

# 2016 Private Equity Annual Review

February 18-19, 2016

Christopher Schelling, Director of Private Equity



# Private Equity Annual Review Agenda

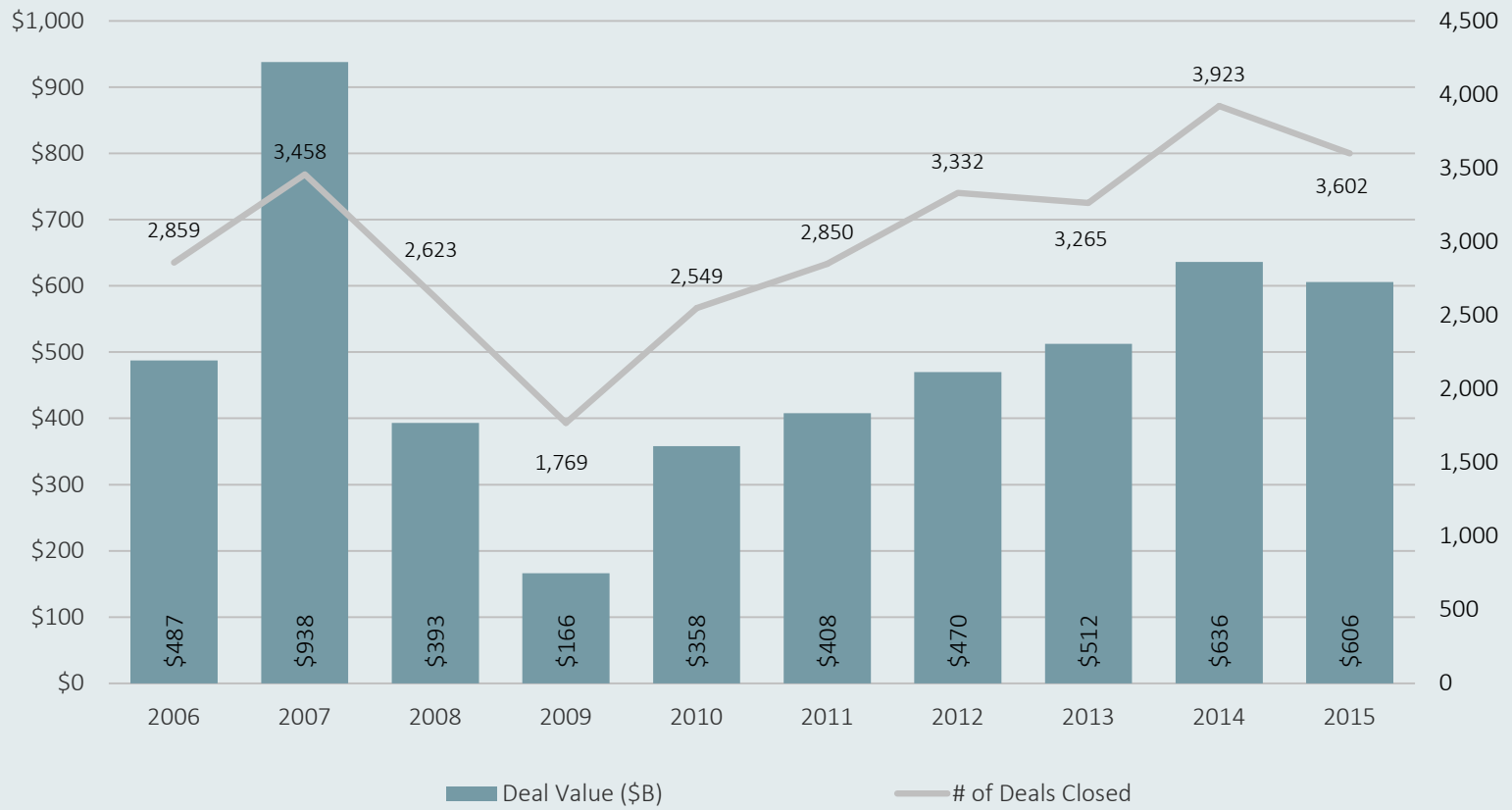
- I. Market Update
- II. Portfolio Overview
- III. Forward Looking Agenda
  - A. Annual Pacing Plan
  - B. J-curve
  - C. Over-commitment Education
  - D. PE Pacing Model
- IV. Annual Monitoring Process
- V. Manager Review
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# I. Private Equity Market Update



