Private Equity Insights

FOURTH EDITION | Q2 2016

CURRENT QUARTER PERFORMANCE SUMMARY

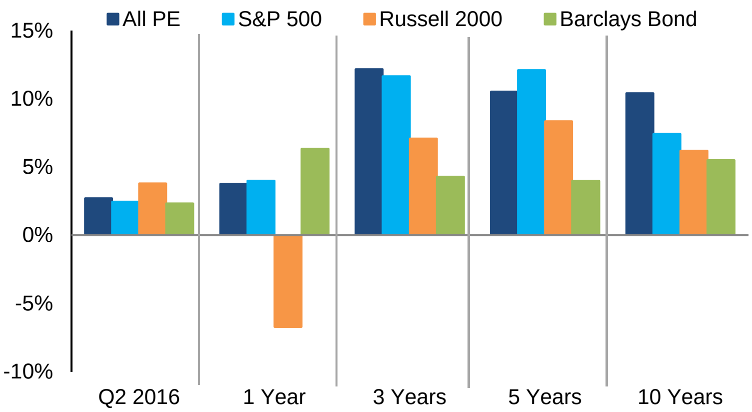
The State Street Private Equity Index posted an overall return of 2.70% in the second quarter of 2016, the highest quarterly return since 2015 Q2, with moderate growth in buyout and private debt and flat return in venture capital (see Exhibit 1). The rolling one-year return of the index dropped to 3.76% following a downward trend in the past two years; on a three-year and ten-year basis, however, the index outperformed major public equity and fixed income indices in the U.S (see Exhibit 2).

Exhibit 1: Private Equity Performance by Strategy

	All PE	Buyout	VC	Private Debt
2016 Q2	2.70%	3.41%	0.28%	2.61%
2016 Q1	0.65%	1.25%	-1.49%	0.75%

Source: State Street Global Exchange℠, as of Q2 2016.

Exhibit 2: Investment Horizon Returns



Source: State Street Global Exchange℠, DataStream, Bloomberg Barclays US Aggregate Bond Index (Total returns as of Q2 2016).

Continued on page 4.

DONKEYS VS. ELEPHANTS: THE PRIVATE CAPITAL EDITION

Insights from the Private Capital Research Institute

PCRI
The Private Capital Research Institute

By Leslie Jeng and Josh Lerner

Given the tumultuous U.S. election season, it is natural to ask under which party has private investing done better. Is there a systematic difference between Democratic and Republican administrations in how private investors fare?

The answer might be considered straightforward. While both presidential candidates in 2016 favored treating carried interest as ordinary income (as opposed to the more tax-favored capital gains), in general one might expect that Republican administrations would be more favorable for private investors along a variety of dimensions. These include:

- Less antitrust scrutiny of acquisitions (important for successful trade sales),
- Encouragement of tax cuts on capital gains (even if many limited partners are tax-exempt, attractive capital gains can entice entrepreneurs to work for private firms rather than for large corporations[1]), and
- More generally, a pro-business approach that can boost investor confidence.

Continued on page 2.

[1] Poterba, James (1989), "Capital Gains Tax Policy Toward Entrepreneurship," *National Tax Journal* 42, pp. 375-390. Gompers, Paul and Josh Lerner (1998), "What Drives Venture Capital Fundraising?," *Brookings Paper on Economic Activity: Microeconomics*, pp. 149-192.

DONKEYS VS. ELEPHANTS – CONTINUED FROM PAGE 1

At the same time, it is well documented that public markets in the United States have performed better under Democratic administrations.[2] Thus, we were curious to know how private capital fared under the different U.S presidents. We looked at performance relative to public markets, in order to understand the returns of private funds.

Specifically, we proceeded in two ways, using the universe of funds collected by State Street. First, we examined the pooled annual returns of private capital funds --including private equity and venture capital-- in excess of the Russell 3000 return in the same year during different U.S. administrations. Throughout our analysis, we do not weight the averages by the amount of funds raised, to avoid overweighting recent years.

