Oregon Investment Council

February 3, 2016 - 9:00 AM

PERS Headquarters
11410 S.W. 68th Parkway
Tigard, OR 97223

Katy Durant
Chair

John Skjervem
Chief Investment Officer

Ted Wheeler
State Treasurer

OREGON INVESTMENT COUNCIL

Agenda

February 3, 2016
9:00 AM

PERS Headquarters
11410 S.W. 68th Parkway
Tigard, OR 97223

Time	A. Action Items	Presenter	Tab
9:00-9:05	**1. Review & Approval of Minutes** December 9, 2015	**Katy Durant** *OIC Chair*	**1**
	Committee Reports	**John Skjervem** *Chief Investment Officer*	
9:05-9:45	**2. Vista Equity Partners Fund VI, L.P.** *OPERF Private Equity Portfolio*	**Michael Langdon** *Senior Investment Officer* **Andy Hayes** *Investment Officer* **Robert F. Smith** *Founder, Chairman & CEO* **Tom Martin** *TorreyCove Partners*	**2**
9:45-10:30	**3. Private Equity Review and 2016 Plan** *OPERF Private Equity Portfolio*	**Michael Langdon** *Senior Investment Officer* **David Fann** *TorreyCove Partners* **Tom Martin** *TorreyCove Partners*	**3**
10:45-10:50	**4. Annual Placement Agent Report**	**John Hershey**	**4**
10:50-10:55	**5. Proposed 2017 OIC Meeting Dates**	**John Skjervem**	**5**

B. Information Items

10:55-11:00	**6. Asset Allocations & NAV Updates** a. Oregon Public Employees Retirement Fund b. SAIF Corporation c. Common School Fund d. Southern Oregon University Endowment Fund	**John Skjervem**	**6**
	7. Calendar — Future Agenda Items		**7**
	8. Other Items	**Council** **Staff** **Consultants**	

C. Public Comment Invited

15 Minutes

TAB 1 – REVIEW & APPROVAL OF MINUTES

December 9, 2015 Regular Meeting

OST Committee Reports – Verbal

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INVESTMENT DIVISION

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OREGON INVESTMENT COUNCIL
DECEMBER 9, 2015
MEETING MINUTES

Members Present:	Rukaiyah Adams, Katy Durant, Keith Larson, Steve Rodeman, John Russell, Ted Wheeler
Staff Present:	Darren Bond, Deena Bothello, Tony Breault, Austin Carmichael, Garrett Cudahey, Debra Day, Sam Green, Scott Harra, John Hershey, Julie Jackson, Krehbiel, Michael Langdon, Perrin Lim, Tom Lofton, Ben Mahon, Mike Mueller, Paola Nealon, Nancy O'Halloran, Jen Peet, Jen Plett, Dave Randall, Jo Recht, Tom Rinehart, Angela Schaffers, Priyanka Shukla, James Sinks, John Skjervem, Michael Viteri, Byron Williams
Consultants Present:	David Fann and Tom Martin (TorreyCove); Allan Emkin, Christy Fields, David Glickman, Dillon Lorda (PCA); Janet Becker Wold, Jim Callahan, Uvan Tseng (Callan)
Legal Counsel Present:	Dee Carlson, Oregon Department of Justice

The December 9, 2015 OIC meeting was called to order at 9:00 am by Katy Durant, Chair.

I. 9:00 am Review and Approval of Minutes

MOTION: Mr. Russell moved approval of the October 28, 2015 meeting minutes. Mr. Larson seconded the motion, which then passed by a 5/0 vote.

COMMITTEE REPORTS John Skjervem, OST Chief Investment Officer gave an update on the following committee actions taken since the October 28, 2015 OIC meeting:

Private Equity Committee:
None

Alternatives Committee:
None

Opportunity Portfolio Committee:
None

Real Estate Committee:
None

II. 9:01 am KKR Americas Fund XII, L.P. - *OPERF Private Equity Portfolio*

Staff and TorreyCove recommended a $500 million commitment to the KKR Americas Fund XII, L.P. for the OPERF Private Equity Portfolio, subject to satisfactory negotiation of terms and conditions with Staff working in concert with Department of Justice personnel.

Across all of KKR's global private equity platforms, the GP looks for opportunities to acquire a controlling ownership stake in leading companies with strong business franchises, attractive growth prospects, defensible market positions and the ability to generate attractive returns. For KKR Americas Fund XII, the GP will target roughly 25 investments of $350 million to $600 million in companies with enterprise values of $500 million to $2 billion. From an industry standpoint, KKR has longstanding coverage of six sectors in the AMPE practice including retail & consumer, energy, financial services, healthcare, industrials and technology, media & telecom. With respect to strategy, Fund XII is being formed to engage in management buyouts/build-ups and growth equity investments primarily in companies based in North America. On an opportunistic basis, KKR will pursue deals in Latin America in Fund XII, and the AMPE practice has recently formed a specialized function to explore active, toe-hold investments in public equities.

KKR Americas Fund XII represents an attractive, core opportunity for the North America, large buyout portion of OPERF's Private Equity Program.

MOTION: Ms. Adams moved approval of the staff recommendation. Mr. Larson seconded the motion which passed by a vote of 5/0.

III. 9:54 am Global Infrastructure Partners III, L.P. - *OPERF Alternatives Portfolio*

Staff and TorreyCove recommended a $400 million commitment to Global Infrastructure Partners III, L.P. for the OPERF Alternatives Portfolio, subject to satisfactory negotiation of terms and conditions with Staff working in concert with Department of Justice personnel.

Global Infrastructure Partners was founded in 2006 by former senior executives from Credit Suisse and General Electric as an independent, specialist infrastructure fund manager. Since its inception, GIP has raised $17.8 billion in commitments for their flagship equity funds, as well as several GIP-led co-investments. Oregon's relationship with GIP dates back to 2011 when the OIC committed $150 million of OPERF capital to Global Infrastructure Partners Fund II, L.P. ("GIP II"), a global, diversified equity mandate. A subsequent $200 million commitment was made to the Global Infrastructure Partners Capital Solutions Fund, L.P. ("GIP CAPS"), a global, diversified debt mandate, in 2014. Thus, this proposed commitment represents the OIC's third GIP fund commitment.

GIP is seeking $12.5 billion in aggregate L.P. capital commitments for the Fund with a $15 billion hard cap. The Firm plans to hold a first close on or about December 15, 2015. Well in excess of the Alternatives Portfolio's target return, the Fund is targeting a gross internal rate of return of 15% to 20%.

The Alternatives Portfolio target allocation to infrastructure is 20% to 30% (or approximately $1.7 billion to $2.5 billion at current OPERF NAV). To date, OIC has approved $1.55 billion in aggregate commitments to the sector, and Staff considers GIP III an anchor commitment within the OPERF infrastructure portfolio.

MOTION: Mr. Russell moved approval of the staff recommendation. Ms. Adams seconded the motion which passed by a vote of 4/1 (Treasurer Wheeler voted no).

IV. 10:55 am OPERF Opportunity Portfolio Review

John Hershey, Director of Alternative Investments presented the Opportunity portfolio annual review and provided an update on that portfolio's strategic focus and transaction pipeline.

V. <u>11:15 am OPERF Real Estate Review</u>

Tony Breault, Senior Investment Officer along with PCA's Christy Fields and David Glickman gave a review of the OPERF Real Estate portfolio performance and prevailing market conditions, followed by a strategic review of the portfolio's long-term objectives. This strategic review included a plan to increase the portfolio's focus on current income, reduced its volatility and continue staff's pursuit of scalable, separate account mandates. To accomplish these objectives, staff will submit corresponding policy revisions for OIC review and approval in Q1 2016.

VI. <u>11:45 am OPERF Fixed Income Strategy Update</u>

Tom Lofton presented a comprehensive analysis that included an evaluation of ten potential strategies for the planned reconstitution of OPERF's fixed income portfolio. Based on this analysis, Staff recommended a revised strategy, key components of which include the following:

- Reduce below investment grade exposures which exhibit credit risks positively correlated with equity market volatility;
- Add U.S. Treasury and Agency exposure to mitigate equity market volatility at the total OPERF portfolio level; and
- Given a reduced need for near-term plan liquidity, use current Short Duration High Quality mandate to fund both the U.S. Treasury/Agency exposure and an increased allocation to OPERF's existing Core mandates.

12:06 (after OIC Elections Vote) MOTION: Mr. Russell moved approval of the staff recommendation. Ms. Adams seconded the motion which passed by a vote of 4/0 (Treasurer Wheeler had already left the meeting).

VII. <u>12:05 pm OIC Elections</u>

Mr. Larson moved to continue with Ms. Durant as OIC Chair and Ms. Adams as Vice Chair. Treasurer Wheeler seconded the motion, which passed by a vote of 5/0.

VIII. <u>12:20 pm OPERF Q3 2015 Performance Report</u>

Janet Becker-Wold of Callan Associates gave a 3rd Quarter OPERF investment performance report.

IX. <u>12:29 pm Asset Allocation & NAV Updates</u>

Mr. Skjervem reviewed asset allocations and NAVs across OST-managed accounts for the period ended October 31, 2015.

X. <u>12:30 pm Calendar – Future Agenda Items</u>

Mr. Skjervem briefly discussed the OIC forward calendar.

XI. <u>12:30 pm Other Items</u>

Mr. Skjervem gave an update on the Investment Division's current recruiting endeavors.

<u>12:32 pm Public Comments</u>

Bill Parish, Registered Investment Advisor with Parish & Company, addressed the Council with prepared remarks.

Ms. Durant adjourned the meeting at 12:35 pm.

Respectfully submitted,

Julie Jackson

Julie Jackson
Executive Support Specialist

TAB 2 – VISTA EQUITY PARTNERS FUND VI, L.P.

Vista Equity Partners VI, L.P.

Purpose

Subject to satisfactory negotiation of terms and conditions with Staff working in concert with DOJ personnel, Staff and TorreyCove recommend approval of a $500 million commitment to Vista Equity Partners VI, L.P. ("Fund VI" or the "Fund") for the OPERF Private Equity Portfolio. This proposed commitment represents the planned continuation of an existing general partner relationship.

Background

Vista Equity Partners ("Vista" or the "Firm") was founded in 2000 and is led today by co-founders Robert Smith, CEO and Brian Sheth, President. Stephen Davis, the third founding principal, left Vista in 2009 in a mutually agreed upon separation. Vista maintains offices in San Francisco, Chicago, and Austin and currently employs 69 investment professionals and 83 professionals within its captive consulting group (Vista Consulting Group, or "VCG").

Vista has raised over $14 billion in capital commitments across all funds to date. The Firm currently invests via its flagship equity funds, Foundation funds (focusing on smaller transactions), a credit fund and a hedge fund. OPERF is a Limited Partner in Vista Equity Partners Fund III, L.P., Vista Equity Partners Fund IV, L.P., Vista Equity Partners Fund V, L.P. as well as Vista Foundation Fund II, L.P. Vista is targeting at least $8 billion for Vista Equity Partners Fund VI, L.P., and has not set a hard cap at this time.

Strategy

Vista's focus for Fund VI will be similar to that pursued in its previous flagship equity funds. The Firm will seek to acquire "mission critical" enterprise software or technology-enabled companies with high recurring revenue and high customer retention. Vista will position Fund VI to continue the platform and add-on focus of past funds, targeting company acquisitions with enterprise values generally between $400 million and $5 billion. Fund VI will typically invest at least $200 million in a platform company, while also adding smaller-sized 'add-on' transactions to each platform. Relative to its past funds, Vista is increasing the prospective size of Fund VI in order to a) opportunistically pursue larger companies without running into allocation limits and b) enhance vintage year diversification.

Unlike many other private equity firms, Vista views itself as a software "holding company" rather than a classic buyout firm. Once a transaction has been consummated, Vista begins implementing their Vista Standard Operating Procedures (VSOPs), a proprietary suite of (currently) 83 constantly changing operating principles and tactics designed to increase revenues and margins. The VSOPs have been very successful to date, and Vista has not lost money on a control deal since its inception. To help transform acquired companies and implement its VSOPs, the Firm created the above-mentioned VCG which has grown to become the Firm' largest business unit.

Issues to Consider

<u>Attributes</u>:

- *Strong investment performance.* Since inception, Vista's private equity deals have generated a total gross IRR of over 35% and a gross multiple on invested capital of 1.9x. Also, the Firm's more mature funds (Vista Equity Funds II and III as well as Foundation Fund I) have all generated net IRRs in excess of 28% which firmly secures Vista's first quartile performance ranking.
- *Deep experienced team with a narrow focus.* Vista has a relatively large team entirely focused on the enterprise software sector. Over the past 15 years, the team has invested close to $12 billion of equity, and returned close to $8.5 billion to investors.
- *Vista Consulting Group.* While other private equity firms have built (or are building) operating capabilities, Vista has an established, sector-specialized team. Staff believes VCG generates for

Vista a sustainable competitive advantage in the technology buyout space. By implementing its VSOPs, VCG adds significant value.

- *Brand recognition.* The Vista platform has become a brand name in the private equity industry as well as the enterprise software industry, which should continue to lead to significant deal flow and proprietary opportunities. While Vista has taken part in auctions in the past, their deep domain expertise has given them opportunities to a) initiate discussions in situations where a potential transaction had not yet been considered or b) front-run the auction process altogether. Vista is generally considered the leading private equity firm in the enterprise software industry.
- *Existing relationship.* On behalf of OPERF, OST and the OIC have been investing with Vista for the past eight years, and Staff sits on the advisory board for Vista Equity Partners Funds III, IV, V as well as Foundation Fund II. As such, Staff has had the opportunity to build a strong relationship with Firm partners and witness firsthand the Vista organization's strong execution capabilities and industry acumen.

Concerns:

- *Fund Size.* Vista is targeting aggregate commitments of $8 billion, with no stated hard cap. Vista Equity Partners Fund V, L.P. was a $6 billion fund, and Fund IV was $3.5 billion. Due to market demand, Staff expects that Fund VI will be oversubscribed. Staff generally becomes concerned as general partners raise larger funds. [Mitigant: Vista has proven very successful at investing in larger deals as the firm has matured. Their ten largest investments are currently marked at a conservative 1.6x cost. As mentioned above, every control investment in Vista's portfolio has been realized for a gain or is currently valued at or above cost.]
- *Narrow industry focus.* Vista focuses predominantly on the enterprise software industry. There will be times when companies in this industry are relatively over- or under-priced, and there could be perceptions of industry concentration risk. [Mitigant: Enterprise software permeates all industries and is expected to grow by close to 13% a year over the next 7 years, according to Gartner IT Spend Forecast and Capital IQ. Additionally, what Vista calls the "Mid Cap" and "Large Cap" space – companies with enterprise values above $300 million (Vista's main focus) – now includes over 5,000 companies, which should continue to provide ample investment opportunities.]
- *Time and attention.* Vista has expanded its platform to include several new strategies. In 2013 the Firm raised its first Credit Opportunities Fund, and has on-boarded a hedge fund team to deploy public strategy capital. [Mitigant: Staff will continue to monitor Vista's capacity to take on more strategies and assets. The Firm continues to build its team, in multiple verticals, in order to expand its capacity. At this time, Staff is comfortable with Vista's various fund and product commitments relative to its current professional roster and management capacity. In addition, Vista has demonstrated its proficiency to exit investments at a frequent pace.]

Terms

The Fund's management fee, preferred return and carry are typical for funds of this type (see TorreyCove memo for details); moreover, proposed terms stipulate that all transaction and monitoring fees are subject to a 100% management fee offset. Finally, no placement agent had contact with Staff in connection with this offering.

Conclusion

In an attempt to more heavily weight the outperformers in OPERF's Private Equity portfolio, staff recommends upsizing the commitment to Vista Equity Partners Fund VI as the Firm ranks high among OPERF's top performing managers.

MEMORANDUM

TO: Oregon Public Employees Retirement Fund (“OPERF”)

FROM: TorreyCove Capital Partners (“TorreyCove”)

DATE: January 22, 2016

RE: Vista Equity Partners Fund VI, L.P. (the “Fund)

Strategy:

The Fund will pursue majority, control investments in enterprise software, data, and technology-enabled solutions companies that serve a variety of different sectors and sub-sectors. The Fund will primarily target companies headquartered in North America but will have the ability to invest outside of this region selectively. A typical investment for the Fund will have a total enterprise value between $400.0 million and $5.0 billion and will typically require over $200.0 million of equity. In addition to pursuing privately held stand-alone companies, the Fund will also pursue carve-outs as well as take-privates. As a general rule, the Fund will seek to acquire companies with significant value creation opportunities. Vista’s investment process relies upon the ability to utilize the 80-person Vista Consulting Group and deploy Vista’s proprietary VSOPs to transform companies into predictable, high cash flow businesses.

Please see attached investment memorandum for further detail on the investment opportunity.

Allocation:

A new commitment to the Fund would be allocated 100% to the Large Corporate Finance investment sub-sector and will further be categorized as a Domestic investment. As of the September 30, 2015, quarterly report, OPERF’s allocation to Large Corporate Finance is listed in the table below. It is important to note that since allocation is based on fair market value, a commitment to the Fund would not have an immediate impact on OPERF’s current portfolio allocation. Commitments to the Fund are complementary to OPERF’s existing fund commitments and provide the overall portfolio with a further degree of diversification.

As of September 30, 2015	Target	FMV	FMV + Unfunded
Large Corporate Finance	45-65%	43.0%	42.2%

Conclusion:

The Fund offers OPERF an opportunity to participate in a differentiated portfolio of private equity investments with relatively attractive overall terms. TorreyCove’s review of the General Partner and the proposed Fund indicates that the potential returns available justify the risks associated with an investment in the Fund. TorreyCove recommends that OPERF consider a commitment of up to $500 million to the Fund. TorreyCove’s recommendation is contingent upon the following:

(1) Satisfactory negotiation or clarification of certain terms of the investment;

(2) Satisfactory completion of legal documents;

(3) Satisfactory continuation and finalization of due diligence;

(4) No material changes to the investment opportunity as presented; and

(5) Confidentiality maintained regarding the commitment of OPERF to the Partnership until such time as all the preceding conditions are met.