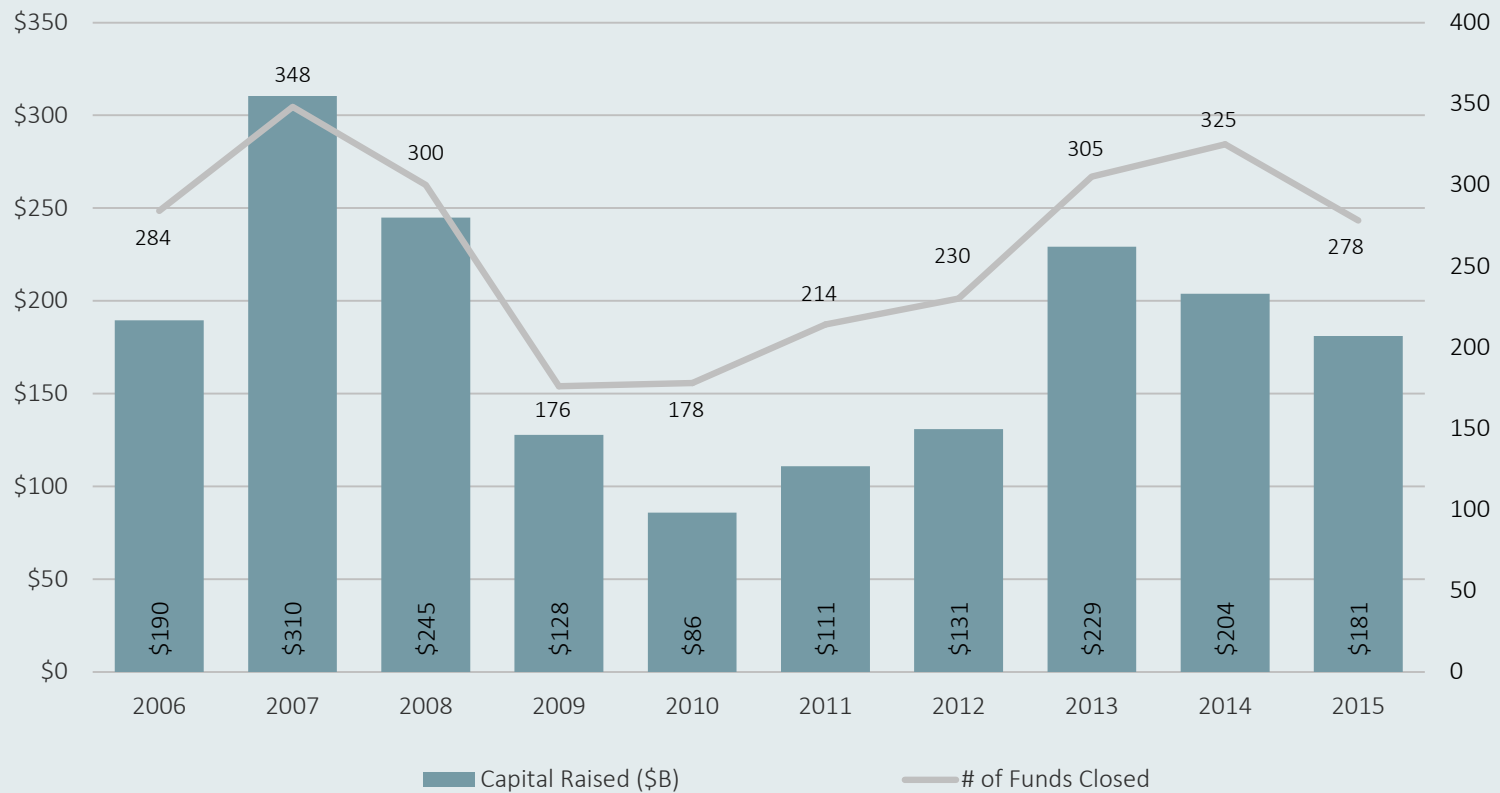
# Private Equity Market Update

## Private Equity Deal Flow



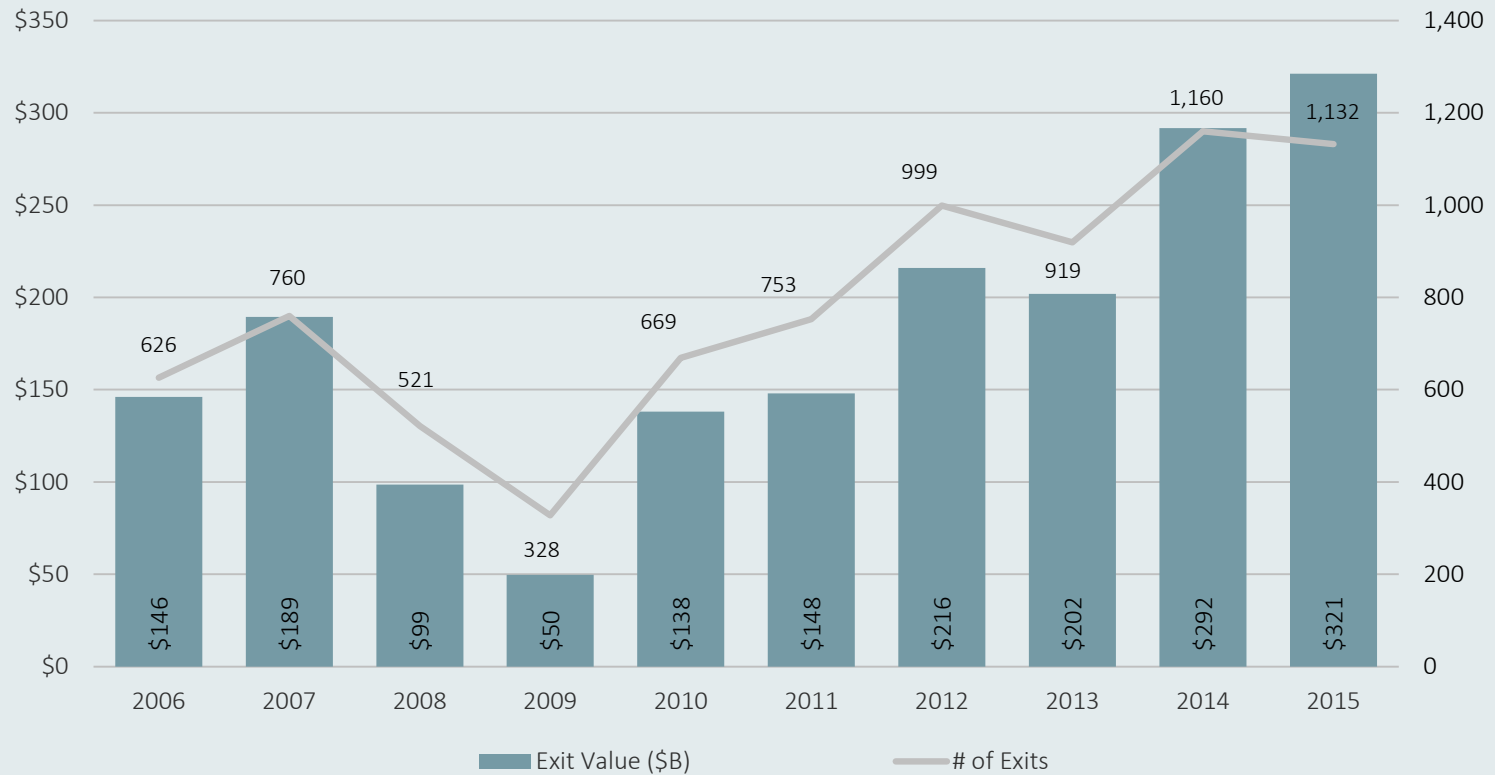
# Private Equity Market Update

## Private Equity Fundraising



# Private Equity Market Update

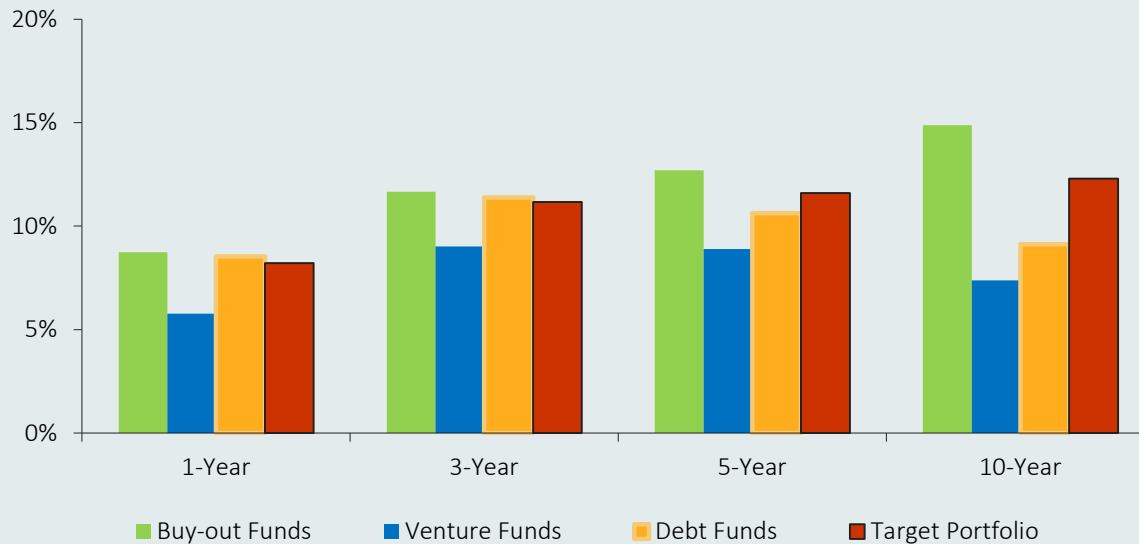
## Private Equity Exits



# Private Equity Performance

Global Horizon IRR by Fund Type

	1-Year	3-Year	5-Year	10-Year
Buy-out Funds	8.7%	11.7%	12.7%	14.9%
Venture Funds	5.8%	9.0%	8.9%	7.4%
Debt Funds	8.5%	11.4%	10.6%	9.1%
Target Portfolio	8.2%	11.2%	11.6%	12.3%



## II. Private Equity Portfolio Overview





# Private Equity Asset Class Objectives

- Objective

- The Private Equity asset class is intended to enhance the total fund performance through investment in non-publicly traded securities by generating a long-term rate of return that exceeds that of publicly-traded equities. Private equity investments are expected to be illiquid and long-term in nature.
- The long-term policy objective is Russell 3,000 + 3% over periods of 5 years and greater.