Exhibit 3 and 4 provide the excess annual returns (i.e., net of the Russell 3000) for the aggregate private equity and venture capital industry from 1983 when State Street data begins having well-populated return data through 2015. The results highlight that the best years for the relative performance of private capital occurred under the administrations of Bill Clinton and George W. Bush. When we run the horse race between years under Democratic and Republican administrations, the donkey beats the elephant, although the differences are only significant at about the 15% confidence level, reflecting the small sample size and the variation in excess performance from year to year. .

We then looked at the cumulative performance (again, adjusting for public market returns) for vintages of funds begun under Republican and Democratic administrations. We used the Kaplan-Schoar Public Market Equivalent (PME) measure, a popular way to adjust for public market movements.[3] A PME greater than one implies that private markets outperformed public ones; a PME less than one implies the reverse.

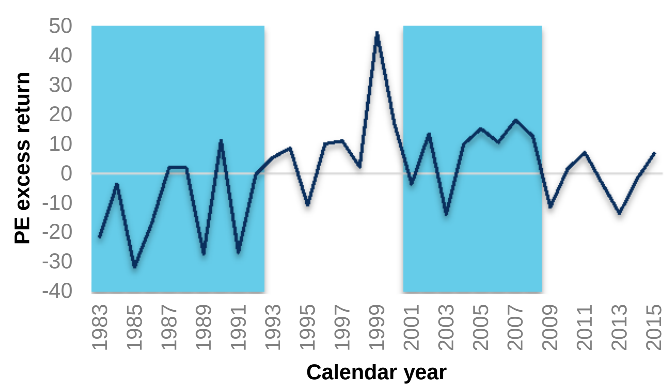
This analysis poses a tricky issue: for a fund begun in 1999, for instance, should we give credit for its performance to Bill Clinton who was president at the time, or to George W. Bush during whose term the bulk of the investments were likely to be made and harvested? To address this concern, we excluded the funds raised in the last two years of an administration before a change in political control of the presidency (e.g., funds raised in 1991, 1992, 1999, 2000, 2007, and 2008). We also excluded funds raised in 2014 and 2015, as we felt the PME measures would not be particularly meaningful due to the immaturity of the funds.

Exhibit 3: Average Pooled Annual Excess Returns of Private Capital

Ronald Reagan (1983 onwards)	-11.5%
George H.W. Bush	-10.6%
William Clinton	+11.6%
George W. Bush	+8.0%
Barack Obama (through 2015)	-2.0%
All Democrats	+5.2%
All Republicans	-2.6%

Source: Author's analysis based on State Street Private Equity Index, as of Q2 2016.

Exhibit 4: Difference between Annual Private and Public Market Returns (%)*



Source: Author's analysis based on State Street Private Equity Index, as of Q2 2016. *Shaded region represents Republican administration years

When we undertake these comparisons in Exhibit 5 and 6, private capital funds under all administrations performed better than their public counterparts. But the strongest performance clearly occurred in the two Bush administrations

2 Blinder, Alan and Mark Watson (2016), "Presidents and the US Economy: An Econometric Exploration," *American Economic Review, American Economic Association*, vol. 106(4), pp. 1015-45.

3 Kaplan, Steven and Antoinette Schoar (2005), "Private Equity Performance: Returns, Persistence, and Capital Flows," Journal of Finance, Volume 60, Issue 4, pp. 1791-1820; Lerner, Josh, Ann Leamon, and Felda Hardymon (2012), "Venture Capital, Private Equity and the Financing of Entrepreneurship", John Wiley & Sons, Inc.

and the Clinton years, with the much discussed decline in relative performance becoming apparent in the Obama years.[4] Overall, we see slightly better performance in vintage years begun in Democratic administrations, but the difference is modest and far from statistically significant.