TAB 3 – PRIVATE EQUITY REVIEW AND 2016 PLAN

2016 Private Equity Annual Plan

February 2016

2016 Private Equity Annual Plan - Agenda

2016 Private Equity Annual Plan - Executive Summary

INVESTMENT ENVIRONMENT

- Global M&A hit record volumes in 2015 with Dealogic tacking $5 trillion of announced transactions
  - 2015 saw considerable volume in large deals with 10 announced transaction above $50 billion in enterprise value and a median enterprise value of $400 million for closed, control deals in North America and Europe
  - Deal pricing remains high with the average multiple of EV/EBITDA of 8.5x
  - Private equity sponsors retained market share accounting for just over 25% of total M&A volume in 2015
- Leveraged finance new issuance was strong again in 2015 with $685 billion in the U.S. and €158 billion in Europe
  - While volumes remain strong on a historical basis they are roughly 20% off from 2014
  - Volumes have been on a consistent decline since records were set in 2013 as a result of tightened regulatory oversight of highly levered transactions
- Private equity & venture capital posted another solid year with respect to fundraising, deployment and realizations, but returns continue to trail public markets as they have since the financial crisis
  - Fundraising in 2015 was on pace to match 2014, but the market has strengthened significantly with high demand for allocations, very aggressive fundraising timelines and terms moving firmly in the direction of GPs
  - New deal activity was on pace to be slightly less than in 2014, and GPs appear to have shown reasonable discipline in this frothy environment
    - The median price for U.S. LBOs buyouts declined to 8.3x for the first three quarters of 2015 which compares to 10.7x for 2014. However, examining a smaller set of scale transactions reveals that prices remain very high
  - 2015 was the strongest year on record with respect to realizations with U.S. volumes on pace to exceed the previous record set in 2014 by 33%

2016 Private Equity Annual Plan - Executive Summary

OPERF PRIVATE EQUITY PROGRAM UPDATE

- As of September 30, 2015 the program had a current value of $14.2 billion across 230 active partnerships
  - The PE program represented 20.9% of the overall fund at September 30, 2015. This compares to a target allocation of 17.5%
  - Since inception the fund has generated a net IRR of 15.7% and a net TVPI of 1.63x
  - Returns for the program have trailed the absolute benchmark (Russell 3000 + 300bps) by roughly 350bps over the 3 and 5 year periods, but OPERF Private Equity exceeded the Cambridge Associates Pooled Average IRR over the same time periods by 60bps and 70bps, respectively
- Through Q3-2015 the program generated $3.1 billion of YTD distributions versus $1.5 billion of YTD contributions
  - The program has been a material cash contributor with $6.6 billion of net distributions since 2012
  - The OIC approved $2.3 billion across 11 new commitments last year
  - From a strategy perspective, the current portfolio is 66% buyout and 34% VC + growth + special situations, and from a geographic standpoint the current portfolio is 79% U.S. and 21% international. Further, sector allocations broadly mirror those of the benchmark index (Russell 3000)
- The program continues to work through some challenging pre-crisis vintages (2005 & 2006 in particular)
  - Despite very strong liquidity, more than half of the program's current value is in funds that began investing before 2009. This mature portfolio is becoming a monitoring challenge as the pre-crisis funds face weak performance and elongated holdings periods leading to complex fund restructurings
- OPERF's private equity program ranks among the top tier of global LPs with respect to the scale of capital deployment, but the fund pursues an implementation strategy that is unique among that peer group
  - The Program relies almost exclusively on primary fund commitments while peers rely heavily on co-invest, direct investing and secondaries to tactically manage exposure and drive more favorable economics
  - Large GPs (on whom the OPERF peer cohort is primarily focused) will increasingly tailor offerings to accommodate these more sophisticated implementation strategies (e.g., co-invest, directs and secondaries) that to date OST/OIC have not pursued nor benefitted from

2016 Private Equity Annual Plan - Executive Summary

OST STAFF 2016 PRIVATE EQUITY PLAN

- Staff recommends a forward commitment pace of $2.5-3.5 billion over the next several vintage years
  - As illustrated in the TorreyCove presentation, pacing at this level allows for a gradual move of the allocation down to 17.5% over several years
  - The Program's GP roster has been rationalized significantly over the past several years. Staff recommends maintaining the current roster of roughly 50 managers which would dictate making 10-15 commitments per annum
  - Staff recommends a continued push to tighten the band of commitment sizes around an average commitment of $250-300 million to allow for more effective diversification and less reliance on mega funds. The proposed range would continue to use a $500 million soft cap while migrating the minimum check size up toward $100-150 million over time
  - In preparation for this push, staff recently undertook an exhaustive market mapping exercise tracking 1,000 scale managers, of which roughly 10% are either in the Program today or part of a candidate list for possible inclusion going forward
- From an implementation standpoint, staff recommends maintaining a focus on primaries with continued emphasis on due diligence and monitoring process enhancements
  - Staff will look to continue exploration of co-investment models as well as separate accounts/strategic relationships, but those initiatives are not prioritized above continuous improvement initiatives in the primary underwriting process
- From a monitoring standpoint, staff will look to spend time exploring solutions for the mature portion of the portfolio
  - As previously noted, more than half of the portfolio's current value is held in funds that commenced investing before 2009
  - End of fund life issues are becoming an increasing burden for staff and the industry in general
  - Staff will look for secondary and advisory solutions to create additional leverage and allow for more effective monitoring and value optimization
- Other 2016 staff projects include the private equity consultant RFP as well as collaboration on the internal risk and audit work already underway

- Investment Environment

M&A Environment – Global M&A

DEALOGIC 2015 DATA – ANNOUNCED M&A TRANSACTIONS

- 2015 was an extremely robust environment for global M&A with announced volume surpassing $5 trillion for the first time
  - 2015 volume surpassed the previous record set in 2007 ($4.6 trillion of announced activity)
  - U.S. targeted M&A accounted for roughly 50% of global M&A volume
  - Healthcare and Technology were the most active sectors with each accounting for roughly 15% of overall volume
  - Activity skewed to the large end with roughly $800 billion of activity attributable to 10 transactions valued of $50 billion or more
    - The previous record was five transactions at or above $50 billion – 1998, 1999 and 2014
    - 2015 top ten announced transactions listed below:

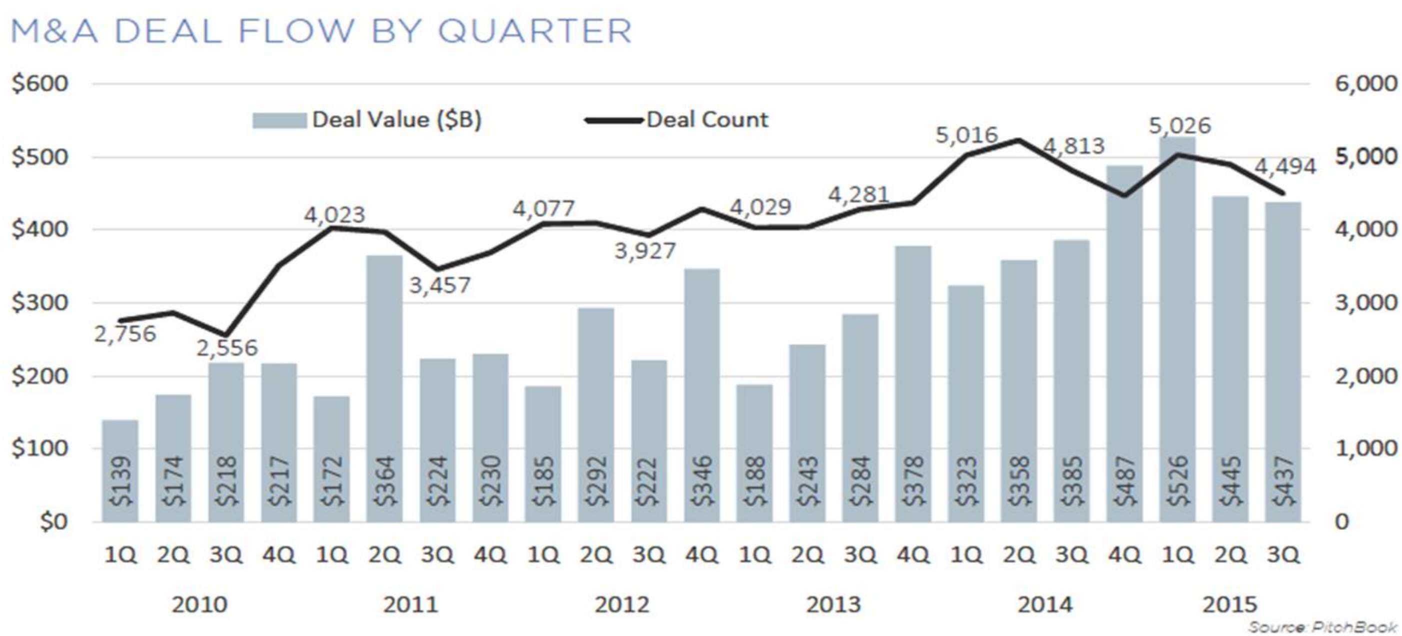
Top 10 Announced M&A Transactions 2015 YTD

Announced Date	Completion Date	Deal Value $bn	Acquiror	Target	Target Nationality	Target Industry
23-Nov-15	*Pending*	160	Pfizer	Allergan	United States	Healthcare
7-Oct-15	*Pending*	117.4	Anheuser-Busch InBev	SABMiller	United Kingdom	Food & Beverage
8-Apr-15	*Pending*	81.5	Royal Dutch Shell	BG	United Kingdom	Oil & Gas
26-May-15	*Pending*	79.6	Charter Communications	Time Warner Cable	United States	Telecom
11-Dec-15	*Pending*	68.6	Dow Chemical	EI du Pont de Nemours	United States	Chemicals
12-Oct-15	*Pending*	66	Dell	EMC	United States	Technology
25-Mar-15	2-Jul-15	62.6	HJ Heinz	Kraft Foods	United States	Food & Beverage
20-Jun-15	*Pending*	55.2	Anthem	Cigna	United States	Healthcare
22-Jun-15	*Pending*	55	Energy Transfer Equity	Williams Companies	United States	Oil & Gas
9-Jan-15	3-Jun-15	53.1	Cheung Kong (Holdings)	Hutchison Whampoa (50.0%)	Hong Kong	Holding Companies
SOURCE: DEALOGIC						

M&A Environment – Closed Developed Markets Control Deals

PITCHBOOK 2015 DATA – CLOSED CONTROL DEALS IN NORTH AMERICA & EUROPE

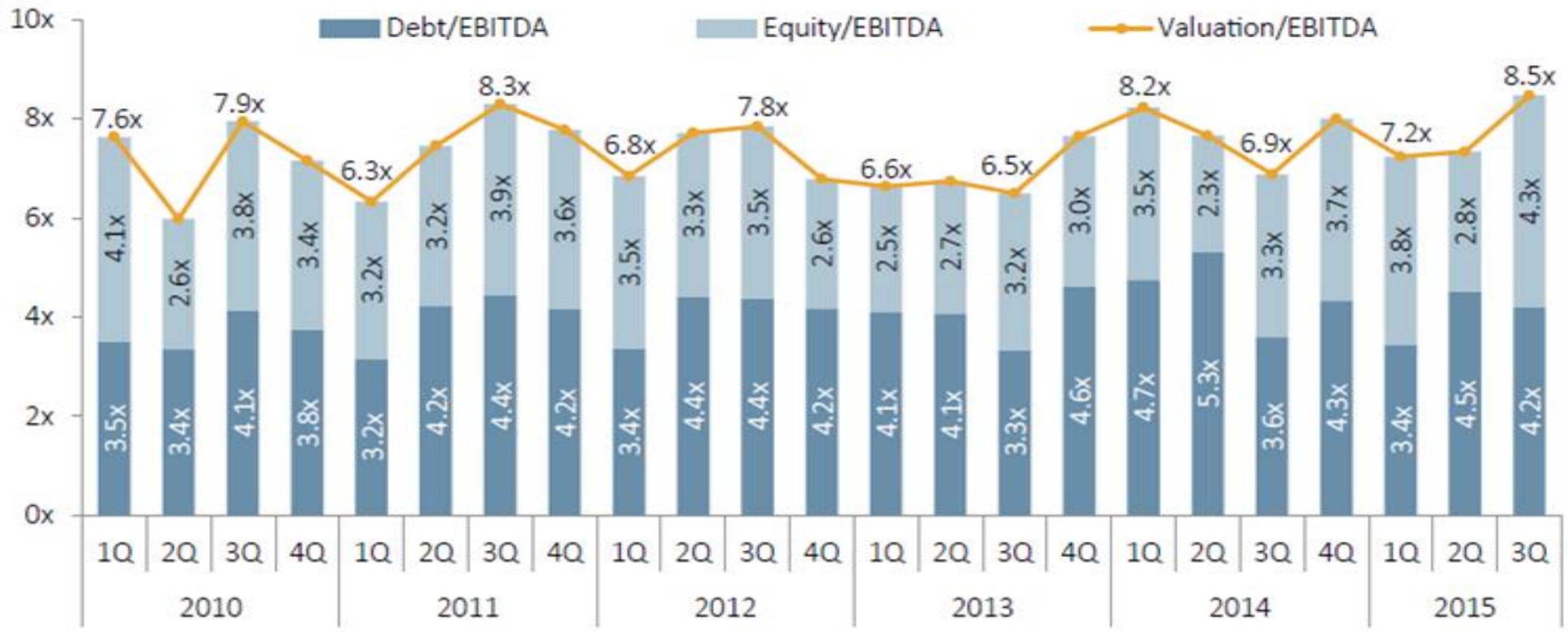
- Through 9/30/15, Pitchbook recorded over 14,000 change of control transactions in North America and Europe with an aggregate value of more than $1.4 trillion
  - Volume across 2015's first three quarters nearly matched the $1.5 trillion of activity for the full year 2014
  - Average transaction size has been above $400 million since Q4-14 (median is roughly $40 million). From Q1-10 to Q3-14, the average transactions size ranged from $205 - $312 million
    - 77% of volume as measured by value is attributable to deals valued above $1 billion. This compares to 68% in 2014 and 65% in 2013
  - The chart below presents quarterly M&A volume since 2010 using the Pitchbook data set



M&A Environment - Multiples

PITCHBOOK 2015 DATA – MULTIPLES

- Average multiples of EV/EBITDA and debt/EBITDA have continued to appreciate ending Q3-15 at 8.5x and 4.2x, respectively.
  - The chart below presents acquisition and debt multiples since Q1-10 using the Pitchbook data set. It is important to note that in this data set roughly 70% of all deals have transaction values below $100 million. This has the effect of skewing multiples down relative to the addressable market for the OPERF PE portfolio, but the overall trend of increasing price and debt multiples is clear

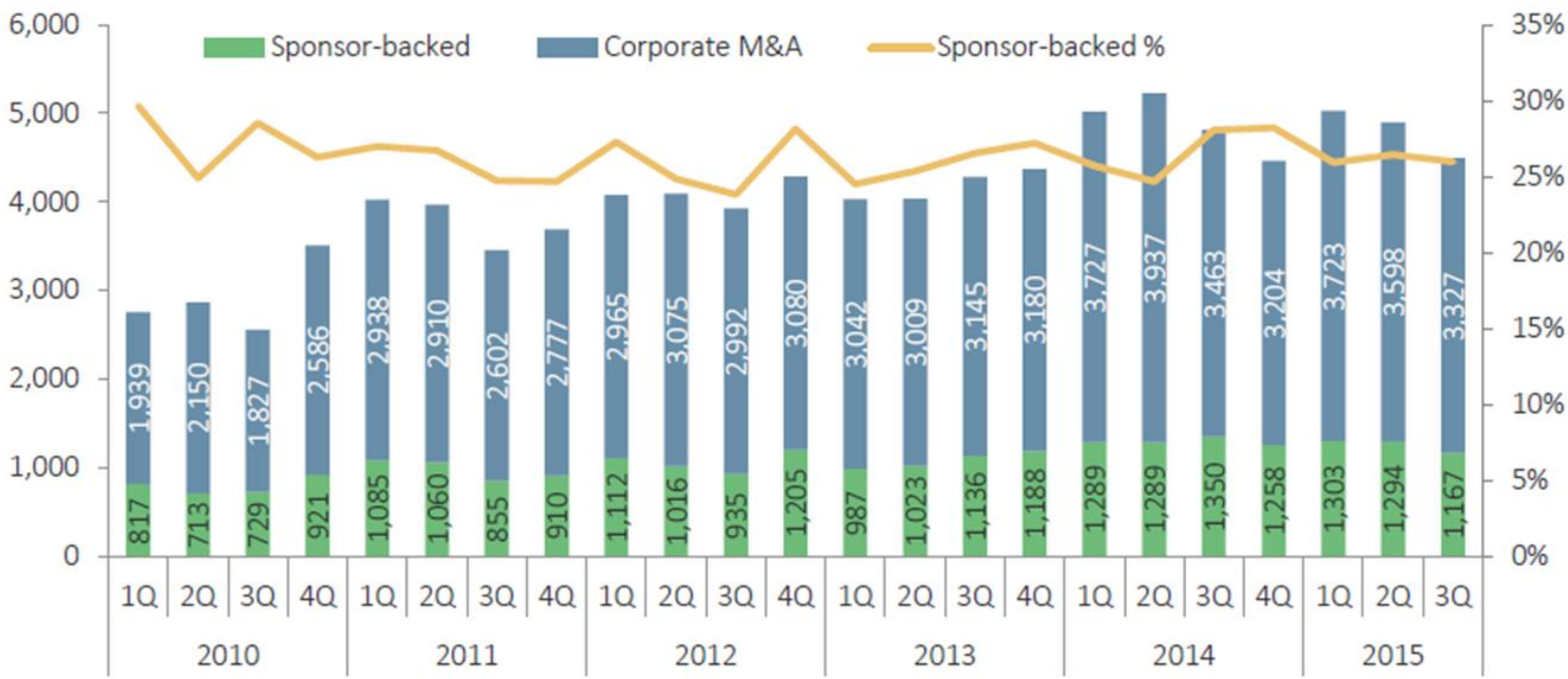


M&A Environment – Private Equity Market Share

PITCHBOOK 2015 DATA – PRIVATE EQUITY SHARE OF M&A ACTIVITY

- Sponsor backed acquisitions have represented 25-30% of M&A activity on a fairly consistent basis since before the global financial crisis (GFC) when the industry reached scale. The chart below presents PE's share of overall activity since 2010

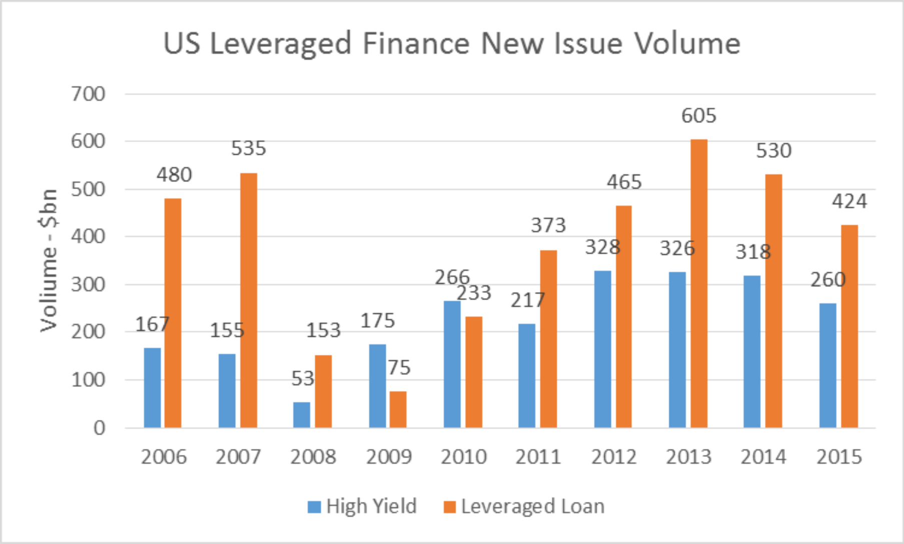
PE AS % OF OVERALL M&A ACTIVITY BY COUNT



Leveraged Finance Environment – U.S.