- Investment Philosophy

- Manager selection is critical, and managers add value through:
  - Reducing agency conflicts and aligning equity holder/executive incentives
  - Investment structuring and balance sheet management
  - Deep sector experience and creating operating efficiencies
  - Navigating non-public information and capturing illiquidity/complexity premia

# Private Equity Allocation

As of December 31, 2015

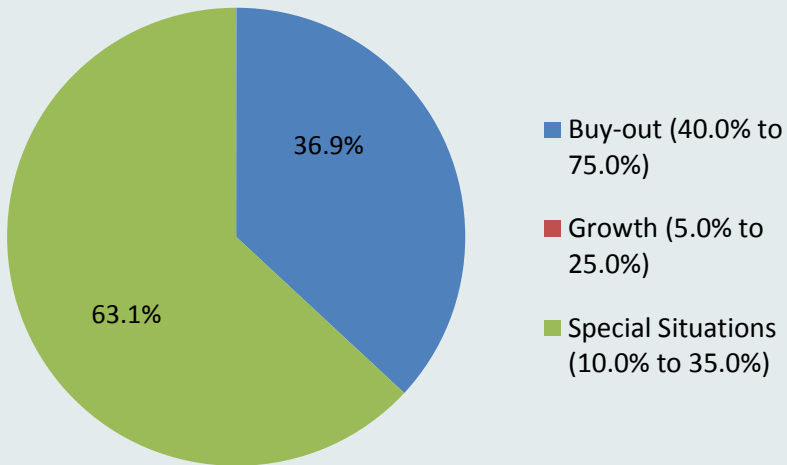
Manager	\$ Approved	\$ Commitment	% of TMRS	% of Target PE	\$ Called	% Called
TSSP Adjacent Opportunities Partners (B), LP (TPG – formerly TSSP)	75,000,000	75,000,000	0.32%	6.36%	-	-
Carlyle Energy Mezzanine Opportunities Fund II, LP (Carlyle – formerly Carlyle Energy)	65,000,000	65,000,000	0.28%	5.51%	-	-
H.I.G. Bayside Loan Opportunity Fund IV, LP (Bayside – formerly H.I.G. Bayside)	60,000,000	60,000,000	0.25%	5.09%	-	-
Tritium I, LP (Tritium)	50,000,000	50,000,000	0.21%	4.24%	11,728,396	23.46%
Searchlight Capital II, LP* (Searchlight)	50,000,000	47,000,000	0.20%	3.98%	5,341,669	11.37%
Harvest Partners VII, LP* (Harvest)	50,000,000	20,000,000	0.08%	1.70%	-	-
<b>Total</b>	<b>\$ 350,000,000</b>	<b>\$ 317,000,000</b>	<b>1.34%</b>	<b>26.87%</b>	<b>\$ 17,070,065</b>	<b>5.38%</b>

Called: \$17 million  
Unfunded commitment: \$300 million

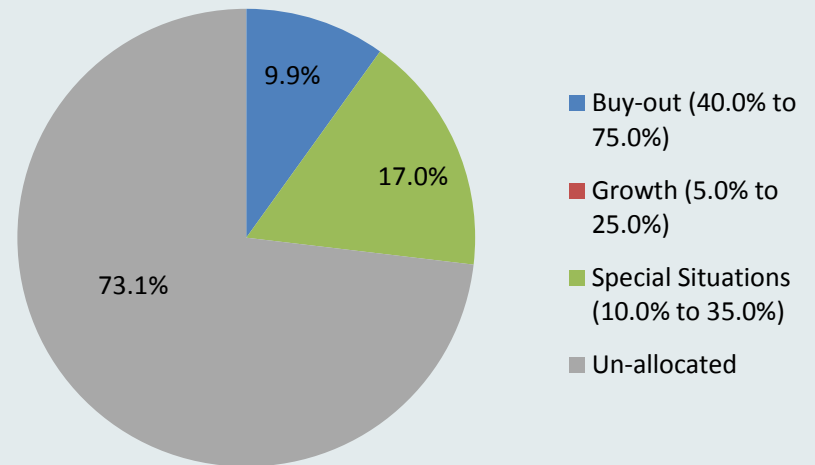
# Private Equity Allocation

As of December 31, 2015

**Figure 1 : Private Equity Strategy Diversification by Commitment**



**Figure 2 : Private Equity Target Diversification**



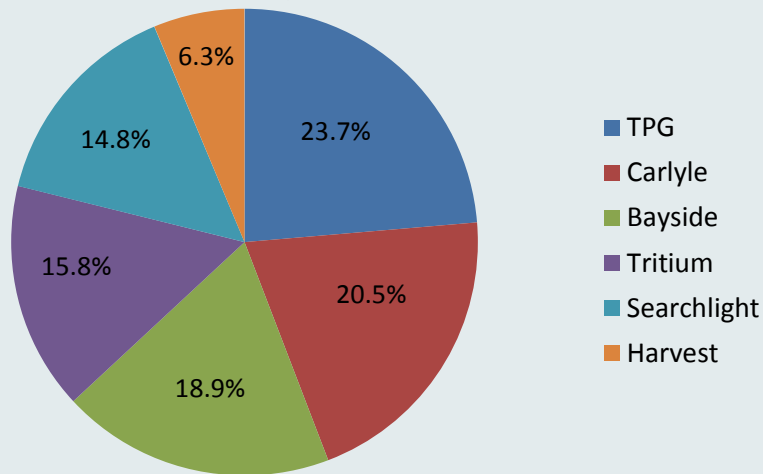
## Policy Strategy Range

Buy-out/Control	40.0% to 75.0%
Growth/Minority/Venture	5.0% to 25.0%
Special Situations/Opportunistic	10.0% to 35.0%