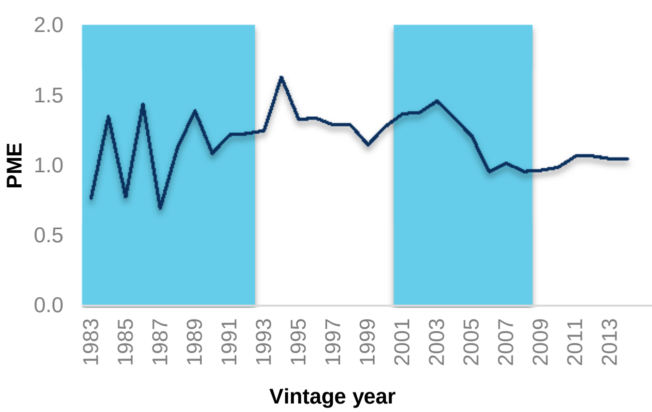
The donkey vs. elephant comparison may not be able to tell us how private capital will fare in the next four years. But hopefully this analysis has been more entertaining than some of this year's presidential debates!

Exhibit 5: Average Private Capital PME

Ronald Reagan (1993 onwards)	1.03
George H.W. Bush (excludes 1991 and 1992)	1.24
William Clinton (excludes 1999 and 2000)	1.36
George W. Bush (excludes 2007 and 2008)	1.29
Barack Obama (through 2013)	1.03
All Democrats	1.21
All Republicans	1.17

Source: Authors' analysis based on State Street Private Equity Index, as of Q2 2016.

Exhibit 6: PMEs by Vintage Year



Source: Authors' analysis based on State Street Private Equity Index, as of Q2 2016.

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The Private Capital Research Institute is a not-for-profit 501(c)(3) corporation formed to further the understanding of private capital and its global economic impact through a commitment to the ongoing development of a comprehensive database of private capital fund and transaction-level activity supplied by industry participants. The PCRI, which grew out of a multi-year research initiative with the World Economic Forum, also sponsors policy forums.

[4] Harris, Robert, Tim Jenkinson,and Steven Kaplan (2016), "How do Private Equity Investments Perform Compared to Public Equity?", *Journal of Investment Management*, pp. 1-24.; L'Her, Jean-Francois, Rossitsa Stoyanova, Kathryn Shaw, William Scott, and Charissa Lai (2016), "A Bottom-Up Approach to the Risk-Adjusted Performance of the Buyout Fund Market," *Financial Analysts Journal*, Volume 72, Number 4, pp. 37-48.

CURRENT QUARTER PERFORMANCE SUMMARY – CONTINUED FROM PAGE 1

With the long anticipated interest rate hike looming at the corner, we looked into the simple linear relationship between historical PE performance and Fed fund rate (FFR) changes. We regressed all PE one-year IRR against the same period changes in FFR and Russell 3000 total return between Q2 1984 and Q2 2016 (see Exhibit 7, where model 1 and 2 are univariate regressions and model 3 includes both FFR changes and the Russell 3000 return).

We found significant positive relationship between PE performance and FFR changes in our sample, even after controlling for the effect of public market returns.

Exhibit 7: Regression Analysis: PE Performance vs. Fed Fund Rate Changes and Russell 3000 Returns

Model	1	2	3
Intercept	15.09	6.24	8.65
t-stats	*(6.02)*	*(2.14)*	*(3.24)*
FFR change	5.45		4.24
t-stats	*(3.47)*		*(3.16)*
Russell 3000 return		0.63	0.53
t-stats		*(4.15)*	*(3.85)*
Adjusted R^2	0.26	0.34	0.49

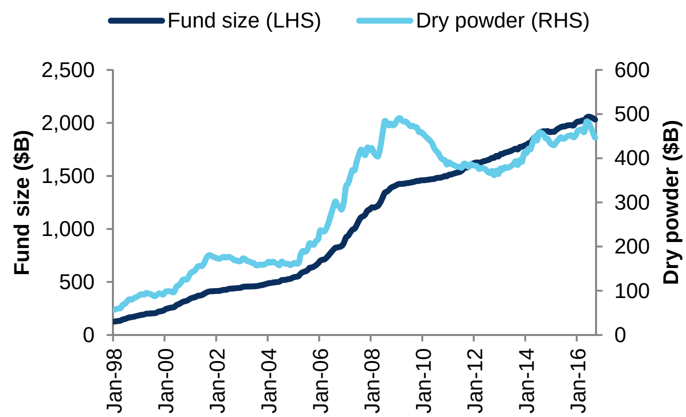
Source: State Street Global Exchange[SM], as of Q2 2016.