U.S. LEVERAGED FINANCE NEW ISSUE VOLUME

- New issue volumes have continued to gradually decline since 2013.
- Through December 11, 2015, U.S. leveraged finance new issuance totaled $684 billion
  - HY volume totaled $260 billion which was roughly 18% behind the pace set in 2014
  - Leveraged loan volume was $424 billion which was roughly 20% behind the pace set in 2014
    - Reduced activity over the course of 2H-14 and 2015 reflected tightened oversight of highly levered transactions by the Federal Reserve, FDIC and U.S. Office of Comptroller of Currency

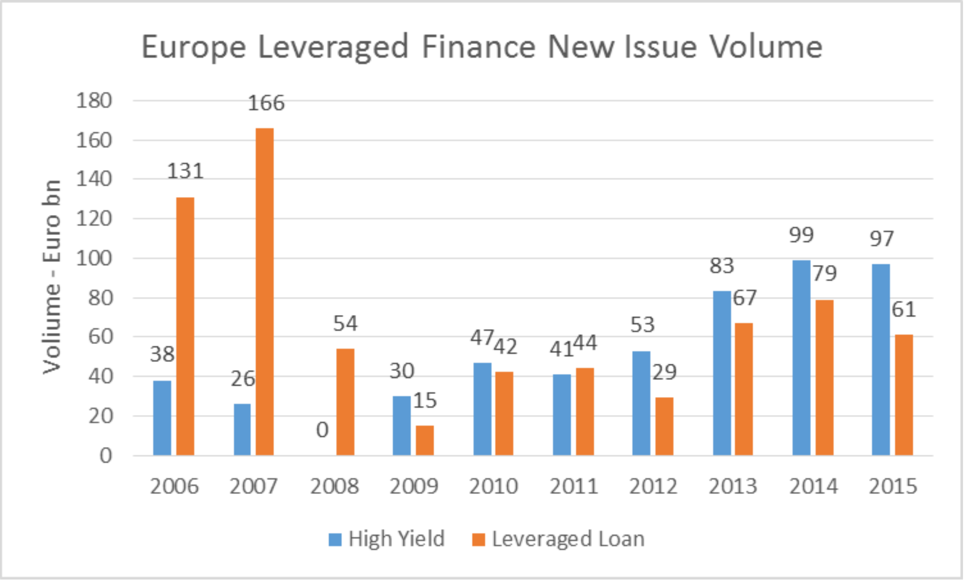


Source: Leveraged Loan – S&P, HY – UBS & IFR

Leveraged Finance Environment – Europe

EUROPE LEVERAGED FINANCE NEW ISSUE VOLUME

- Through December 11, 2015, Europe leveraged finance new issuance totaled €158 billion
  - HY volume totaled $97 billion which was roughly on pace with 2014
  - Leveraged loan volume was $61 billion which was roughly 23% behind the pace set in 2014

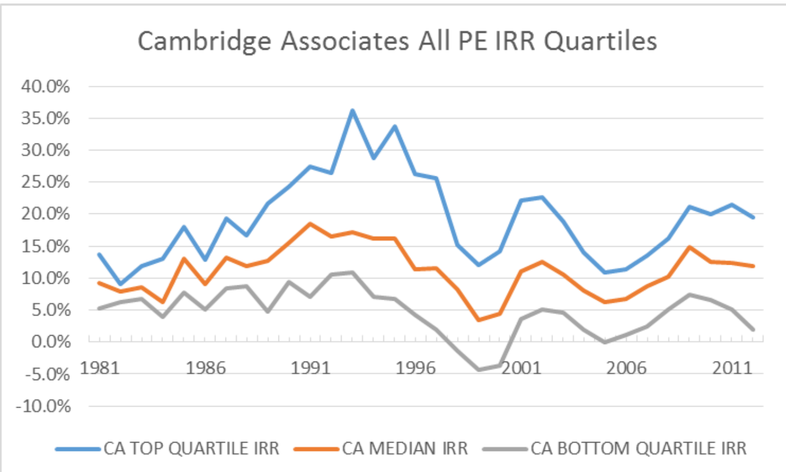


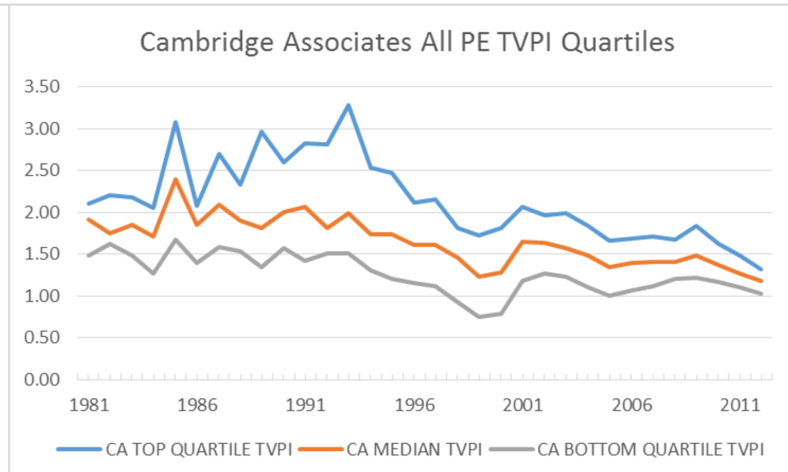
Source: Leveraged Loan – S&P, HY – UBS

Global PE & VC Returns

CAMBRIDGE ASSOCIATES QUARTILE DATA – GLOBAL ALL FUNDS - Q2-15

- As the charts below suggest, manager selection remains essential as the span of returns between top quartile, median and bottom quartile managers remains wide





Global PE & VC Returns

ILPA PRIVATE MARKETS BENCHMARK – ALL FUNDS POOLED RETURN COMPARED TO CA MODIFIED PUBLIC MARKETS EQUIVALENT – Q2-15

- As of June 30, 2015 Private Equity continued to trail U.S. public market performance since the financial crisis
  - Performance YTD in 2015 may suggest an improving relative return profile

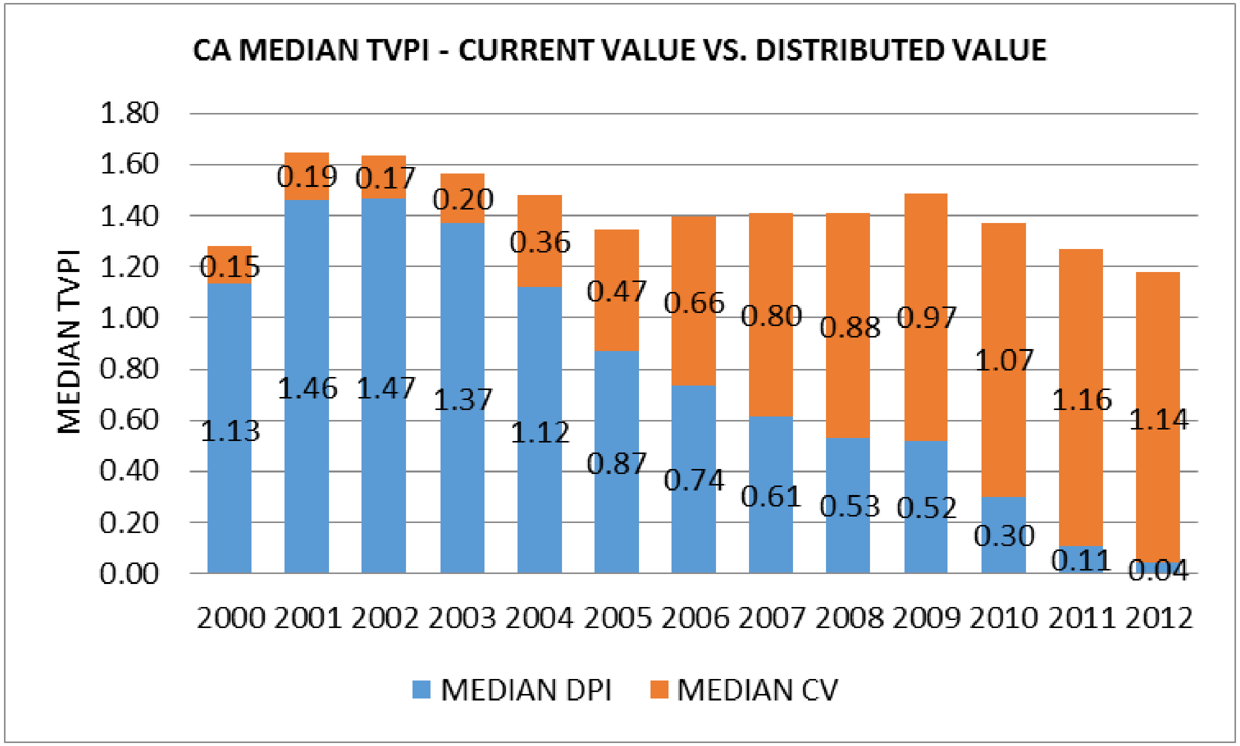
All Funds: Fund Index Summary: End-to-End Pooled Return Compared to CA Modified Public Market Equivalent (mPME)
Net to Limited Partners

ILPA Index	1-Year	3-Year	5-Year	10-Year	15-Year	20-Year	25-Year	30-Year
ILPA Private Markets Benchmark - All Funds Index[1]	**8.62**	**14.95**	**14.84**	**11.84**	**9.50**	**13.96**	**14.10**	**13.84**
mPME Analysis[2]								
S&P 500 Index	7.52	17.83	17.63	9.00	7.30	8.60	8.83	9.01
Value-Add (bps)	110	-288	-278	284	220	536	528	483
Russell 3000® Index	7.34	18.30	17.84	9.26	7.67	8.89	9.13	9.27
Value-Add (bps)	129	-335	-300	258	183	507	498	457
MSCI World Index	1.33	14.84	13.30	6.65	5.67	6.43	6.49	6.63
Value-Add (bps)	729	11	155	519	382	753	761	721
MSCI Europe Index	-7.86	13.19	10.25	4.63	4.55	5.47	5.60	5.90
Value-Add (bps)	1,648	176	460	721	494	849	850	794

Global PE & VC Returns

CAMBRIDGE ASSOCIATES QUARTILE DATA – GLOBAL ALL FUNDS Q2-15

- Despite massive realization activity over the past several years, PE funds from long-dated vintages continue to hold large current NAVs
  - As the chart below shows, funds raised 8-12 years ago continue to hold substantial current assets. This is partially attributable to the global financial crisis which clearly extended holding periods, but the trend has persisted across a fertile liquidity environment creating challenges for LPs and the industry in general

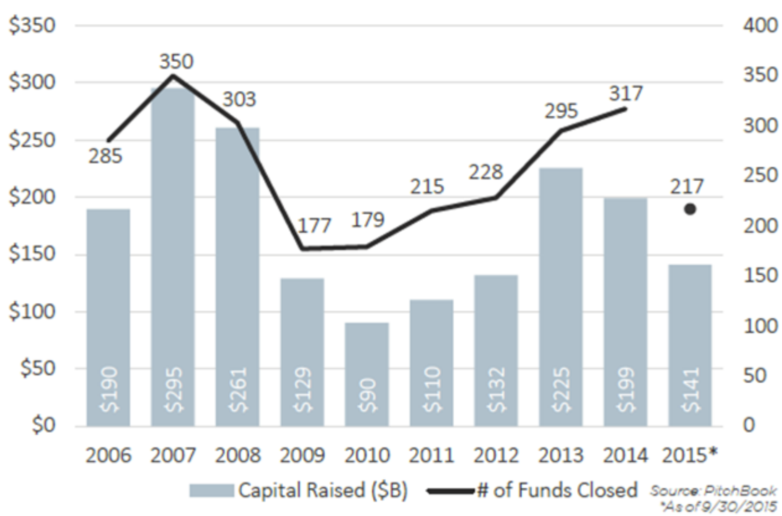


Private Equity Update – U.S. Fundraising

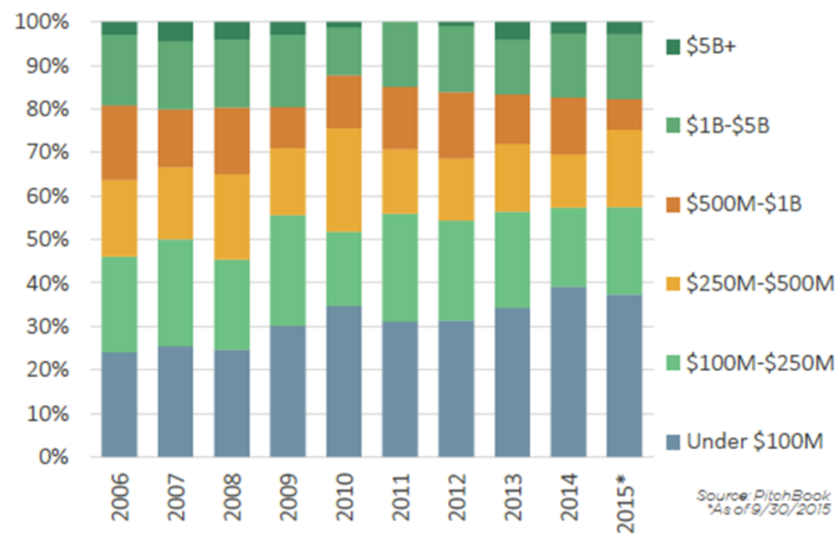
PITCHBOOK 2015 DATA – U.S. PRIVATE EQUITY FUNDRAISING ACTIVITY

- Through the first three quarters of 2015, private equity sponsors raised $141 billion across 217 funds. This measure puts the industry on pace to raise just below $200 billion which would fall in line with 2014
  - As has been the case every year since 2006, less than 20% of all funds raised by count in 2015 have $1+ billion in total commitments. While the universe of GPs has consistently expanded, median fund sizes have consistently declined. Median fund size through three quarters of 2015 was less than $150 million which compares to close to $300 million in 2006
  - The fundraising data for the past several years does not reflect a very active shadow market with LPs allocating significant capital to direct, co-investment and secondary programs as well as managed separate accounts

U.S. PE FUNDRAISING BY YEAR



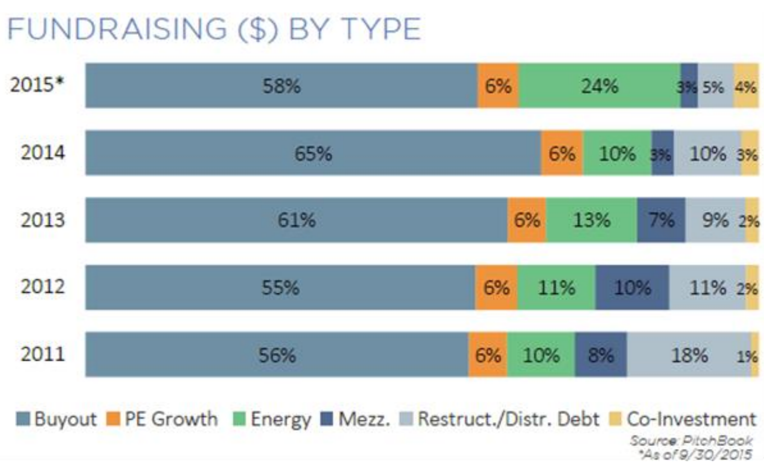
U.S. PE FUNDRAISING (#) BY SIZE

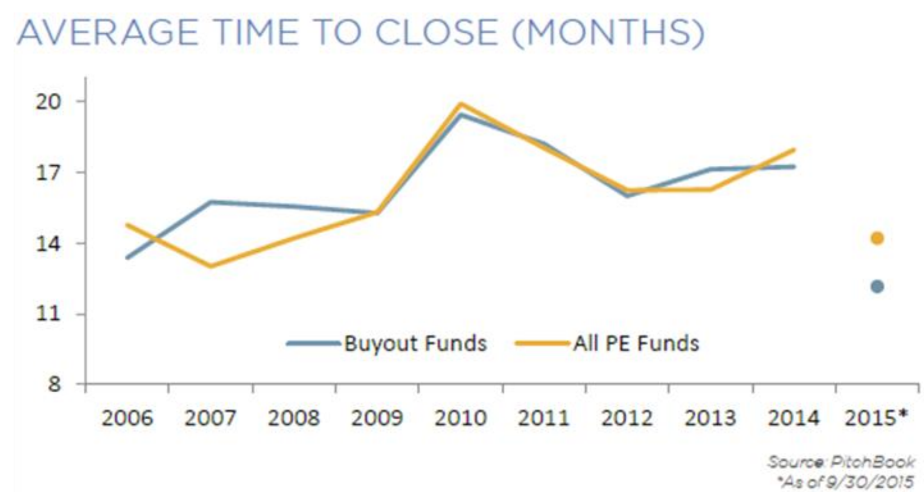


Private Equity Update – U.S. Fundraising

PITCHBOOK 2015 DATA – U.S. PRIVATE EQUITY FUNDRAISING ACTIVITY

- With respect to mix, energy has been a particularly active part of the PE fundraising market following the downturn in commodity markets
  - Energy fundraising comes at the expense of buyout fundraising which represented 58% of all capital raised
  - Fundraising for mezzanine and distressed funds continued to decline for the first three quarters of the year
  - Co-investment fundraising continues to increase as a portion of the overall market. It's important to note that this data only accounts for capital raised in commingled co-investment funds. Substantial funds available for co-investment on a direct basis or through segregated accounts are not reflected
- With respect to fundraising processes the largest change in the private equity market has been an aggressive decline in average time to close
  - The fundraising market is extremely strong despite flat total fundraising numbers. The amount of time it takes a GP to raise a fund is shorter today than it was before the financial crisis, and, as a result, GPs have the advantage in negotiating terms
  - A recent PEI Research & Analytics survey suggested that 50% of LPs intend to increase allocations to the asset class over the next two years and 37% intend to maintain current allocations. Given the pace of realizations this suggests continued strong demand

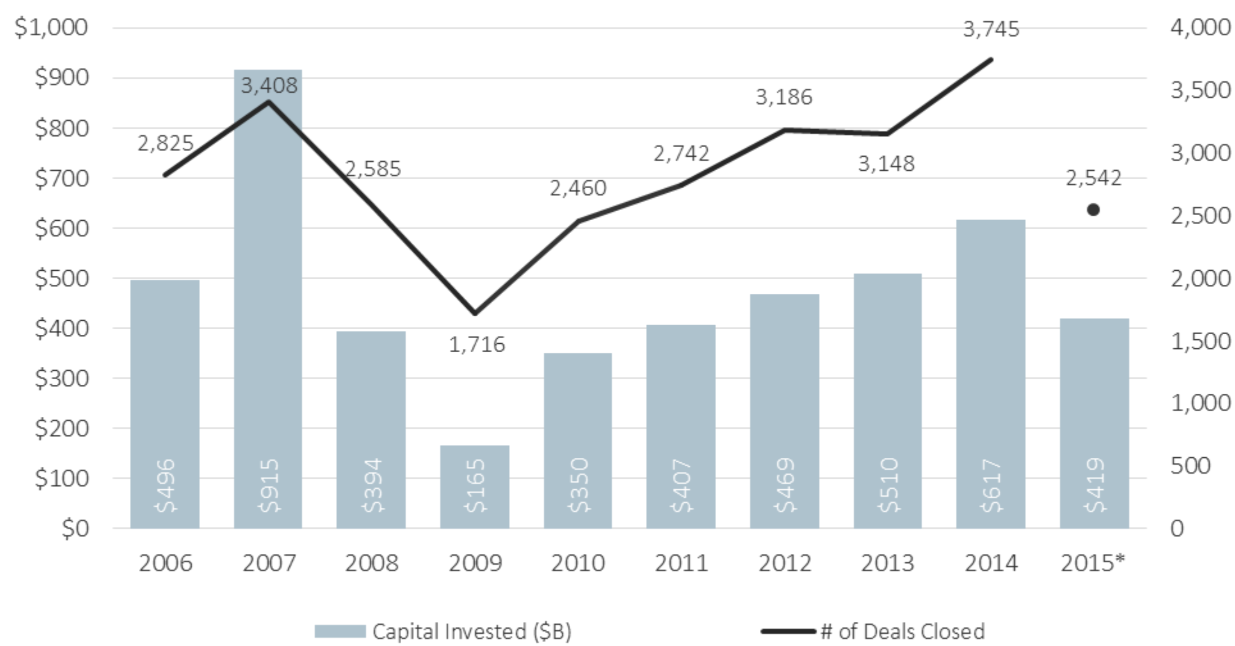




Private Equity Update – U.S. Deployment

PITCHBOOK 2015 DATA – U.S. PRIVATE EQUITY INVESTMENT ACTIVITY

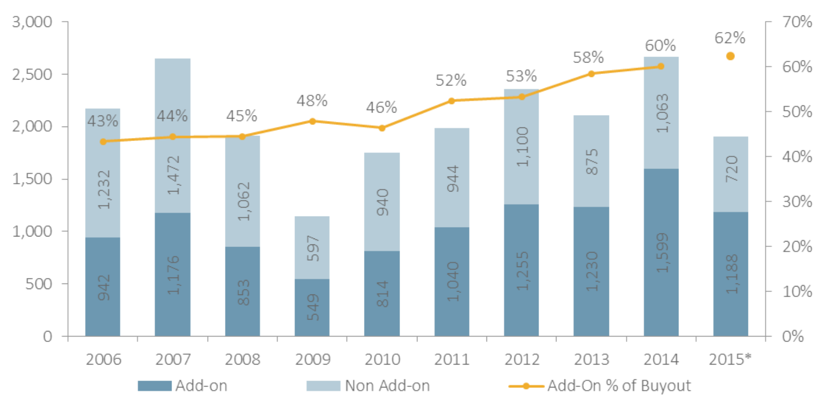
- Through September 30, 2015 U.S. private equity investment activity totaled $419 billion across more than 2,500 deals (source: Pitchbook)
  - The U.S. market is on pace for roughly $550 billion of deal activity. This would be 10% below 2014 activity, but it would still qualify as the third most active year on record
  - To date in 2015, the allocation to deals with enterprise values above $1 billion has topped 30% for the first time since 2008