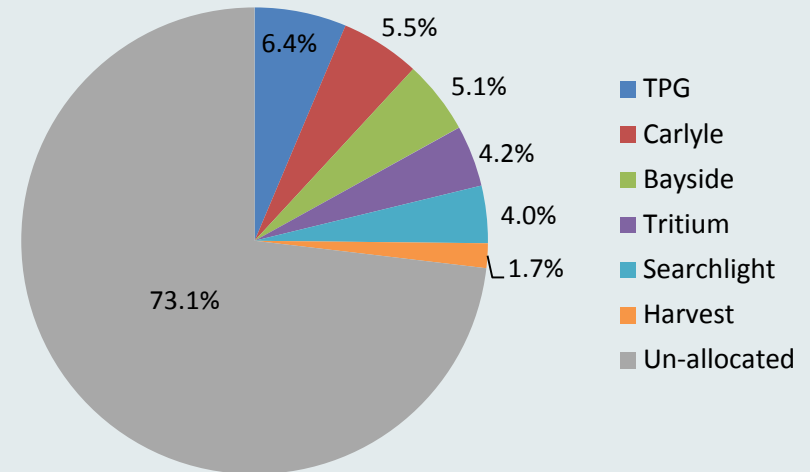
# Private Equity Allocation

As of December 31, 2015

**Figure 3: Private Equity Manager Diversification by Commitment**



**Figure 4 : Private Equity Target Manager Diversification**



## Major Policy Guidelines

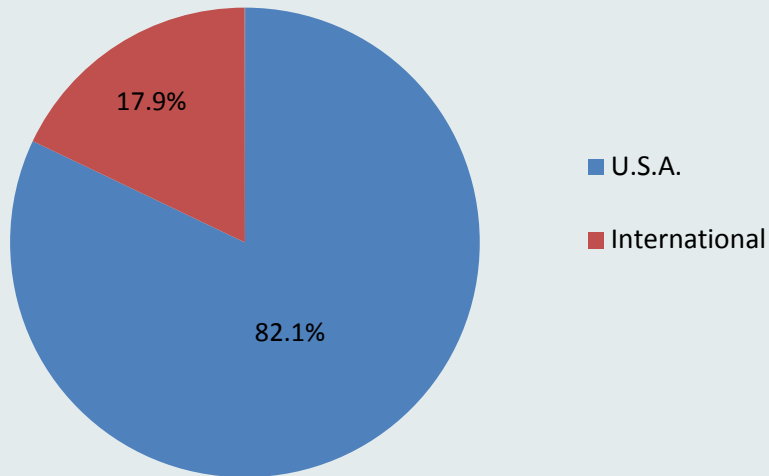
No more than 35% with any one investment manager

No more than 25% in any one investment vehicle

# Private Equity Allocation

As of December 31, 2015

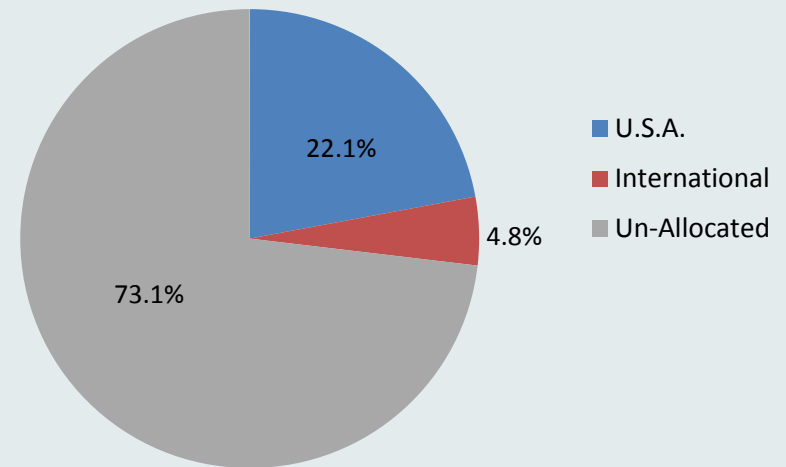
**Figure 5 : Private Equity Geographic Diversification by Commitment**