Cash Flow Activity

Private equity had a great recovery after the 2008 financial crisis, with robust fund raising, deal making and exit activities since 2010. In Exhibit 8, we show the total fund size and dry powder by calendar month between January 1998 and September 2016. In each month, only active funds younger than 15 years are accounted for.

There are some noteworthy differences between the 2005-2008 pre-crisis boom-years and the 2010-2016 post-crisis recovery. First, fund raising in recent years has been strong but more modest than that of the pre-crisis boom-years. Second, the dry powder increased much faster than total fund size between 2005 and 2008 – a sign that GPs were not able to keep up their investments with new capital raised; in recent years, the dry powder increases were more in line with increases in fund size.

Exhibit 8: Fund Size and Dry Powder (Jan. 1998 – Sep. 2016)

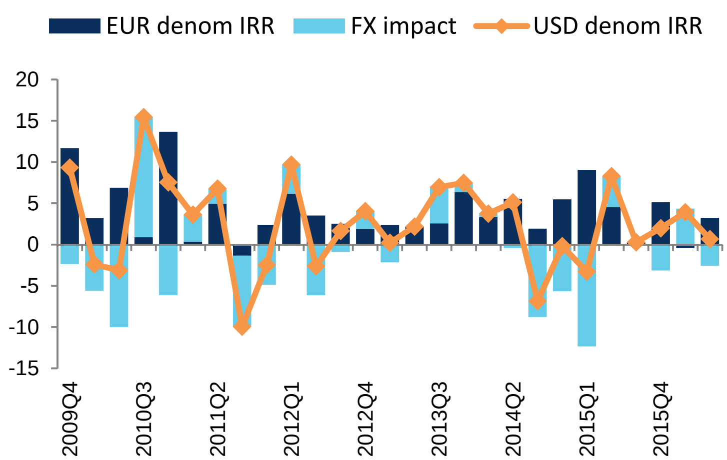


Source: State Street Global Exchange[SM], as of Q2 2016.

Valuations

The anticipation of an interest rate hike also drove up the value of the US dollar against other currencies. Such movements could impact the USD denominated valuations of foreign assets. We looked into the performance of Europe Buyout funds as an example (see Exhibit 9). The FX impact to these funds was defined as the difference between their USD-denominated quarterly IRR and EUR-denominated (i.e. local) counterpart. A simple linear regression of USD-denominated quarterly IRR against the FX impact indicated that about 64% of the volatility in USD-denominated returns could be explained by USD/EUR FX impact (sample period 2009Q4 - 2016Q2).

Exhibit 9: FX Impact to Europe Focused Buyout Fund returns



Source: State Street Global Exchange[SM], as of Q2 2016.

ABOUT THE GX PRIVATE EQUITY INDEX

Participants in private capital markets need a reliable source of information for performance and analytics. Given the non-public nature of the private equity industry, collecting comprehensive and unbiased data for investment analysis can be difficult. The GX Private Equity Index ("GXPEI") helps address the critical need for accurate and representative insight into private equity performance.

Derived from actual cash flow data of our Limited Partner clients who make commitments to private equity funds, GXPEI is based on one of the most detailed and accurate private equity data sets in the industry today. These cash flows, received as part of our custodial and administrative service offerings, are aggregated to produce quarterly Index results. Because the GXPEI does not depend on voluntary reporting of information, it is less exposed to biases common among other industry indexes. The end result is an index that reflects reliable, consistent and unbiased client data, and a product that provides analytical insight into an otherwise opaque asset class.

- Currently comprises more than 2,600 funds representing more than $2.47 trillion in capital commitments as of Q2 2016.
- Global daily cash-flow data back to 1980.
- The Index has generated quarterly results since Q3 2004.
- Published approximately 100 days after quarter-end.