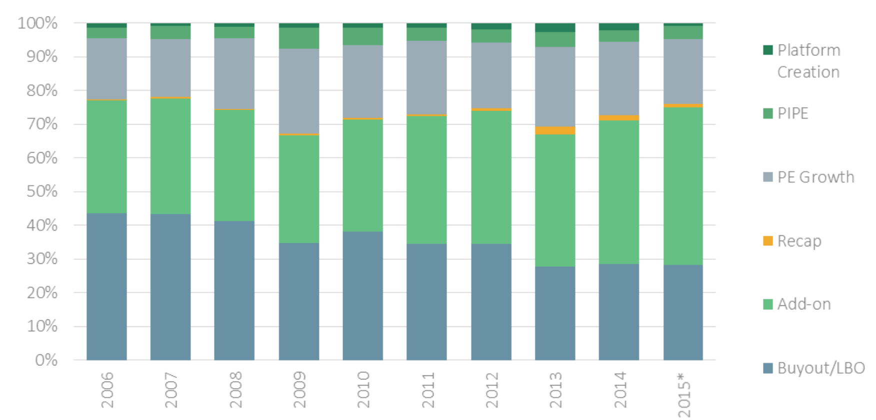


Private Equity Update – U.S. Deployment

PITCHBOOK 2015 DATA – U.S. PRIVATE EQUITY INVESTMENT ACTIVITY BY DEAL TYPE

- Add-on acquisitions continue to represent a growing portion of U.S. private equity deal activity
  - Through three quarters of 2015 add-ons represented 62% of all deals done
  - Roughly 60% of all deal activity since the beginning of 2013 has been add-ons
- The allocation to straightforward leveraged buyout transactions has been on a consistent decline since 2007
  - Conventional LBO transactions have represented 28% of all deals done since the beginning of 2013
  - From 2006-2008, LBOs accounted for more than 40% of all deals done, while in each year from 2009-2012, LBOs accounted for 34-38%

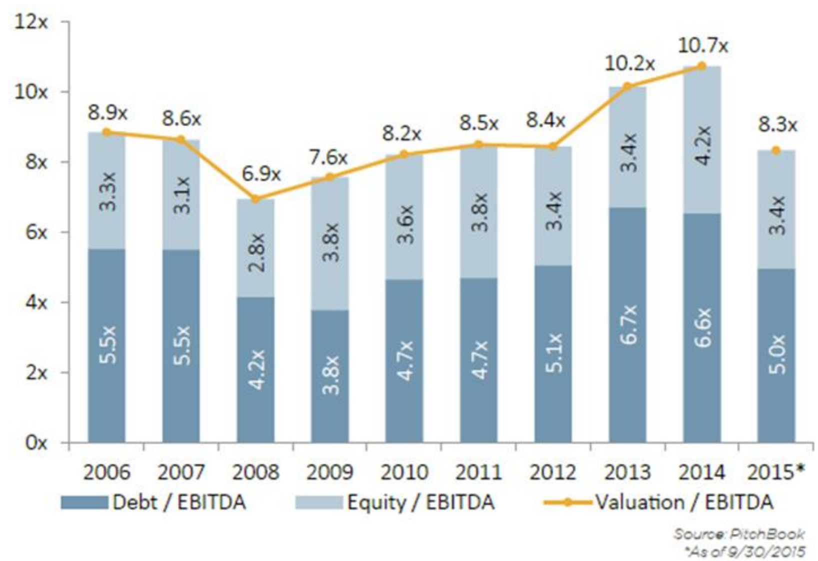




Private Equity Update – U.S. Deployment

PITCHBOOK 2015 DATA – U.S. PRIVATE EQUITY TRANSACTION MULTIPLES

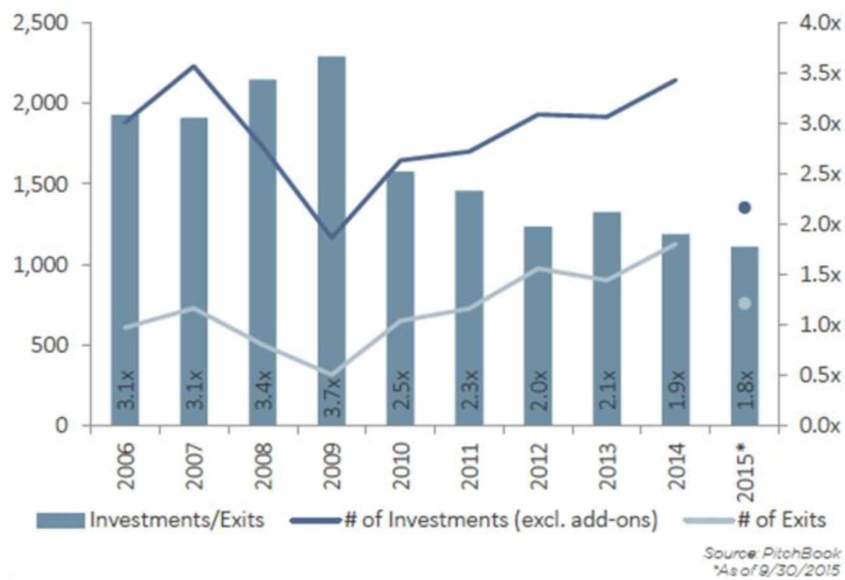
- The median multiple of EBITDA paid across all deals in the first three quarters of 2015 was 8.3x
  - This represents a significant decline versus 2013 and 2014 when the median multiple of EBITDA was above 10x
  - However, median multiples for transactions with enterprise values of $250 million or more remain above 10x having stretched as high as 11.7x in the second quarter of 2015
- The median debt multiple across all deals in the first three quarters of 2015 was 5.0x
  - Debt multiples are down significantly from levels seen in 2013 and 2014
  - Debt as a percentage of enterprise value is roughly 60% year to date in 2015



Private Equity Update – U.S. Exits

PITCHBOOK 2015 DATA – U.S. PRIVATE EQUITY EXIT ACTIVITY

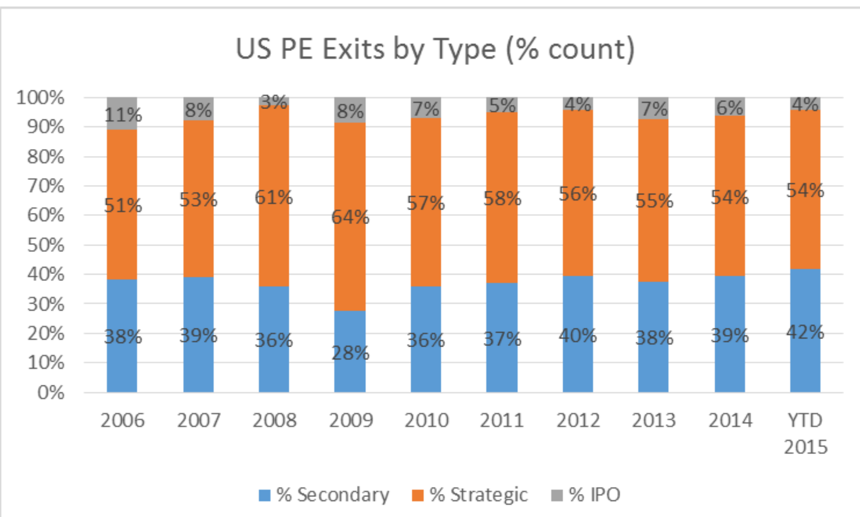
- Exits during the first three quarters of 2015 totaled $230 billion across 760 transactions
  - The U.S. PE industry is on pace to generate more than $300 billion of volume for the first time
  - The pace of exit activity during the first three quarters of 2015 was 33% ahead of 2014 which is the industry's current record year for liquidity
- The ratio of new platform investments to exited investments continues to decline standing at 1.8x through the first three quarters of 2015
  - Since 2010 there have been 2.1 platform acquisitions for every exit. From 2006 to 2009 the ratio was 3.2 acquisitions per exit
  - Today, PE owns a stake in more than 11,000 U.S. companies

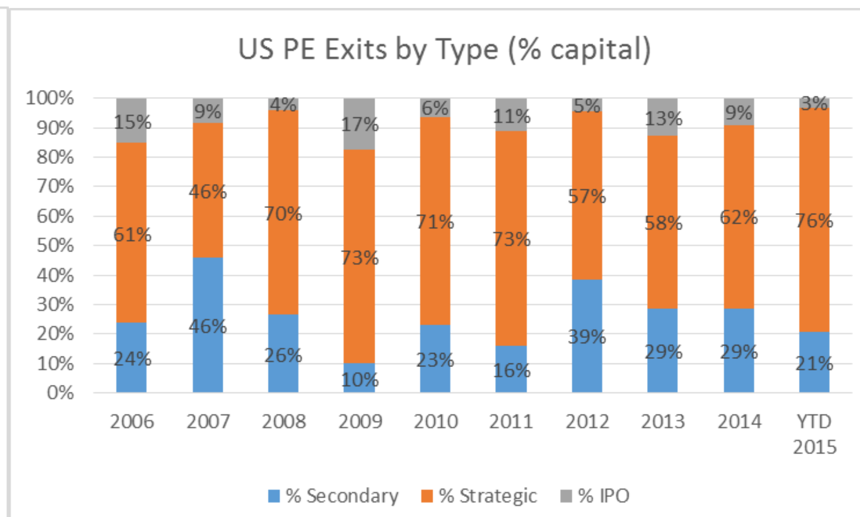


Private Equity Update – U.S. Exits

PITCHBOOK 2015 DATA – U.S. PRIVATE EQUITY EXIT ACTIVITY BY TYPE

- Exits to strategic acquirers remain the most significant path to exit for U.S. private equity backed companies accounting for 54% of all deals and 76% of all value realized
- Sponsor-to-sponsor activity continues to represent roughly 40% of all exits, but as a percentage of capital those deals represented only 21% of all volume during the first three quarters of 2015
- PE backed IPO activity remains a small component of the exit landscape for PE. Through the third quarter of 2015 only $7 billion was raised from 31 PE backed IPOs

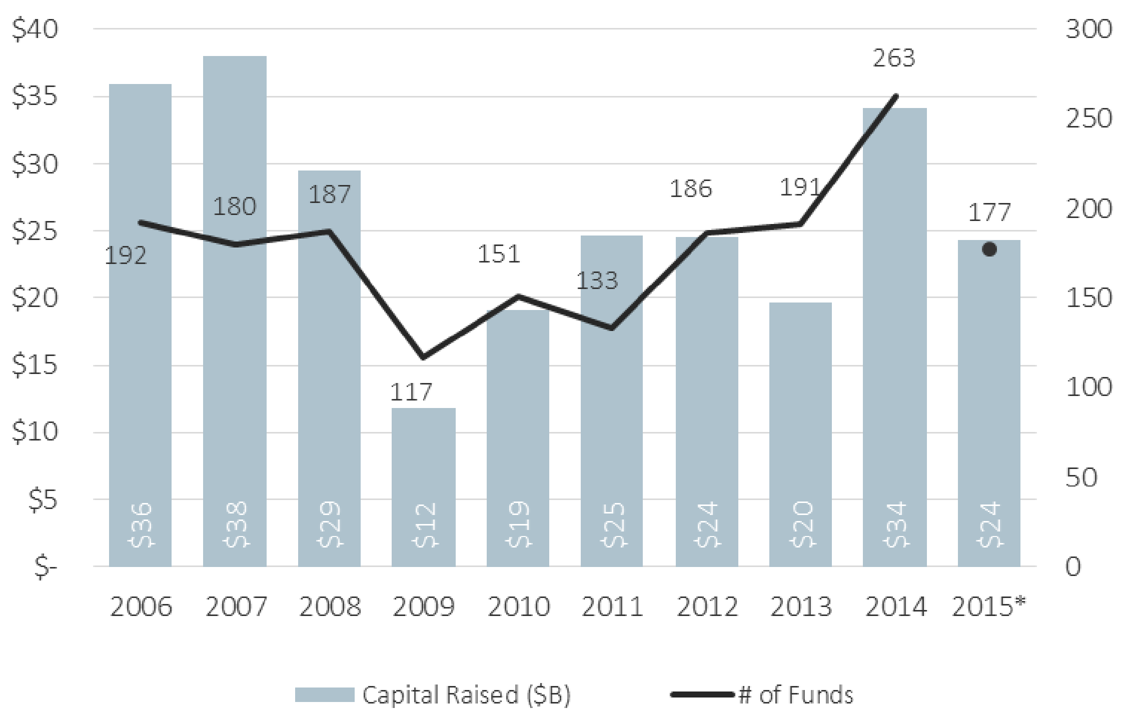




Venture Capital Update – U.S. Fundraising

PITCHBOOK 2015 DATA – U.S. VENTURE CAPITAL FUNDRAISING ACTIVITY

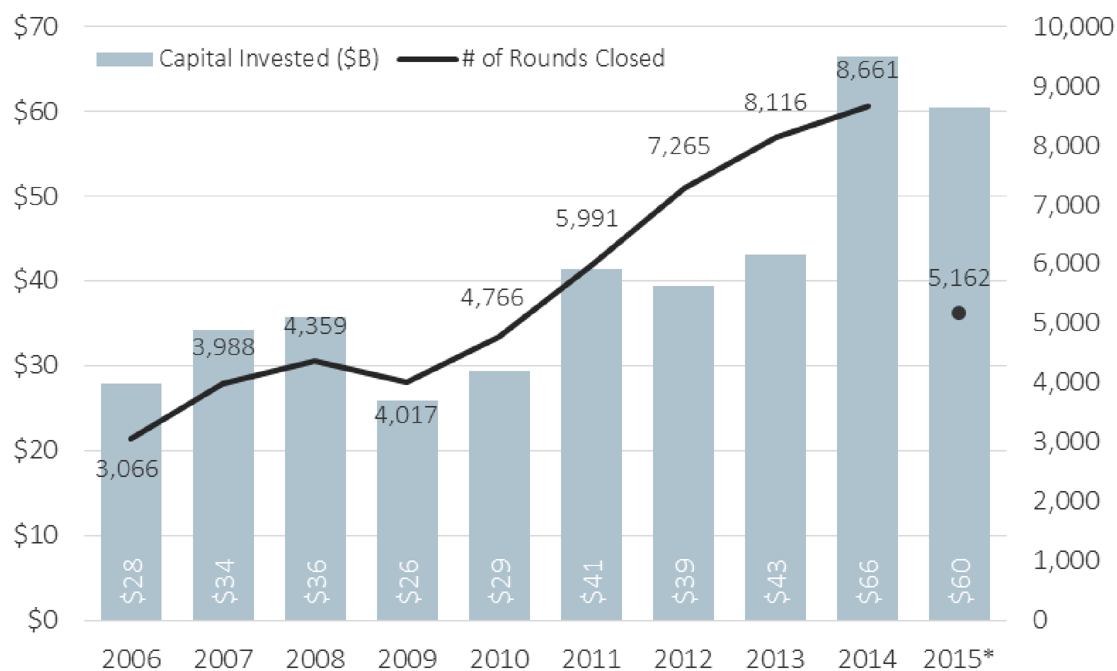
- Through the first three quarters of 2015, U.S. VC general partners have raised $24 billion across 177 funds (source: Pitchbook)
  - 2015 YTD activity compares to $34 billion raised across 263 funds in 2014
  - As in the private equity market, U.S. VC fundraising is strong with more than 85% of funds hitting or exceeding targets and timelines compressing massively



Venture Capital Update – U.S. Deployment

PITCHBOOK 2015 DATA – U.S. VENTURE CAPITAL INVESTMENT ACTIVITY

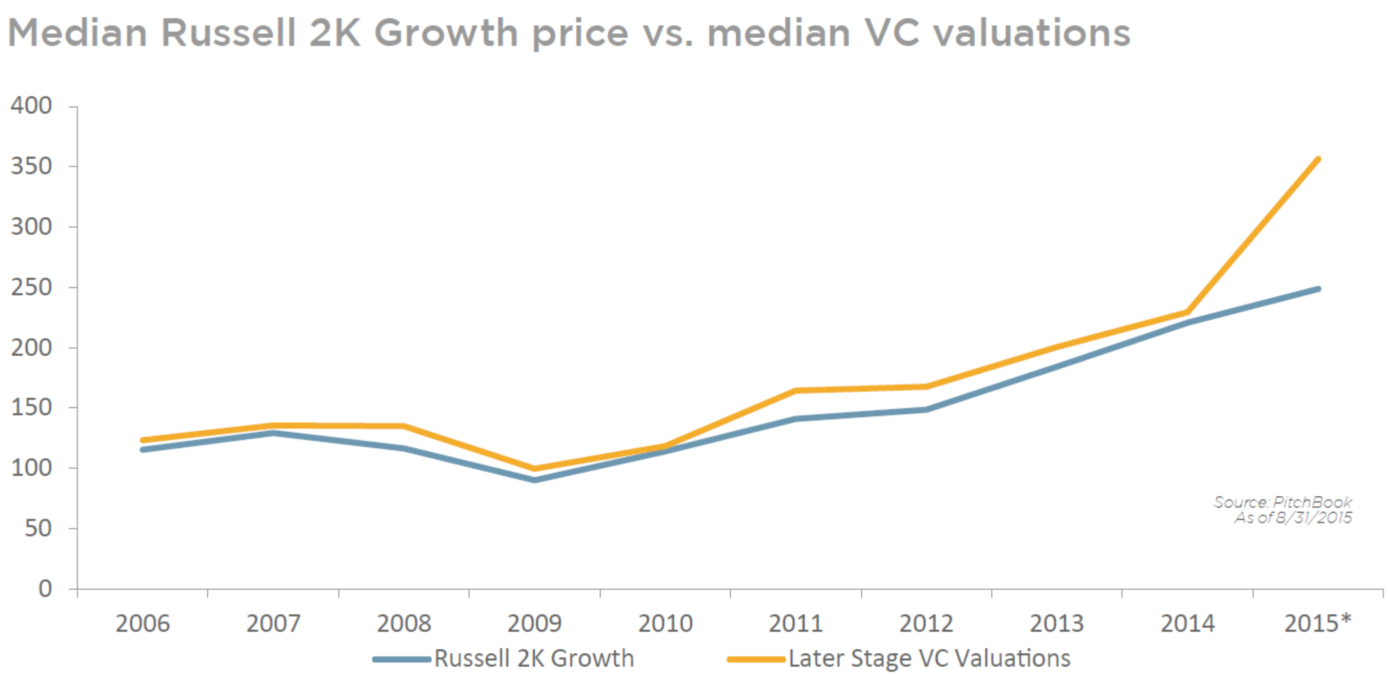
- Through September 30, 2015 U.S. private equity investment activity totaled $60 billion across more than 5,000 financing rounds (source: Pitchbook)
  - The U.S. VC market was on pace for $80 billion of total financing volume which would be 21% above 2014 activity and 87% above 2013
  - While total financing are up significantly, the pace for total financing rounds is 20% behind 2014. This reflects a slight shift in mix to later stage rounds where prices have increased significantly