Policy Geography

U.S.A.  
International

**Figure 6: Private Equity Target Geographic Diversification**



Min. 80%  
Max. 20%

# III. Forward Looking Agenda

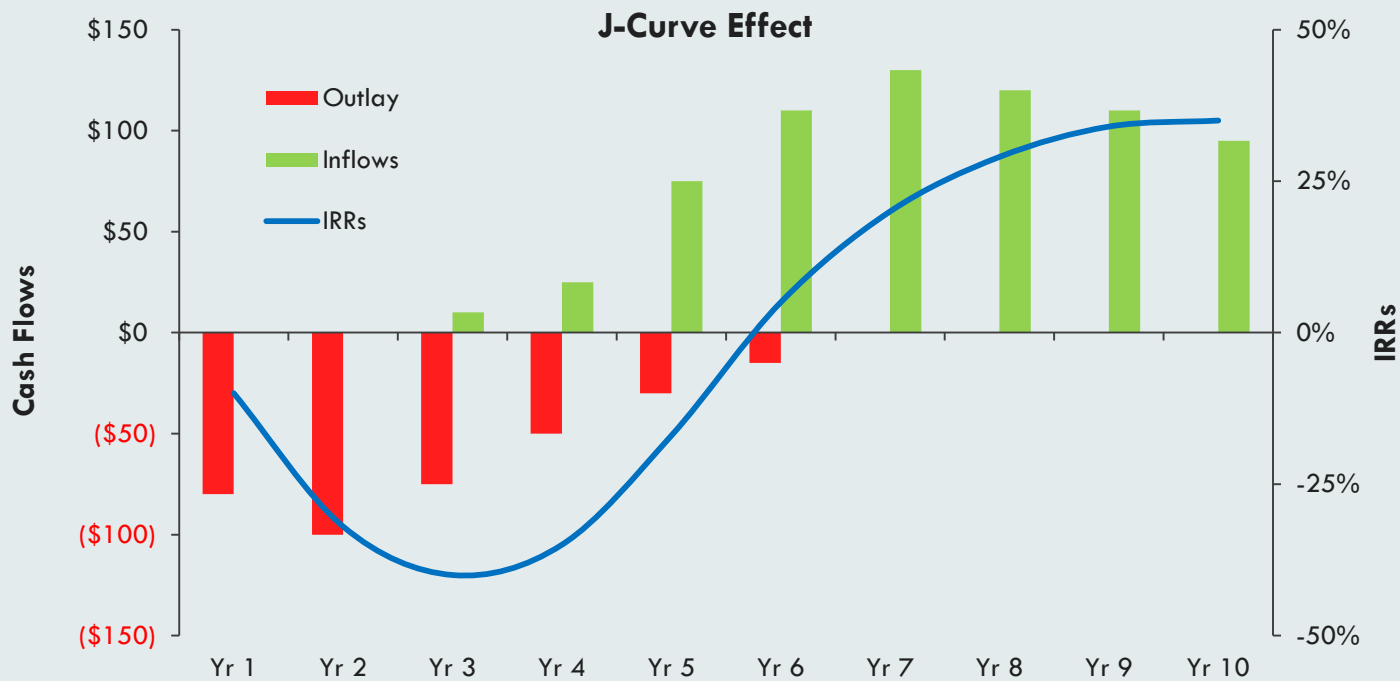


# Private Equity Pacing

- December 2015 – Board authorized manager search recommendations for up to \$600 million of private equity commitments for 2016

		2016 System-wide Investment Pacing Plan											
Asset Class	Activity	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
4	Expected # of Recommendations for 2016		3	10		7	3		8	9	4		6
Private Equity*													
	Annual Asset Class/P&P Review												
	Manager Search (\$150M)		3										
	Manager Search (\$150M)					3							
	Manager Search (\$150M)								3				
	Manager Search (\$150M)											3	

# Remember the J-Curve!





# Unfunded Commitment

Theoretical	Year 1	Year 2	Year 3	Year 4	Year 5
Fund 1 Commitment	\$100				
Calls during the year	\$20	\$20	\$20	\$20	\$20
<b>Total Called</b>	<b>\$20</b>	<b>\$40</b>	<b>\$60</b>	<b>\$80</b>	<b>\$100</b>
Fund 1 Unfunded	\$80	\$60	\$40	\$20	\$0

Actual	Year 1	Year 2	Year 3	Year 4	Year 5
Fund 1 Commitment	\$100				
Calls during the year	\$15	\$22	\$14	\$16	\$18
<b>Total Called</b>	<b>\$15</b>	<b>\$37</b>	<b>\$51</b>	<b>\$67</b>	<b>\$85</b>
Fund 1 Unfunded	\$85	\$63	\$49	\$33	\$15

