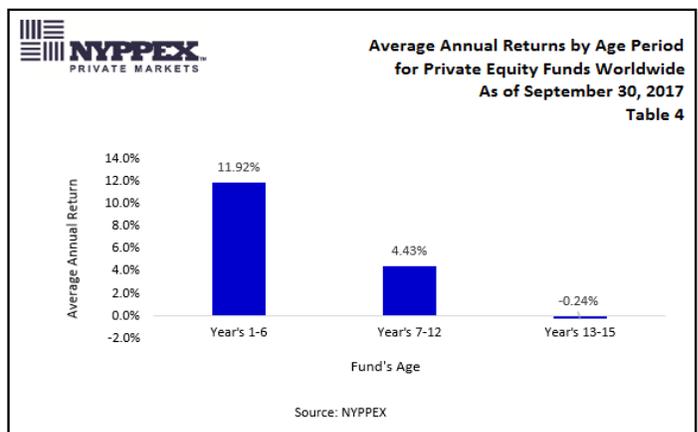
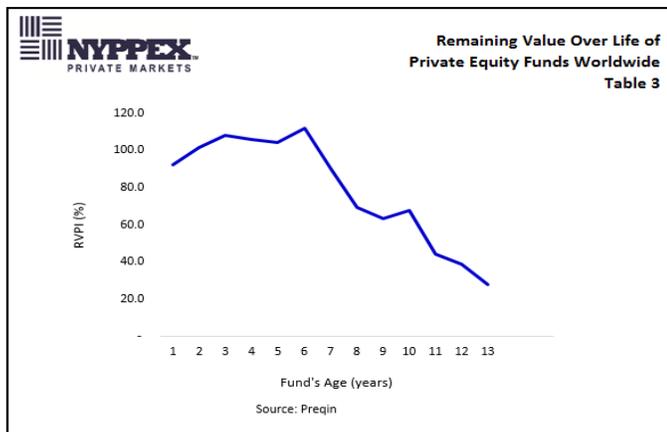
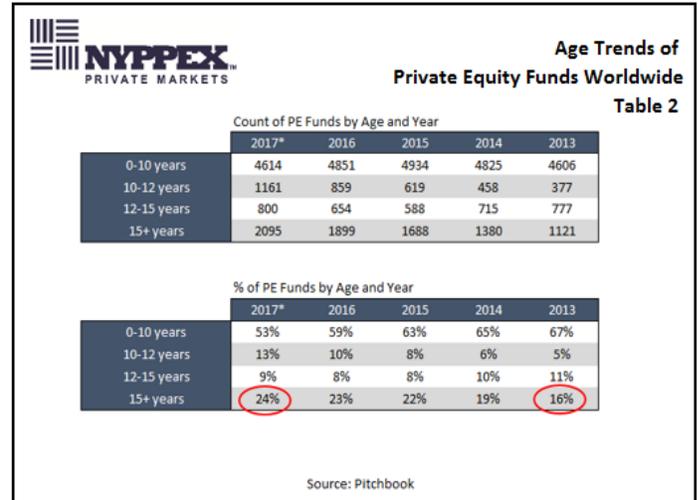
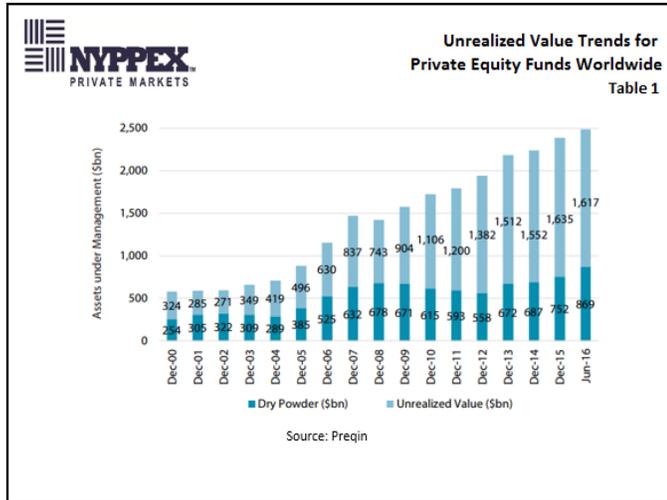
<p>Unrealized Value Increasing</p> <p>Fund Terms Extending</p>	<ul style="list-style-type: none"> • Today, unrealized value is over \$1.6 trillion in private equity funds worldwide as estimated by NYPPEX. This trend has caused private equity funds to extend terms and evaluate GP-led transactions such as liquidations or restructurings. • Private equity funds' aged 15 years or more now comprise approximately 24% of private equity funds worldwide compared to 16% as of December 31, 2013. In general, as private equity funds extend terms, annual returns decline to investors. <i>Please see Table 1 - Unrealized Value Trends for Private Equity Funds Worldwide. Please see Table 2 - Age Trends of Private Equity Funds Worldwide.</i>
<p>Standard IRR & IM Methods Mask Returns in Later Years</p> <p>Managing Investor Fiduciary Risk</p> <p>Tail-End Fund Liquidations vs. Restructurings</p>	<ul style="list-style-type: none"> • We believe that standard IRR and investment multiple calculation methodologies mask the actual annual returns in older tail-end funds due to (i) their inclusion of cumulative returns generated in earlier years and (ii) failure to reflect annual changes in net asset values, which for older funds in recent years - show rapid declines. <i>Please see Table 3 - Remaining Value Over Life of Private Equity Funds Worldwide.</i> • Increasingly, we believe general partners will seek to manage investor fiduciary risk upon an understanding that older private equity funds aged 13-15 years are generating an annual return of only -0.24% on average for the 12 month period ended September 30, 2017. • For tail-end funds with minimal return potential, we believe general partners should consider a liquidation strategy via the secondary markets. For tail-end funds that require more time for the opportunity to generate attractive returns, we believe general partners should consider a restructuring strategy, which typically (1) offers options to the fund's investors such as to (a) remain in the tail-end fund at a reduced management fee or to transfer to a new fund or (b) divest interests via the secondary market and (2) seeks to raise capital for a new fund from the secondary-primary investors. <i>For a fiduciary risk analysis utilizing historical returns by age category for 3,420 private equity funds, please see the table below.</i>

General Partners' Fiduciary Risk Analysis

Assumes \$1 million Net Asset Value in a 2004 Private Equity Fund

Action	Fund & Vintage	Age in Years	Holding Period (Years)	Estimated Annual Return	Price (% of NAV) or Reinvestment	Future Value in 5 Years	% Change in Future Value at 5th Year
Hold	Sample PE Fund 2004	13	5	-0.24%	n/a	\$988,083	
vs							
Sell	Sample PE Fund 2004	13	n/a	n/a	80		
Buy	Sample PE Fund 2018	<1	5	11.92%	\$800,000	\$1,404,850	
	Sell vs. Hold Relative Performance			+12.16%		+\$416,767	+42%

Tables



Report Methodology. NYPPEX' evaluated approximately 3,420 private equity funds whose performance data met our standards for this analysis. Fund profiles were (a) 2001 through 2017 vintages, (b) buyout, real estate, distressed debt, natural resources, infrastructure, secondaries and funds of funds strategies and (c) North America, Europe, Asia, Middle East, Australia and Africa regions.

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