Venture Capital Update – U.S. Deployment

PITCHBOOK 2015 DATA – U.S. VENTURE CAPITAL VALUATIONS

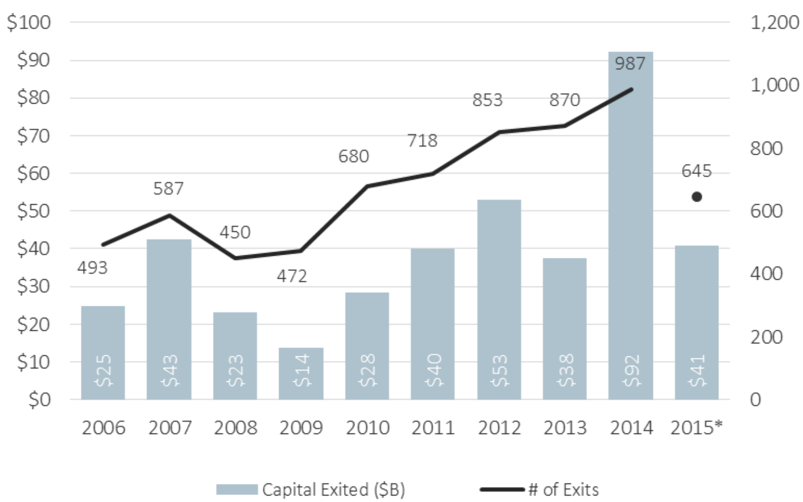
- From 2006 through 2014 median VC valuations in the U.S. broadly tracked price growth for the Russell 2000 Growth Index, but in 2015 VC valuations broke that trend increasing rapidly
  - In both 2014 and 2015 more than 30 "unicorns" (start-ups with valuations of at least $1 billion) were minted in the U.S. This compares to 6 in 2011 and 4 in both 2012 and 2013

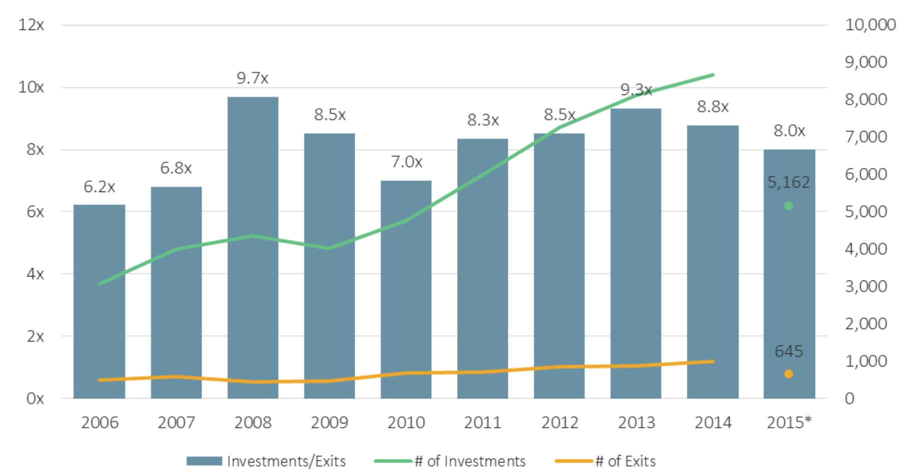


Venture Capital Update – U.S. Exits

PITCHBOOK 2015 DATA – U.S. VENTURE CAPITAL EXIT ACTIVITY

- Exits during the first three quarters of 2015 totaled $41 billion across 645 transactions
  - Roughly 16% of total liquidity was achieved through 57 VC backed IPOs
  - The pace of exit activity during the first three quarters of 2015 was 42% behind the pace for 2014. However, 2014 was a standout year for liquidity and 2015 is on pace to be the second most productive in the past decade
- The ratio of new platform investments to exited investments continues to decline standing at 8.0x through the first three quarters of 2015

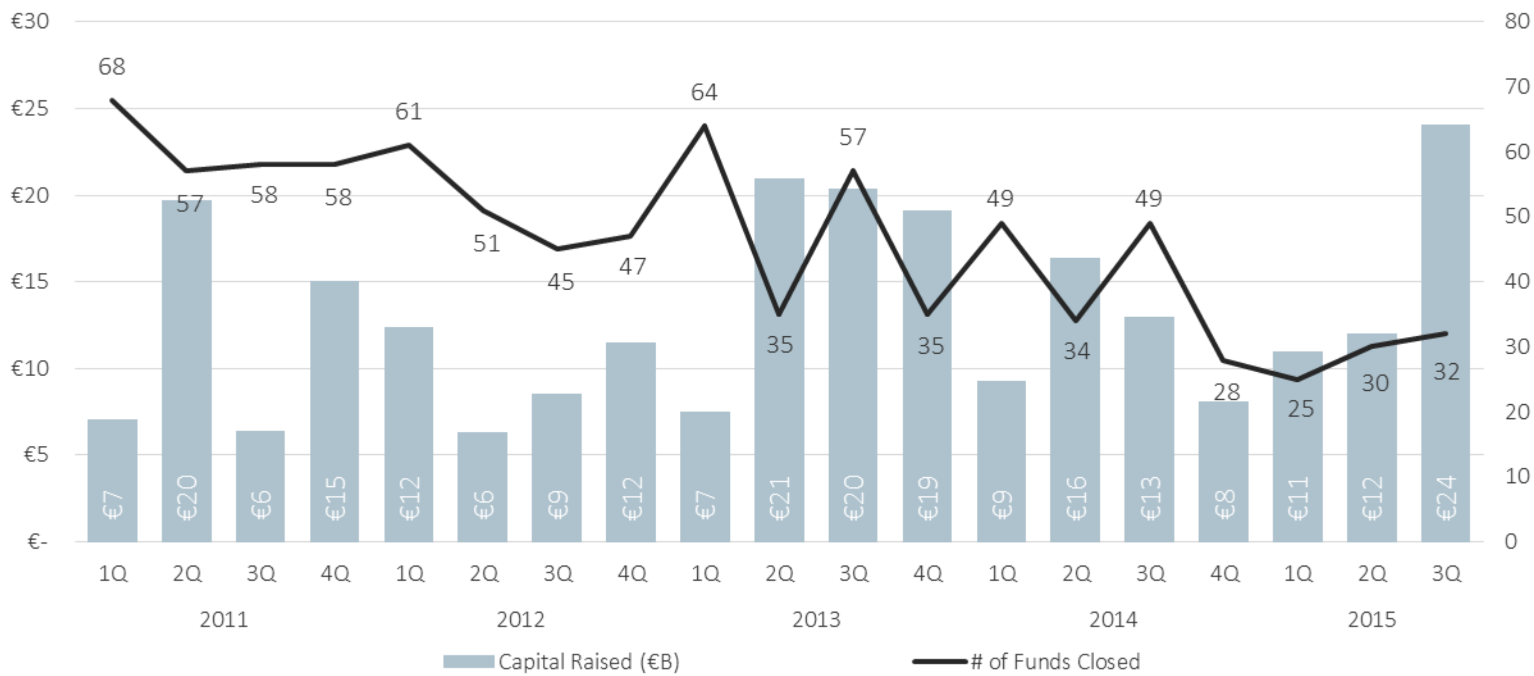




Europe PE & VC Update – Fundraising

PITCHBOOK 2015 DATA – EUROPE FUNDRAISING ACTIVITY

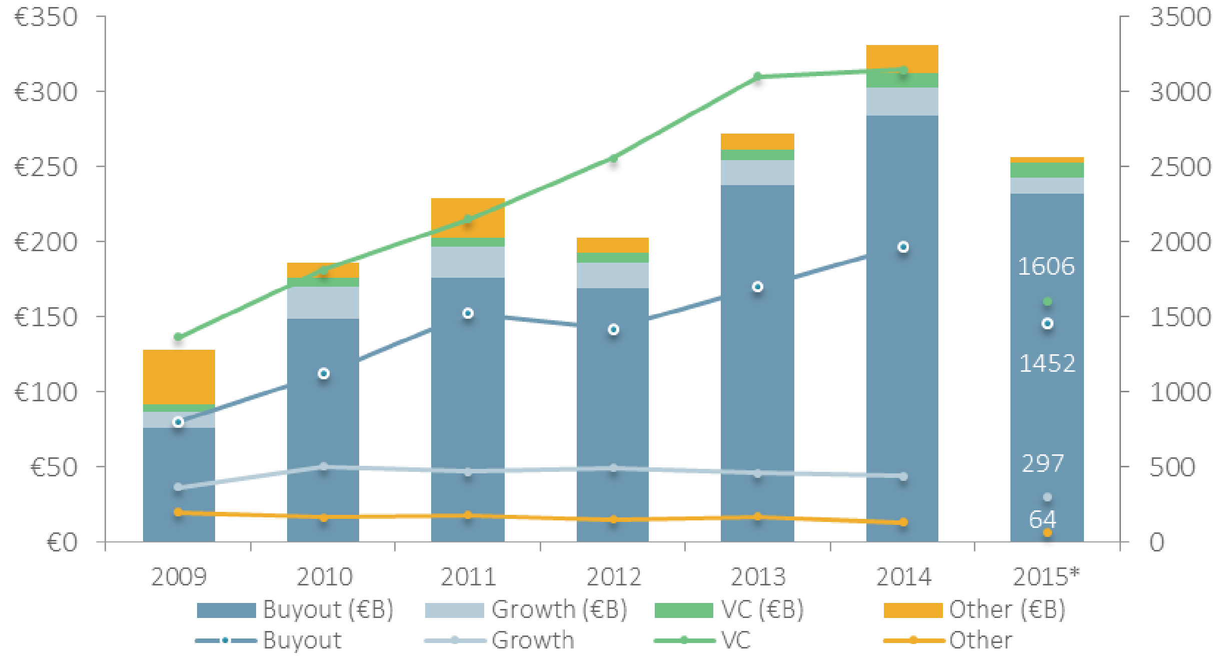
- Through the first three quarters of 2015, European general partners have raised €57 billion across 87 funds (source: Pitchbook)
    - The pace through Q3-15 was roughly 35% ahead of 2014 on the back of strong fundraising in the third quarter
    - Fundraising in 2015 has been heavily biased toward buyout funds which account for 43% of all funds raised by count. Since 2009 buyout funds have represented 25-33% of all European PE/VC funds raised



Europe PE & VC Update – Deployment

PITCHBOOK 2015 DATA – EUROPE INVESTMENT ACTIVITY

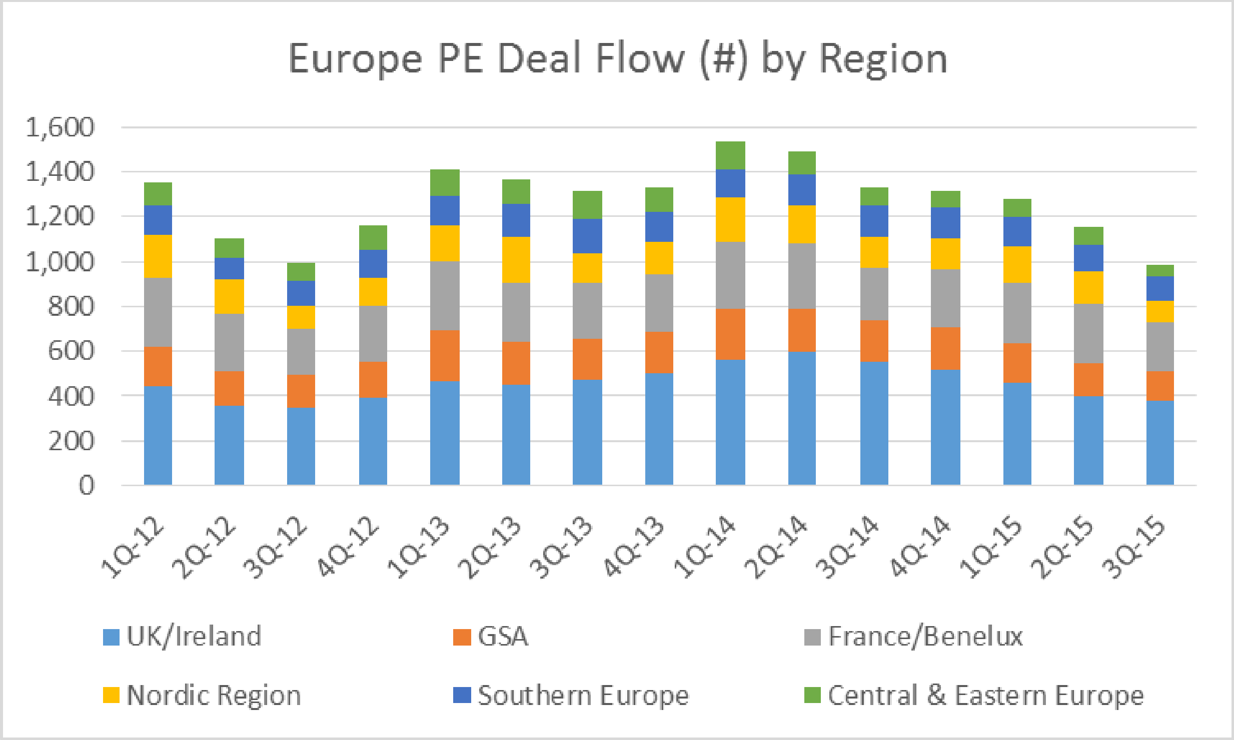
- Through September 30, 2015 U.S. private equity investment activity totaled €256 billion across more than 3,400 deals (source: Pitchbook)
  - Deal volume is on pace to match the €330 billion deployed in 2014, but the transaction count pace is roughly 20% lower. This would suggest the mix has skewed toward larger transactions so far in 2015
  - As the chart below suggests, European deal volume is heavily biased toward buyout transactions. As in the U.S., the PE transaction mix includes an increasing allocation to add-on acquisitions which represent 50% of all deals done to date in 2015. From 2009-2012 add-ons accounted for 27-41% of all PE transactions, and in 2013 and 2014 add-ons accounted for roughly 46% of all transactions



Europe PE & VC Update – Deployment

PITCHBOOK 2015 DATA – EUROPE PE INVESTMENT ACTIVITY BY REGION

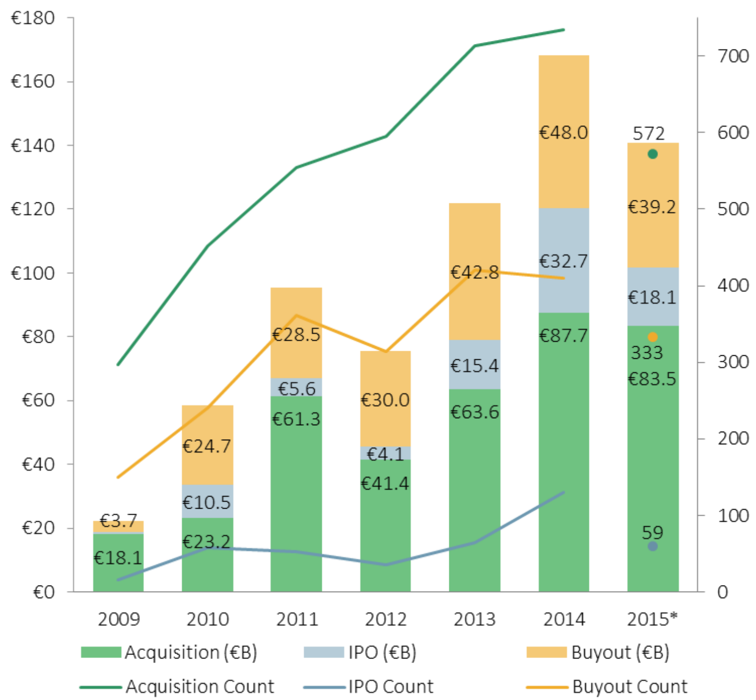
- Allocations by region since 2012 have been reasonably stable (source: Pitchbook)
  - The UK remains the most important market followed by France/Benelux and Germany/Switzerland/Austria



Europe PE & VC Update – Exits

PITCHBOOK 2015 DATA – EUROPE EXIT ACTIVITY

- Exits during the first three quarters of 2015 totaled €141 billion across 964 transactions
  - Activity to date in 2015 is on pace with 2014 with respect to exit count but 12% ahead with respect to exit proceeds
  - With respect to path to exit, strategic exits have represented roughly 60% of all activity and sponsor-to-sponsor deals have accounted for about a third of all exits. IPOs have played a more significant role over the past three years accounting for 5-10% of all exits and 13-19% of all proceeds

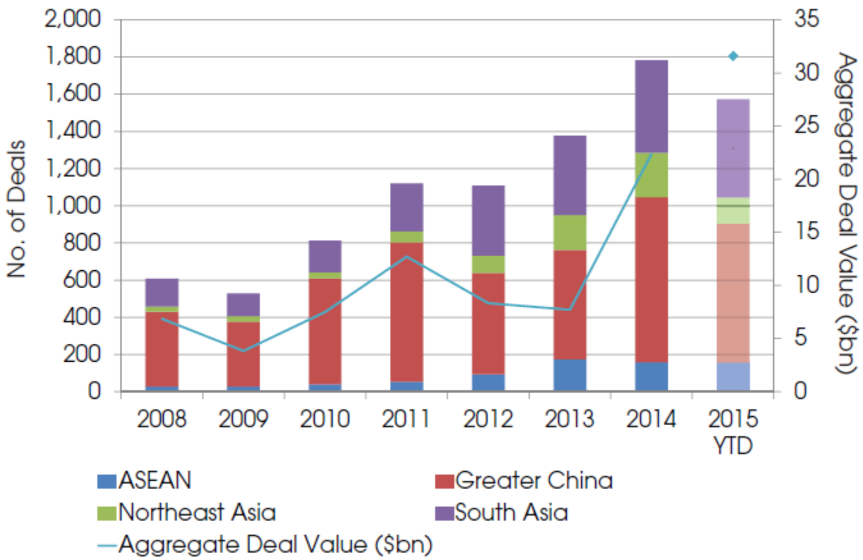


Asia PE & VC Update

PREQIN 2015 DATA – ASIA PE & VC ACTIVITY

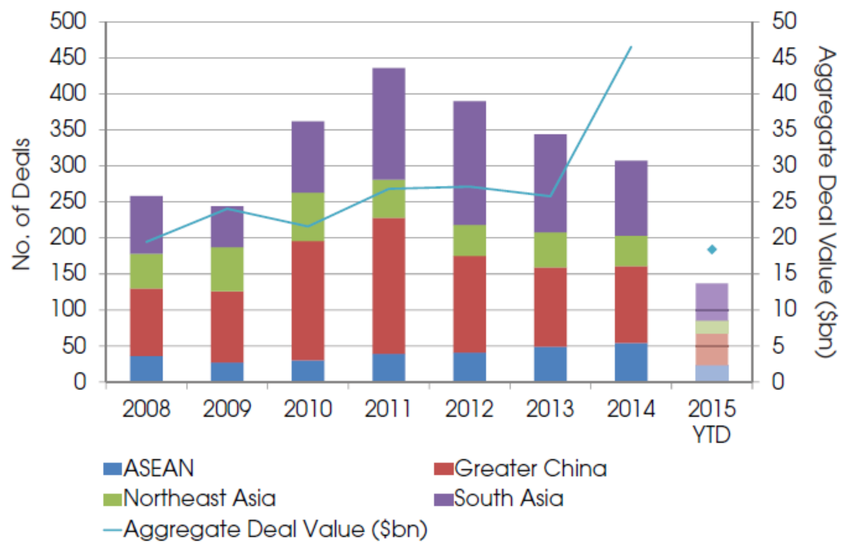
- Asia PE & VC activity through August totaled roughly $40 billion which suggests an annualized pace of more than $60 billion
  - Overall deal volumes on a value basis have been on a significant upward trajectory since 2013. Volumes in venture capital had already easily exceeded the record set in 2014
  - Fundraising was on pace for $45-50 billion for 2015, but the number of funds raised continues to decline suggesting larger funds. Total dry powder stands at roughly $140 billion