# Over-commitment Defined

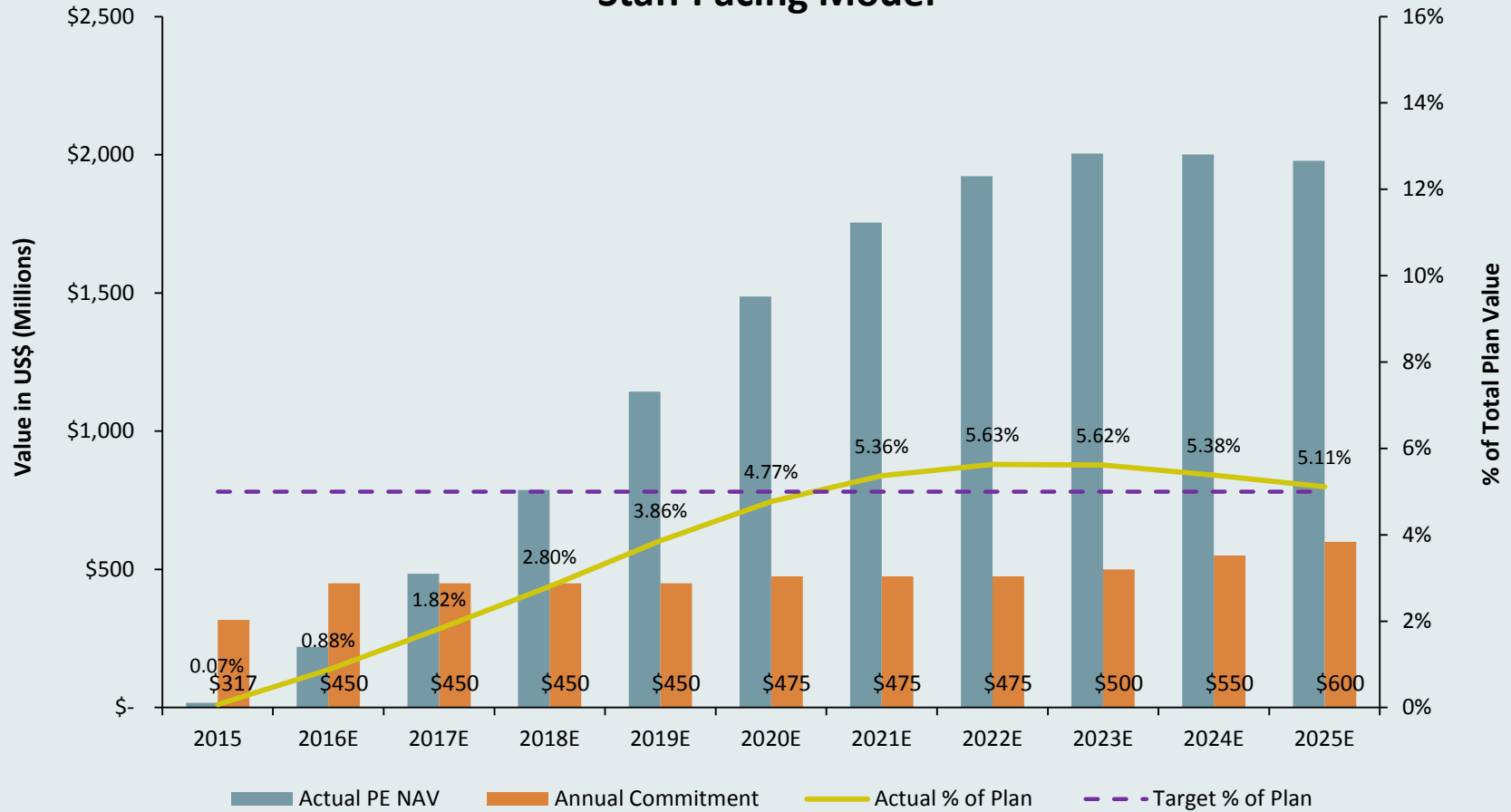
- Debit card analogy - If you have a \$50 debit card to Best Buy, you never hit the \$50 dead on. PE firms generally underinvest fund commitments for a number of reasons.
- Since capital is not put to work immediately in private equity funds, investors must run what is known as an over-commitment strategy in order to hit their target allocation. That is, the cumulative value of the funds committed to private equity exceeds the value of the private equity portfolio at any given time.

# Over-commitment Example

- If the pacing model indicates that private equity value will peak at 85% of commitments, an investor needs to commit 117.6% (or  $1/0.85$ ) of your targeted allocation to keep the private equity portfolio at target exposure.
- To target \$1,200 billion in commitments, 5% of total fund, and get 85% called, you will have \$1,020 in NAV ( $\$1,200 * 0.85$ ) or 4.25% of total fund actual expected exposure.
- To target \$1,200 billion in NAV, assuming you get 85% called, you target \$1,411 billion in commitments ( $1.176 * \$1,200$ ).

# Private Equity Pacing Model

## Staff Pacing Model

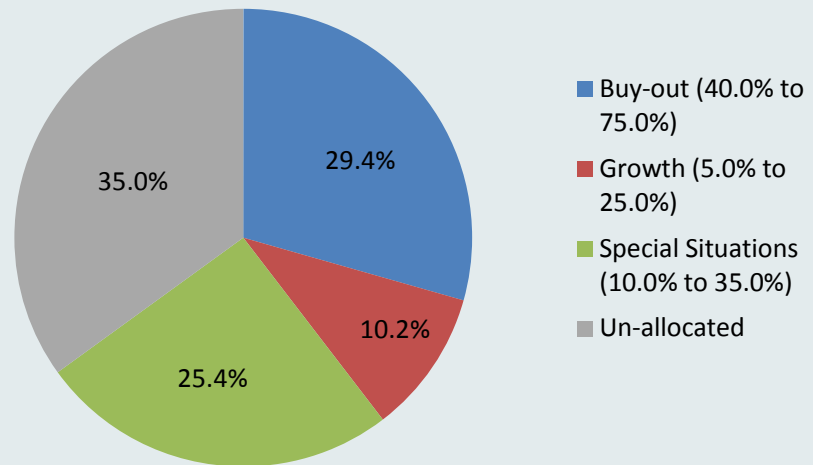


The TMRS Investment Policy Statement limits annual investment in primary private equity investments to 35% of the total target in any one year. The \$600m approved in the annual pacing plan includes \$150m that can be used for secondary and co-investments which are excluded by policy from that limit.