Fig. 10: Number and Aggregate Value of Venture Capital Deals* in Asia, 2008-2015 YTD (As at 25 August 2015)



Source: Preqin Venture Deals Analyst

Fig. 9: Number and Aggregate Value of Private Equity-Backed Buyout Deals in Asia, 2008 - 2015 YTD (As at 25 August 2015)



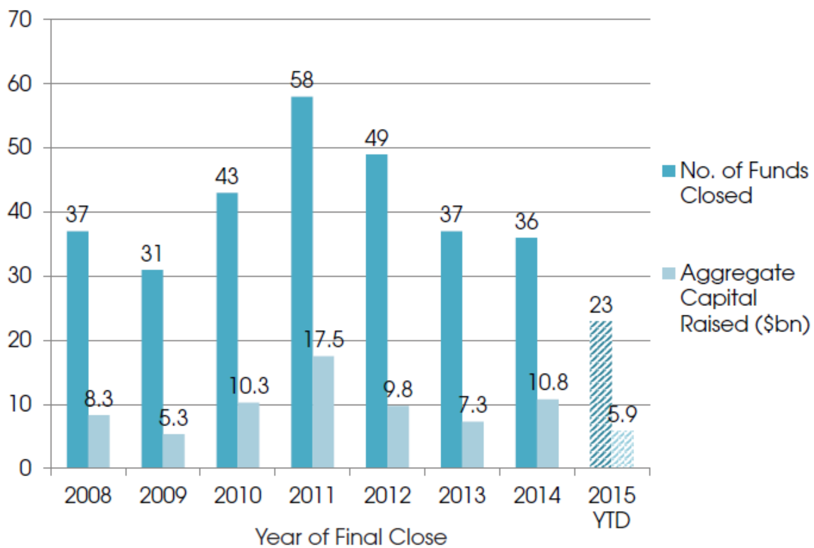
Source: Preqin Buyout Deals Analyst

Latin America PE & VC Update

PREQIN 2015 DATA – LATIN AMERICA PE & VC ACTIVITY

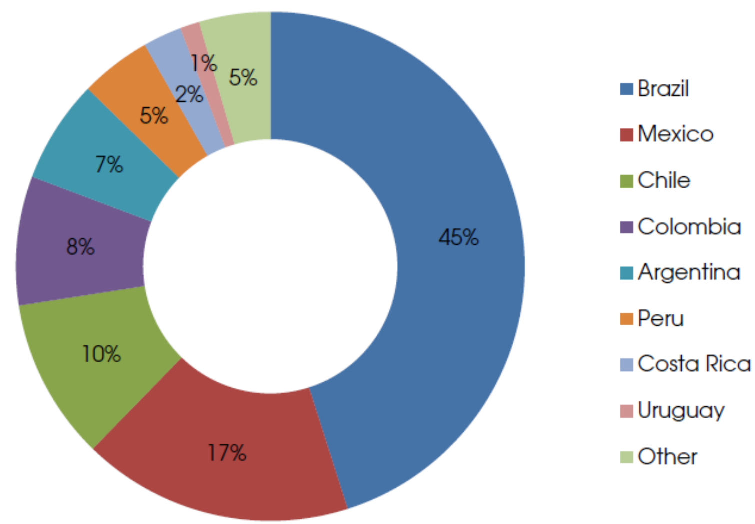
- Latin America remains a nascent geography for private equity with only $6 billion raised across 23 funds through November of 2015
  - Dry powder in the region stands at roughly $27 billion
  - Brazil continues to be the dominant geography

Fig. 1: Latin America-Focused Private Equity Fundraising, 2008 - 2015 YTD (At at 25 November 2015)



Source: Preqin Funds in Market

Fig. 2: Breakdown of Latin America-Based GPs by Country



Source: Preqin Fund Manager Profiles

2016 Private Equity Annual Plan

- OPERF Private Equity Program Update

OPERF Private Equity Program Update

OPERF PRIVATE EQUITY PROGRAM – OVERVIEW

- As of September 30, 2015, the OPERF Private Equity Program had a current value of $14.2 billion across 230 active partnerships
  - Private Equity currently represents 20.9% of the overall Fund which compares to a target allocation of 17.5%. The current value of the Program is $2.3 billion above target
  - Since 1981, $37.6 billion has been allocated to roughly 300 partnerships

TOTAL PROGRAM	COMMITTED	CALLED	DISTRIBUTED	CURRENT VALUE	TOTAL VALUE	TVPI*
OPERF PE PROGRAM (billions)	$ 37.58	$ 34.14	$ 38.38	$ 14.24	$ 52.62	1.63X

* - Adjusted for recallable contributions

ACTIVE FUNDS	COMMITTED	CALLED	UNFUNDED	RECALLABLE	CURRENT VALUE	POTENTIAL EXPOSURE
OPERF PE PROGRAM (billions)	$ 31.34	$ 26.50	$ 4.84	$ 3.21	$ 14.24	$ 22.29

  - Since inception, the Program has generated a net IRR of 15.7% and a net TVPI of 1.6x. The chart below shows the Program's performance relative to the benchmark as well as the Cambridge Associates pooled average

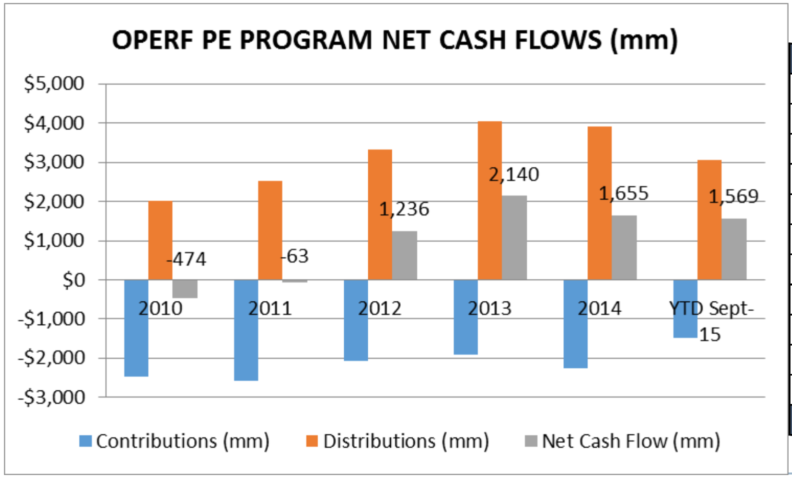
AS OF 9/30/15	3 YR.	7 YR.	10 YR.	20 YR.	SINCE INCEPTION
OPERF PE PROGRAM IRR	13.6%	10.8%	10.9%	13.0%	15.6%
RUSSELL 3000 + 300bps	17.2%	14.3%	11.1%	12.3%	15.3%
(+/-)	*-3.6%*	*-3.5%*	*-0.2%*	*0.7%*	*0.3%*

AS OF 6/30/15	3 YR.	7 YR.	10 YR.	20 YR.	SINCE INCEPTION
OPERF PE PROGRAM IRR	15.2%	9.6%	11.7%	13.4%	15.7%
CA POOLED IRR	14.7%	8.9%	11.7%	13.6%	13.5%
(+/-)	*0.6%*	*0.7%*	*0.1%*	*-0.1%*	*2.2%*

OPERF Private Equity Program Update

OPERF PRIVATE EQUITY PROGRAM – 2015 ACTIVITY

- As of September 30, 2015, the OPERF Private Program continued to be a large net cash generator with distributions of $3.1 billion versus contributions of $1.5 billion
  - Since 2012 the Program has generated $6.6 billion in net distributions
- For full year 2015, the OIC approved $2.3 billion of new capital commitments across 11 funds
  - This compares to $2.0 billion across 16 funds in 2014 and $2.1 billion across 16 funds in 2013
  - The Program has been significantly rationalized and now comprises roughly 50 "current" relationships
    - In this context "current" means that the Program made a commitment to the GP's most recent fund and will more than likely make a commitment to the next fund. Situations where the Program is invested in more than one fund series with the same GP are counted as a single relationship



2015	STRATEGY	GEOGRAPHY	COMMITMENT
Blackstone Capital Partners VII	Large Buyout	Global	$ 450,000,000
EnCap Energy Capital Fund X	Natural Resources	North America	$ 90,000,000
General Atlantic Separate Account	Growth Equity	Global	$ 250,000,000
GGV Capital Select	Venture Capital - Late Stage	North America/China	$ 50,000,000
KKR Americas Fund XII	Large Buyout	North America	$ 500,000,000
KSL Capital Partners IV	Middle Market Buyout	North America	$ 150,000,000
OCM Opportunities Fund X/Xb	Distressed Debt	Global	$ 150,000,000
Orbimed Private Investments VI	Venture Capital - Multi Stage	North America	$ 60,000,000
Rhone Capital Parnters IV	Middle Market Buyout	Transatlantic	$ 212,300,000
RRJ Capital Master Fund III	Growth Equity	Asia - China	$ 150,000,000
TPG Growth III	Growth Equity	Global	$ 200,000,000
			$ 2,262,300,000

OPERF Private Equity Program Update

OPERF PRIVATE EQUITY PROGRAM – PORTFOLIO CONSTRUCTION

- As the charts below reflect, the Program is broadly in line with target allocations from both a strategy and geographic exposure perspective
  - Current exposure to growth equity remains light, but significant progress was made over the course of 2015 in that sector
  - The allocation to Europe has decreased significantly over time. This development mostly reflects a weaker deal and fundraising environment in Europe versus the U.S., but 2016 is expected to present opportunities to rebuild the Program's European exposure

INVESTMENT STRATEGY/IMPLEMETATION

	TARGET	MARKET VALUE	%	UNFUNDED	%	TOTAL EXPOSURE	%
BUYOUT	**65-85%**	**$ 9,421**	**66%**	**$ 5,677**	**68%**	**$ 15,098**	**67%**
LARGE	45-65%	$ 6,152	43%	$ 3,408	41%	$ 9,533	42%
MID	10-25%	$ 2,966	21%	$ 2,035	24%	$ 5,001	22%
SMALL	0-10%	$ 329	2%	$ 234	3%	$ 563	2%
GROWTH	**5-10%**	**$ 192**	**1%**	**$ 647**	**8%**	**$ 839**	**4%**
VENTURE	**0-5%**	**$ 960**	**7%**	**$ 254**	**3%**	**$ 1,214**	**5%**
SPECIAL SITUATIONS	**5-15%**	**$ 1,516**	**11%**	**$ 1,141**	**14%**	**$ 2,656**	**12%**
DISTRESSED	0-10%	$ 1,112	8%	$ 763	9%	$ 1,875	8%
MEZZANINE	0-5%	$ 179	1%	$ 191	2%	$ 329	1%
SECONDARIES	0-5%	$ 225	2%	$ 187	2%	$ 412	2%
FUND-OF-FUNDS	**0-5%**	**$ 1,463**	**10%**	**$ 386**	**5%**	**$ 1,850**	**8%**
CO-INVESTMENTS	**0-7.5%**	**$ 689**	**5%**	**$ 229**	**3%**	**$ 918**	**4%**
		$ 14,240	**100%**	**$ 8,334**	**100%**	**$ 22,574**	**100%**

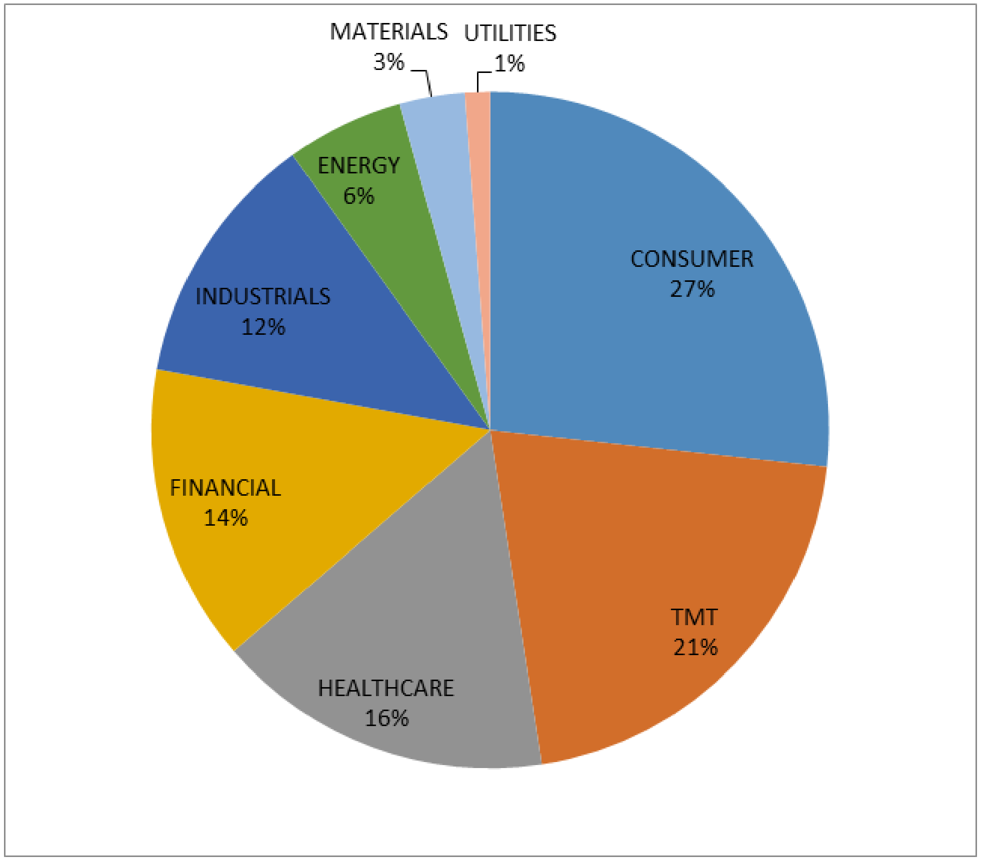
INVESTMENT GEOGRAPHY

	TARGET	MARKET VALUE	%	UNFUNDED	%	TOTAL EXPOSURE	%
NORTH AMERICA	**60-80%**	**$ 11,247**	**79%**	**$ 5,758**	**69%**	**$ 17,005**	**75%**
INTERNATIONAL	**20-40%**	**$ 2,993**	**21%**	**$ 2,576**	**31%**	**$ 5,569**	**25%**
GLOBAL		$ 898	6%	$ 1,031	12%	$ 1,930	9%
ASIA		$ 528	4%	$ 679	8%	$ 1,207	5%
EUROPE		$ 1,543	11%	$ 797	10%	$ 2,340	10%
ROW		$ 24	0%	$ 69	1%	$ 93	0%
		$ 14,240	**100%**	**$ 8,334**	**100%**	**$ 22,574**	**100%**

OPERF Private Equity Program Update

OPERF PRIVATE EQUITY PROGRAM – PORTFOLIO CONSTRUCTION

- From a sector standpoint, the OPERF PE Program is highly diversified



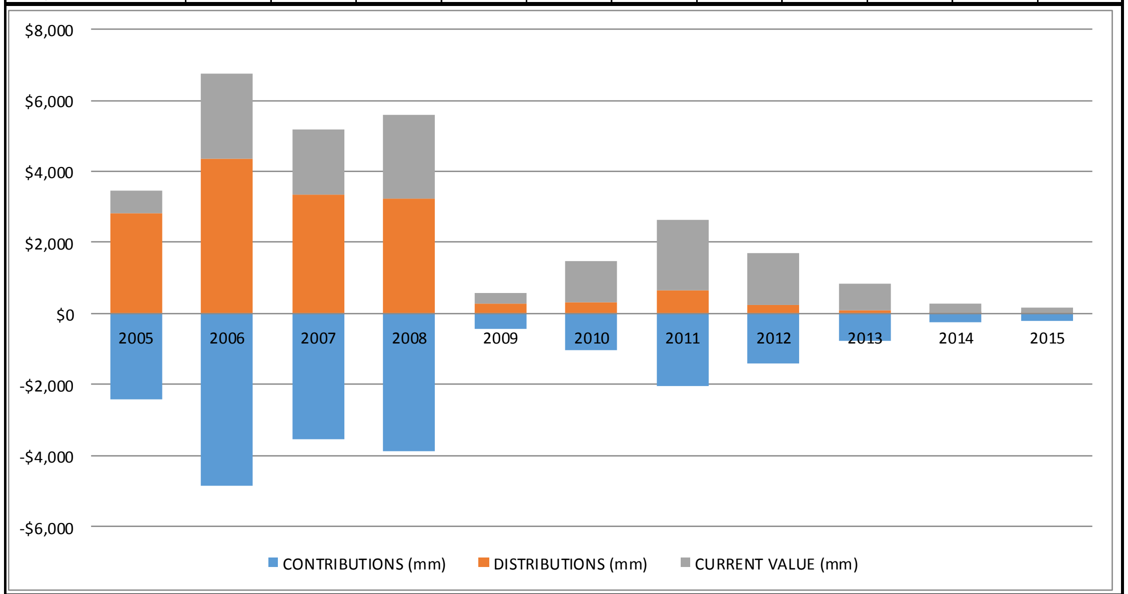
- The sector breakdown to the left broadly mirrors the sector allocation of the Russell 3000 with the exception of consumer where the OPERF PE Program (and the PE industry in general) are overweight
    - The Program's consumer exposure is heavily weighted toward discretionary (21%) versus staples (6%)
- Recent new investment activity for OPERF and for the PE industry overall is more heavily weighted toward TMT (including business services) than what is depicted here

OPERF Private Equity Program Update

OPERF PRIVATE EQUITY PROGRAM – RELATIVE PERFORMANCE

- As noted on a previous slide, the Program has trailed its benchmark (Russell 3000 + 300bps) by roughly 350 bps for both the 3- and 7-year periods
  - This underperformance is an industry wide phenomenon as PE has trailed public markets since the GFC
  - Also noted previously, the Program has effectively matched the CA pooled average for the 10- and 20-year periods and is 60bps and 70bps ahead for the 3- and 7-year periods, respectively

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
COMMITMENTS (count)	17	27	23	24	6	9	23	15	15	10	21
COMMITMENTS (mm)	$2,182	$4,424	$3,366	$3,892	$490	$1,113	$2,477	$2,262	$1,708	$983	$3,583
PROGRAM TVPI	1.5x	1.5x	1.5x	1.6x	1.3x	1.5x	1.3x	1.3x	1.1x	1.0x	0.9x
PROGRAM IRR	7.1%	7.4%	10.0%	13.2%	9.7%	16.1%	15.7%	15.8%	NM	NM	NM
TVPI QUARTILE	2nd	2nd	2nd	2nd	3rd	2nd	2nd	2nd	NM	NM	NM
IRR QUARTILE	3rd	3rd	2nd	2nd	3rd	2nd	2nd	2nd	NM	NM	NM

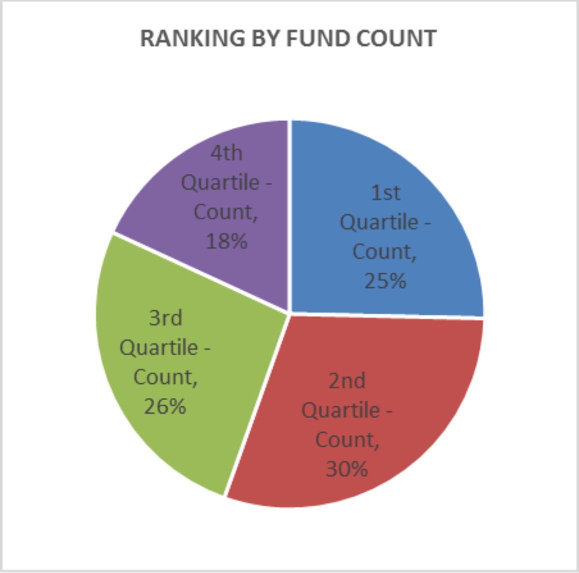


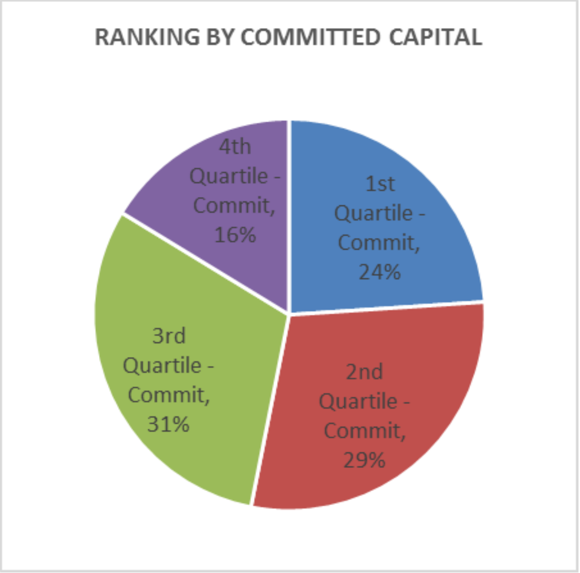
- As the chart to the left reflects, Program performance consistently lands in the second quartile on a vintage year basis which is not surprising given the scale of commitments
  - 2005, 2006 and 2009 were challenging vintages for the Program
- More than half the Program's current value is in funds which started investing before 2009 (funds that are 7+ years old)
- Please note that this analysis defines vintage year by first capital call, not OIC approval

OPERF Private Equity Program Update

OPERF PRIVATE EQUITY PROGRAM – RELATIVE PERFORMANCE

- From inception to June 30, 2015, 25% of all funds in the Program (representing 24% of committed Program capital) were top quartile versus Cambridge Associates, while 55% of all funds (representing 53% of committed capital) were above median
  - Drilling down further by strategy, geography and period (aside from the immediately pre-GFC vintages which are skewed to the bottom half), the returns distribution across quartiles (as seen below) is fairly stable
  - Importantly, more than 80% of all funds raised have committed capital less than $1 billion, and 65%-75% of all funds (depending on vintage year) raise less than $500 million. This fundraising profile reduces the value of quartile rankings to a crude indicator for OPERF because the vast majority of the fund universe is not accessible given the Program's size and scale requirements





OPERF Private Equity Program Update

OPERF PRIVATE EQUITY PROGRAM – MARKET POSITION

- As the chart below depicts, P&I recently ranked OPERF as the #5 public pension plan PE program, and Oregon was #15 in PEI's most recent LP50, a ranking determined by trailing five-year commitments

P&I RANK	NAME	ASSETS IN PE (bn)
1	California Public Employees' Retirement System	$31.2
2	California State Teachers' Retirement System	$21.4
3	Washington State Investment Board	$16.4
4	Teacher Retirement System of Texas	$15.4
5	***Oregon Public Employees Retirement System***	***$15.1***
Source: P&I Top 1000 Special Report - 9/30/14 Data		
PEI RANK	**NAME**	**5 YR. COMMIT (bn)**
1	Canada Pension Plan Investment Board	$28.1
2	Alpinvest Partners	$19.7
3	Hamilton Lane	$18.7
4	HarbourVest Partners	$16.0
5	Washington State Investment Board	$14.4
6	Goldman Sachs Asset Management	$14.3
7	California Public Employees' Retirement System	$13.2
8	Pantheon	$12.1
9	La Caisse de Dépôt et Placement du Québec	$12.1
10	Teacher Retirement System of Texas	$11.6
11	Pathway Capital Management	$11.4
12	California State Teachers' Retirement System	$10.7
13	APG Asset Management	$10.6
14	Florida State Board of Administration	$10.2
15	***Oregon State Treasury***	***$10.0***
Source: PEI LP50 - July/August 2015		

The PEI rankings fail to capture a robust universe of large and active SWFs that would undoubtedly rank above OPERF

- SWFs includes ADIA, Kuwait Investment Authority, Qatar Investment Authority, GIC, Tamasek, Korea Investment Corporation, China Investment Corporation, China State Administration of Foreign Exchange, Hong Kong Monetary Authority, etc.

While the OPERF PE program is among the largest in the industry, it is extremely unique among its peer cohort given its implementation strategy's heavy reliance on primary fund commitments

- All programs at the large end are limited with respect to the universe of managers that are accessible
- OPERF's competition commit to the same group of large GP's in their primary programs, but allocate much more program commitments to co-invest, directs and secondaries to tactically manage portfolio exposures and optimize economics
- Large GPs will increasingly manage funds in a manner that complements these more sophisticated implementation strategies; however, this trend will not accrue to OPERF's benefit as our peer cohort is driving terms and behavior in the primary market that only make sense in conjunction with these other, ancillary implementation strategies (i.e., co-invest, directs and secondaries) that we are not pursuing.

2016 Private Equity Annual Plan

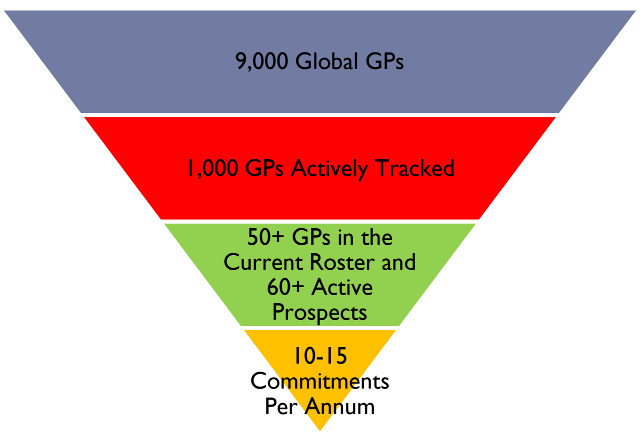
- OST Staff 2016 Private Equity Plan

OST Staff 2016 Private Equity Plan

OST STAFF 2016 PRIVATE EQUITY PLAN – COMMITMENT PACING

- Having looked closely with TorreyCove at various forward scenarios, OST Private Equity staff are recommending a forward investment pace of **$2.5-3.5 billion per annum** over the next several years
  - As illustrated in TorreyCove's annual plan document, pacing commitments in this range over the next several years should guide the OPERF private equity allocation down to 17.5% in a smoothed manner
  - As previously discussed, staff has made considerable progress rationalizing the Program's GP roster over the past several years. At this stage, staff would not recommend further roster pruning as doing so would render both performance and diversification objectives challenging in a primaries-only context
    - For the next several years, staff recommends tightening the range of commitment size around an average of $250-300 million per commitment to increase diversification and reduce reliance on mega funds. To do so staff recommends capping commitments at $500 million while also attempting to move smaller commitments up toward $150 million over time. This would dictate averaging 10-15 commitments to buyout/growth equity per year and opportunistic investments in venture and distressed debt

OST STAFF GP FUNNEL



- Staff recently completed a market mapping exercise to capture the addressable universe of GPs that raise funds of $500 million or more (VC excluded). While the full universe of GPs approaches 9,000 by some counts, OPERF's addressable universe stands at roughly 1,000 GPs
- Of that 1,000-GP group, we can expect 250 individual managers per annum on average to raise capital
- Of these 1,000 actively-tracked GPs, roughly 50 are on the current OPERF roster and another 60 have been highlighted by staff as potential candidates for Program inclusion
- 10-15 commitments per year would suggest investing in roughly 5% of funds in the addressable universe
- Staff will focus primarily on cultivating relationships with current and targeted GPs to optimize allocations. This effort will require allowing fundraising cycles to dictate timing to some extent versus perfectly smoothing commitments from year-to-year (for managers on the target list we will invest when they come to market)

OST Staff 2016 Private Equity Plan

OST STAFF 2016 PRIVATE EQUITY PLAN – IMPLEMENTATION

- As noted already the OPERF implementation plan relies almost completely on staff/consultant directed primary fund commitments
  - **Primaries** – The push for 2016 will be continued due diligence and monitoring process enhancements
    - The pacing/commitment sizing strategy outlined on the last slide uses the working assumption that with further process enhancements, OST is staffed to maintain a roster of roughly 50 GP relationships. If additional leverage proves unachievable, the GP roster will need to be rationalized further and/or some element of the portfolio will need to be moved to a discretionary separate account or FOF manager
  - **Secondaries** – Given where the Program is relative to target as well as current pricing in the secondary market, staff is not recommending an emphasis on secondaries in 2016
  - **Co-Investment/Directs –** OPERF currently has very limited exposure to co-invest through commitments to co-invest fund managers. This part of the market has changed in a material fashion over the last several years so staff is recommending that OPERF pause and study options
    - Demand for co-invest access has grown exponentially over the last several years, and many OPERF peers have employed staff directed co-investment programs. This means that by implementing through discretionary mangers, OPERF is now at a strategic disadvantage in deal sourcing
    - Current co-invest exposure is only 5%. Given that the primary drive with co-invest is improved economics, this strategy should be at least 10% and probably closer to 20% of the Program to have an impact. Further, terms and conditions have moved significantly with respect to discretionary co-invest separate accounts so OPERF's legacy approach now appears above market on fees/carry
  - **Separate Accounts/Strategic Relationships –** Staff continues to explore options with GPs, but the benefits attributed to some peer models do not (in staff's opinion) sufficiently offset increased concentration and illiquidity risks. Staff will continue to monitor, but this area is an unlikely focal point for staff in 2016
    - Staff observe new product developments at the large end of the market that have provisionally been branded "Core" private equity. These products are currently marketed as seeking "low teens" net IRRs with lower volatility, longer holds and reduced fees. While that return profile is potentially attractive and additive particularly for a large LP like OPERF, if the risk reduction is real, staff believes there are several potential conflicts that need resolution during this first generation implementation period. Therefore, staff is recommending a "watch and learn" approach with respect to this "Core" private equity strategy

OST Staff 2016 Private Equity Plan

OST STAFF 2016 PRIVATE EQUITY PLAN – MATURE PORTFOLIO

- As previously discussed, more than half the Program's current exposure is in funds at least seven years old
  - Due to an accelerated pace of commitments going into the GFC and the resulting extension of holding periods, the Program currently holds 57% of total portfolio value in 131 funds (57% of all funds) which commenced investing before 2009. The chart below depicts the Program's current exposure to these long-dated funds
    - As seen below, roughly 25% of all active funds in the Program have already exceeded their 10-year expected life, and an accelerating number of funds will hit that milestone over the next several years
    - Funds beyond their 10-year life are increasingly turning to restructurings as an alternative to conventional liquidations. Restructurings can be both extremely time consuming and potentially value destroying for LPs
    - Given the substantial value remaining in OPERF's long-dated fund portfolio as well as the increasing monitoring burden as end-of-fund-life issues become more complex, staff recommends exploring solutions for this portion of the Program over the course of 2016. Potential solutions include secondary sale and/or advisory delegation

VINTAGE	FUND AGE (yrs.)	ACTIVE FUND COUNT	% OF All ACTIVE FUNDS	CURRENT VALUE (mm)	% OF TOTAL CURRENT VALUE
PRE-2005	10+	42	18%	$907	6%
2005	10	15	7%	$637	4%
2006	9	27	12%	$2,368	17%
2007	8	23	10%	$1,867	13%
2008	7	24	10%	$2,363	17%
TOTAL	**7+**	**131**	**57%**	**$8,142**	**57%**

OST Staff 2016 Private Equity Plan

OST STAFF 2016 PRIVATE EQUITY PLAN – PRIORITIES

2016 OST Private Equity Staff Priorities

1. $2.5-3.5 billion of new fund commitments
2. Private Equity Consultant RFP (TorreyCove contract expires at the end of 2016)
3. Effect continued enhancements to due diligence and monitoring processes
4. Study solutions for the Program's long-dated fund portfolio
5. Collaborate with audit team on 2016 process audit
6. Support risk team on integration of private markets into Aladdin

Ongoing OST Private Equity Staff Projects

1. Study and implement IT solutions to improve data capture and operating leverage
2. Study co-invest options
3. Study separate account solutions and "Core" private equity offerings

TAB 4 – ANNUAL PLACEMENT AGENT REPORT

Annual Disclosure of Placement Agents
February 3, 2016

Purpose

In accordance with OST Policy 5.03.01, Conflict of Interest and Code of Conduct, OST shall disclose, in all investment recommendations to the Oregon Investment Council, any Placement Agent used by an investment firm *that has had any contact with Treasury investment staff*. Staff shall present to the OIC an annual summary of the foregoing, which will also be made available to the public on the Treasury website.

Summary for Calendar Year 2015

Partnership	**OPERF Commitment**	**Placement Agent**
GGV Capital Select, L.P.	$50 million	UBS Securities LLC
Teays River Investments, LLC	$150 million	Brooklands Capital Strategies

Note that placement agents are retained by the general partner of the fund, and OPERF does not rely on such firms for access or analysis.

TAB 5 – 2017 OIC MEETING DATES

OREGON INVESTMENT COUNCIL

2017 Meeting Schedule

Meetings Begin at 9:00 am

Oregon State Treasury North Office
16290 SW Upper Boones Ferry Road
Tigard, OR 97224

Wednesday, February 1, 2017

Wednesday, March 15, 2017

Wednesday, April 26, 2017

Wednesday, June 7, 2017

Wednesday, August 9, 2017

Wednesday, September 20, 2017

Wednesday, November 1, 2017

Wednesday, December 13, 2017

TAB 6 – ASSET ALLOCATION & NAV UPDATES

Asset Allocations at December 31, 2015

OPERF	Policy	Target[1]	Regular Account: $ Thousands	Regular Account: Pre-Overlay	Regular Account: Overlay	Regular Account: Net Position	Regular Account: Actual	Variable Fund: $ Thousands	Total Fund: $ Thousands
Public Equity	32.5-42.5%	37.5%	25,700,565	37.8%	635,964	26,336,529	38.7%	644,224	26,980,753
Private Equity	13.5-21.5%	17.5%	13,982,582	20.5%		13,982,582	20.5%		13,982,582
Total Equity	**50.0-60.0%**	**55.0%**	**39,683,147**	**58.3%**	**635,964**	**40,319,111**	**59.3%**		**40,963,335**
Opportunity Portfolio	0-3%	0.0%	1,286,288	1.9%		1,286,288	1.9%		1,286,288
Fixed Income	**15-25%**	**20.0%**	**14,869,829**	**21.9%**	**764,956**	**15,634,785**	23.0%		**15,634,785**
Real Estate	**9.5-15.5%**	**12.5%**	**8,239,207**	**12.1%**	**(30,600)**	**8,208,607**	12.1%		**8,208,607**
Alternative Investments	**0-12.5%**	**12.5%**	**2,299,979**	**3.4%**		**2,299,979**	3.4%		**2,299,979**
Cash[2]	**0-3%**	**0.0%**	**1,670,299**	**2.5%**	**(1,370,320)**	**299,979**	0.4%	11,395	**311,374**
TOTAL OPERF		**100%**	**$ 68,048,749**	**100.0%**	**$ -**	**$ 68,048,749**	**100.0%**	**$ 655,619**	**$ 68,704,368**

[1]Targets established in June 2015. Interim policy benchmark consists of: 41.5% MSCI ACWI Net, 23.5% Custom FI Benchmark, 20% Russell 3000+300bps (1 quarter lagged), 12.5% NCREIF (1 quarter lagged), & 2.5% CPI+400bps.

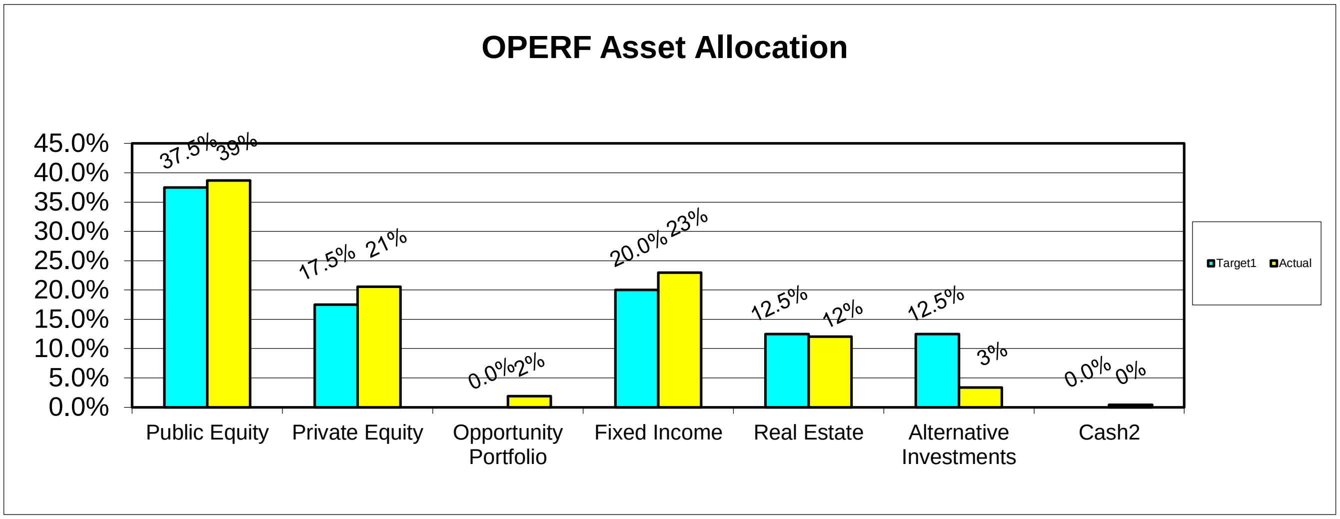
[2]Includes cash held in the policy implementation overlay program.

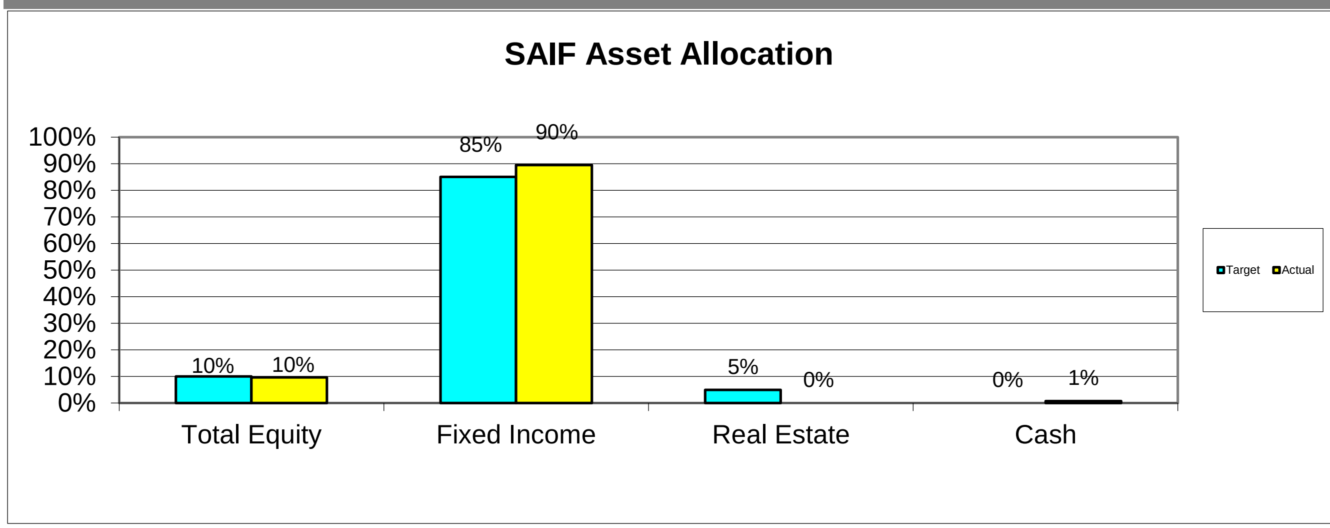
SAIF	Policy	Target	$ Thousands	Actual
Total Equity	**7-13%**	**10.0%**	**435,941**	**9.7%**
Fixed Income	**80-90%**	**85.0%**	**4,015,785**	**89.6%**
Real Estate	**0-7%**	**5.0%**	**0**	**0.0%**
Cash	**0-3%**	**0%**	**31,649**	**0.7%**
TOTAL SAIF			**$4,483,375**	**100.0%**

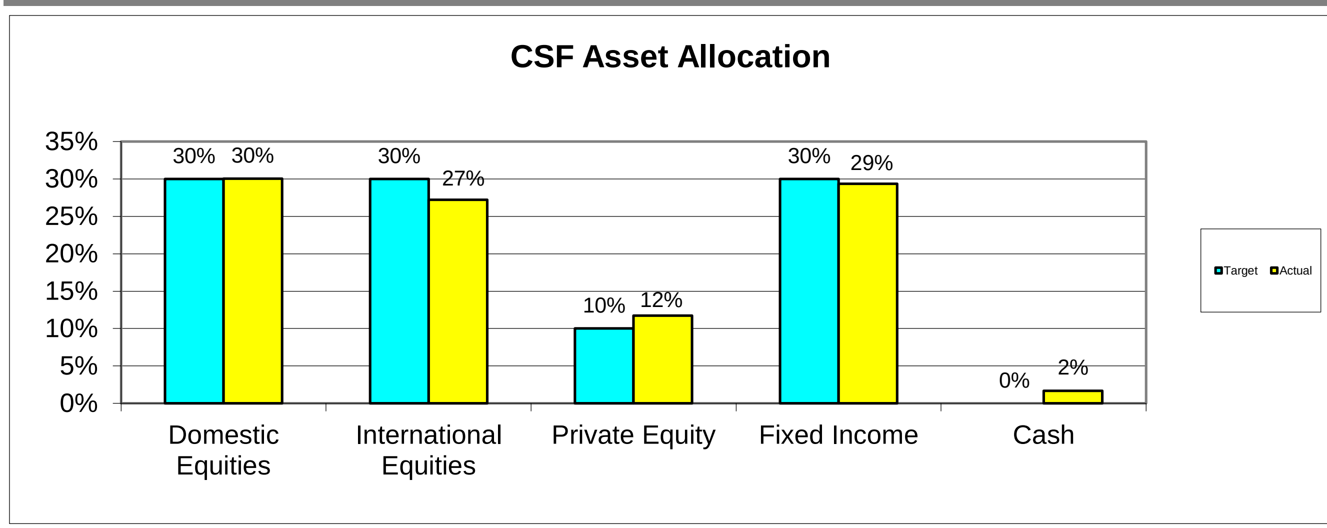
CSF	Policy	Target	$ Thousands	Actual
Domestic Equities	25-35%	30%	$427,665	30.0%
International Equities	25-35%	30%	387,326	27.2%
Private Equity	0-12%	10%	167,267	11.7%
Total Equity	**65-75%**	**70%**	**982,258**	**69.0%**
Fixed Income	**25-35%**	**30%**	**417,968**	**29.3%**
Cash	**0-3%**	**0%**	**23,968**	**1.7%**
TOTAL CSF			**$1,424,194**	**100.0%**

SOUE	Policy	Target[3]	$ Thousands	Actual
Global Equities	65-75%	70%	**1,485**	71.4%
Growth Assets	**65-75%**	**70%**	**1,485**	**71.4%**
Fixed Income	25-35%	30%	593	28.5%
Cash	0-3%	0%	3	0.1%
Diversifying Assets	**25-35%**	**30%**	**596**	**28.6%**
TOTAL SOUE			**$2,081**	**100.0%**

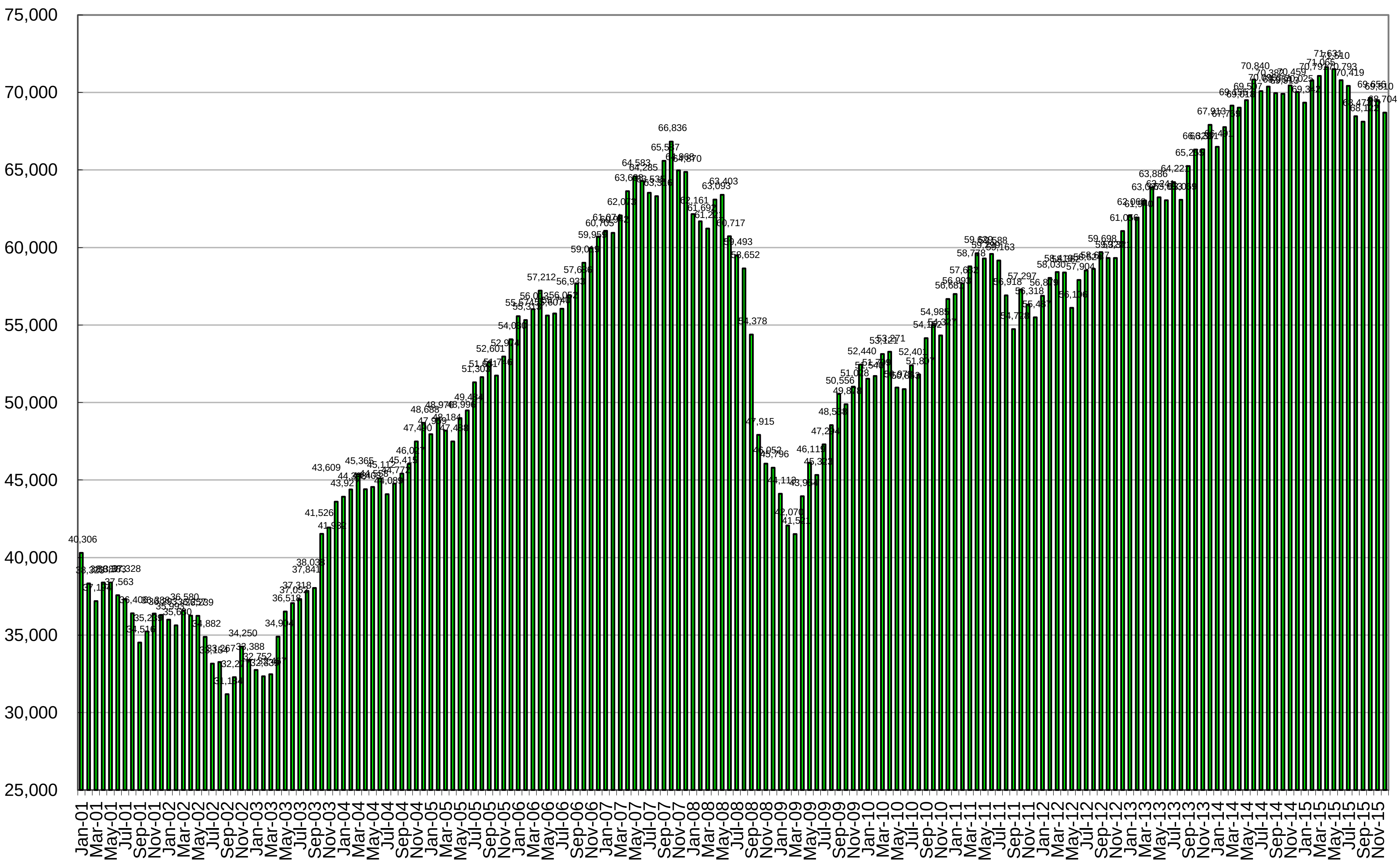
[3]Revised asset allocation adopted by OIC, March 2015.


OPERF Asset Allocation
45.0%
40.0%
35.0%
30.0%
25.0%
20.0%
15.0%
10.0%
5.0%
0.0%
37.5%
39%
17.5%
21%
0.0%
2%
20.0%
23%
12.5%
12%
12.5%
3%
0.0%
0%
Public Equity
Private Equity
Opportunity Portfolio
Fixed Income
Real Estate
Alternative Investments
Cash2
Target1
Actual

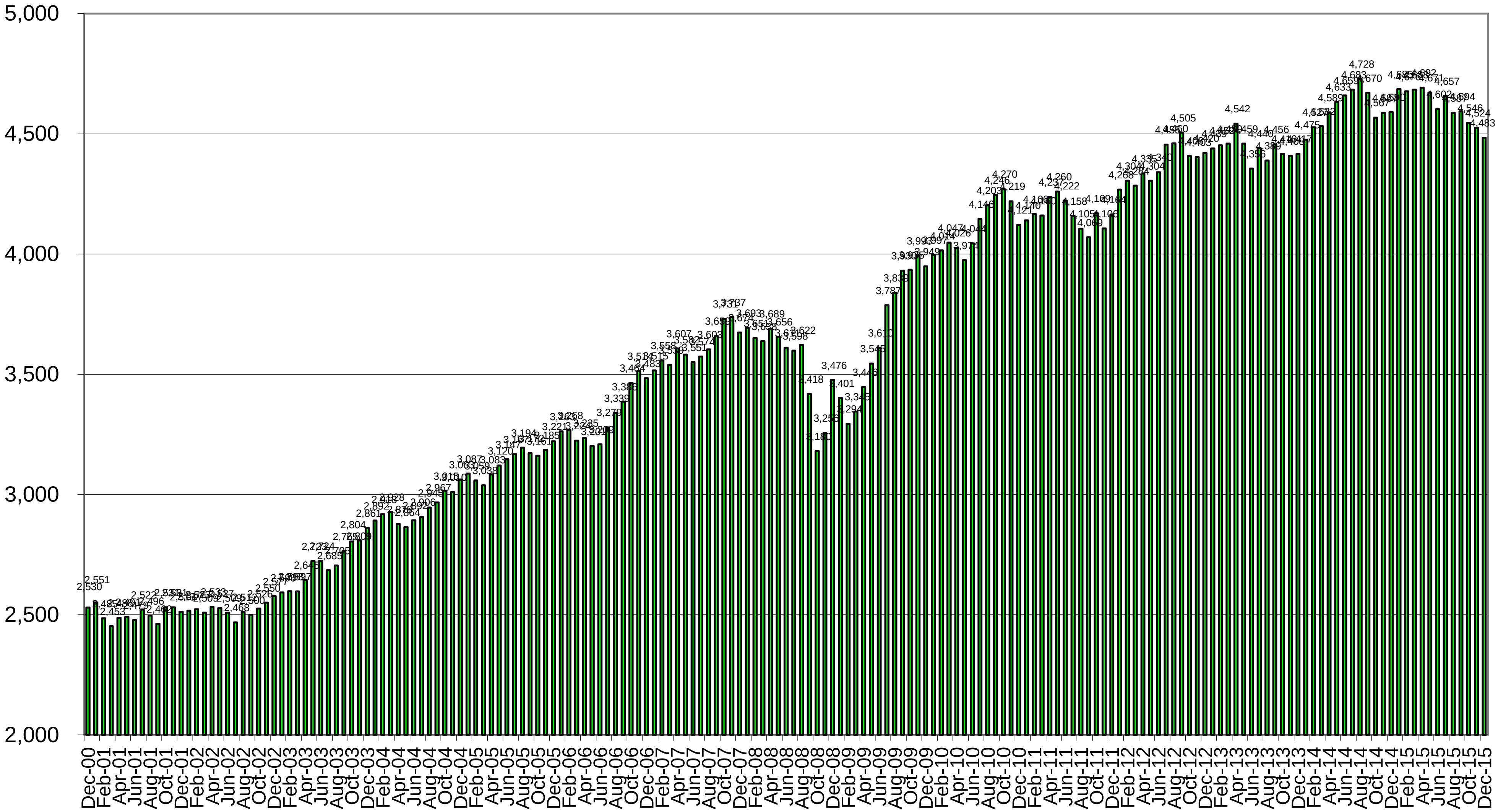

SAIF Asset Allocation
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
10%
10%
85%
90%
5%
0%
0%
1%
Total Equity
Fixed Income
Real Estate
Cash
Target
Actual


CSF Asset Allocation
35%
30%
25%
20%
15%
10%
5%
0%
30%
30%
30%
27%
10%
12%
30%
29%
0%
2%
Domestic Equities
International Equities
Private Equity
Fixed Income
Cash
Target
Actual

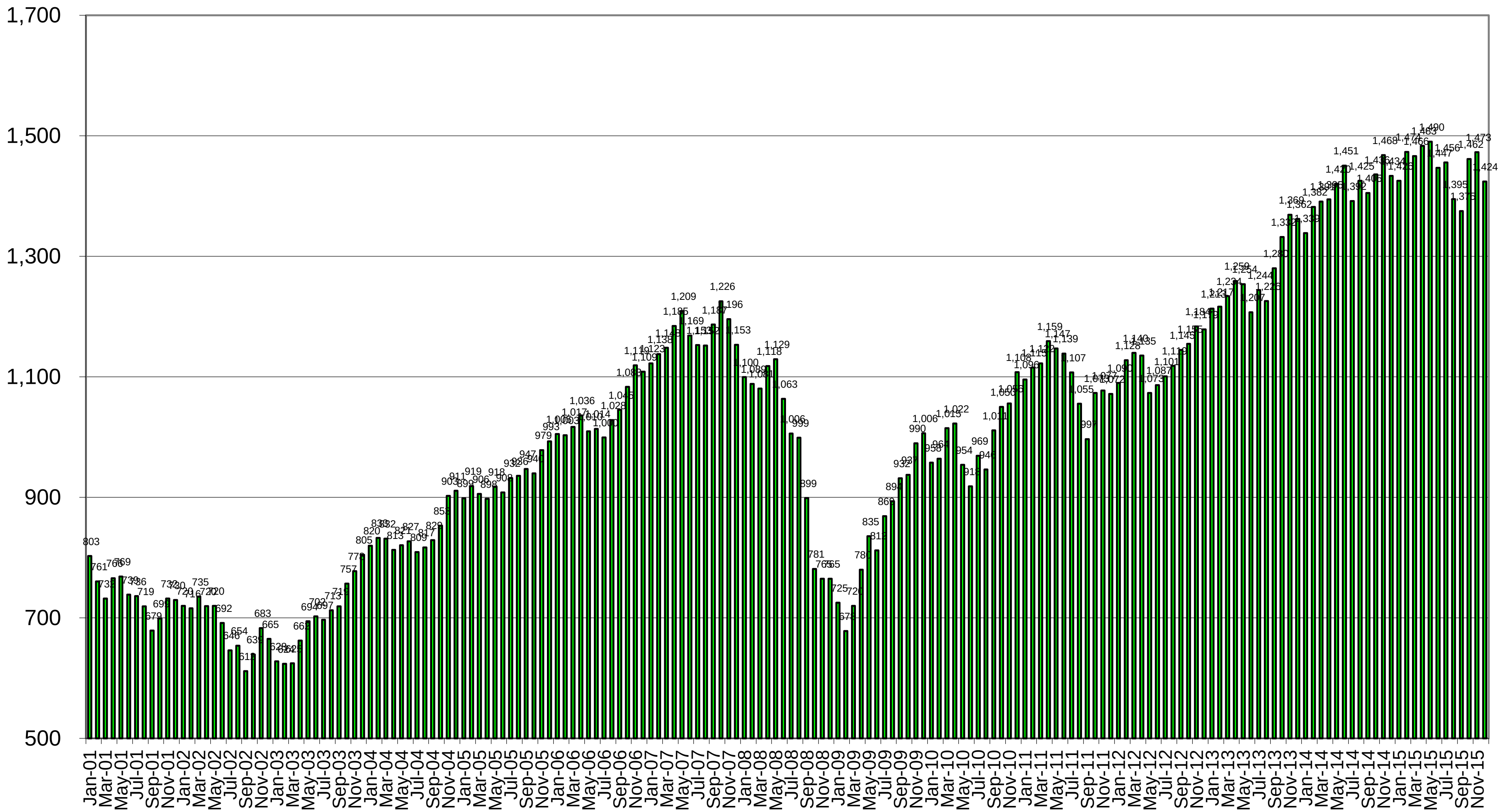
OPERF NAV
15 years ending December 2015
($ in Millions)



SAIF NAV
15 years ending December 2015
($ in Millions)



CSF NAV
15 years ending December 2015
($ in Millions)



TAB 7 – CALENDAR AND FUTURE AGENDA ITEMS

2016 OIC Meeting Calendar and Planned Agenda Topics

February 3:	**O**PERF Private Equity Manager Recommendation Private Equity Program Review Placement Agent Report 2017 OIC Calendar Approval
March 9:	**O**PERF Alternatives Manager Recommendation SAIF Annual Review OPERF Real Estate Policy and Portfolio Update OITP Policy Update and Recommendation Q4 2015 OPERF Performance & Risk Report
April 20:	OPERF Overlay Review Alternatives Portfolio Review CSF Annual Review OST/OPERF Compliance Update OIC Policy Update Placeholder
June 1:	Securities Lending Update Q1 2016 OPERF Performance & Risk Report OPERF Litigation Update OIC Real Estate Consultant Recommendation
August 3:	OITP Review
September 14:	Public Equity Program Review OIC Private Equity Consultant Recommendation OPERF Q2 2016 Performance & Risk Report OSGP Update
October 26:	OSTF Review Fixed Income Program Review CEM Benchmarking Report OIC General Consultant(s) Recommendation
December 7:	OPERF Q3 2016 Performance & Risk Report Real Estate Portfolio Review Opportunity Portfolio Review