# Interim Targets

<b>Buy-Out</b>	
4 - 5 Managers	\$230 MM
<b>Growth</b>	
3 - 4 Managers	\$120 MM
<b>Special Situations</b>	
1 - 2 Managers	\$100 MM
	\$450 MM

**Figure 7 : Year End 2016 Private Equity Target Diversification**



## Policy Strategy Range

Buy-out/Control	40.0% to 75.0%
Growth/Minority/Venture	5.0% to 25.0%
Special Situations/Opportunistic	10.0% to 35.0%

# IV. Annual Monitoring Process



# Annual Monitoring Process

- Per the TMRS IPS, comprehensive reviews are to be conducted and documented at least annually.
- The annual review process includes:
  - Annual due diligence questionnaire, ADV and/or compliance questionnaire as appropriate are reviewed from all managers, covering any potential changes to the firm, personnel, investment strategy or style, philosophy and process, compliance and operations, risk management, and performance.
  - Managers are reviewed on both quantitative and qualitative factors.
  - The review includes a due diligence visit by Staff to the Manager's office or a meeting to take place at TMRS at least once annually.
  - Results are reported to the Board along with any recommended actions, if appropriate.

# V. Manager Review





# Manager Monitoring Summary Report

Manager	Fund Name	Sub-Asset Class	Under Review?	Qualitative Evaluation
TPG	TSSP Adjacent Opportunities Partners (B), LP	Special Situations	No	Excellent
Carlyle	Carlyle Energy Mezzanine Opportunities Fund II, LP	Special Situations, Energy Mezzanine	No	Excellent
Bayside	H.I.G. Bayside Loan Opportunity Fund IV, LP	Special Situations, Non-Control Distressed	No	Excellent
Tritium	Tritium I, LP	Buy-out, Small Market Growth	No	Excellent
Searchlight	Searchlight Capital II, LP	Buy-out, Middle Market Value	No	Excellent
Harvest	Harvest Partners VII, LP	Buy-out, Core Middle Market	No	Excellent

## TPG: Special Situations

\*As of 12/31/2015

Assessment Area	Grade	Update & Comments
Organization		The subscription documents were fully executed on December 31, 2015. The Fund closed on roughly \$3 billion on December 31, 2015.
People		There has been no additions or departures to the investment team. Parent company, TPG Capital, hired Jin-Yong Cai, former head of the World Bank's private-sector investment arm.
Philosophy		There were no changes to the investment philosophy.
Process		There were no changes to the investment process.
Performance		N/A – The Fund has not currently called capital from TMRS.
Portfolio		There are currently no investments in the portfolio.
Risk Management		There are no risk management issues.
Operations		There were no changes to the firm's operations team or processes.
Compliance		There were no compliance breaches.
Client Service		There were no changes to the client service team.
Other		None

Excellent

In Good Standing

Fair  
*(working with manager)*

Unsatisfactory  
*(remedial action being taken)*

Comprehensive Review

## Carlyle: Special Situations, Energy Mezzanine

\*As of 12/31/2015

Assessment Area	Grade	Update & Comments
Organization		The subscription documents were fully executed on December 22, 2015. Fund II's investment period commenced on December 1, 2015 and the fund has closed on roughly \$2.25 billion.
People		There were no changes to the firm's personnel.
Philosophy		There were no changes to the investment philosophy.
Process		There were no changes to the investment process.
Performance		N/A – The Fund has not currently called capital from TMRS.
Portfolio		There are two investments in the portfolio, Shenandoah and an undisclosed investment, which the manager will provide further information on in Q1-2016.
Risk Management		There are no risk management issues.
Operations		There were no changes to the firm's operations team or processes.
Compliance		There were no compliance breaches.
Client Service		There were no changes to the client service team.
Other		None.

Excellent

In Good Standing

Fair  
*(working with manager)*

Unsatisfactory  
*(remedial action being taken)*

Comprehensive Review

## Bayside: Special Situations, Non-control distressed

\*As of 12/31/2015

Assessment Area	Grade	Update & Comments
Organization		Currently in the final stages of negotiating the contract. There has been no changes to the H.I.G. Bayside organization.
People		There were no changes to the firm's personnel.
Philosophy		There were no changes to the investment philosophy.
Process		There were no changes to the investment process.
Performance		N/A – The Fund has not currently called capital from TMRS.
Portfolio		The fund has invested roughly \$250 million across 16 investments and is performing strongly. The current yield on the portfolio is nearly 10%.
Risk Management		There are no risk management issues.
Operations		There were no changes to the firm's operations team or processes.
Compliance		There were no compliance breaches.
Client Service		There were no changes to the client service team. HIG has been very responsive and accommodative to TMRS requests.
Other		None.

Excellent

In Good Standing

Fair  
*(working with manager)*

Unsatisfactory  
*(remedial action being taken)*

Comprehensive Review

## Tritium: Buy-out, Small Market Growth

\*As of 12/31/2015

Assessment Area	Grade	Update & Comments
Organization		Fund I held a final close in November 2015 totaling \$309 million, and Tritium is now focused on investing the commitment. The team has grown, and the business is stable.
People		The firm has added one professional to the investment team, and there has been no attrition.
Philosophy		There were no changes to the investment philosophy.
Process		There were no changes to the investment process.
Performance		There has been no performance for TMRS yet, but the gross multiple is roughly 1.12x. The underlying portfolio companies are all performing strongly.
Portfolio		The fund has 5 companies, and is roughly 25% committed. The portfolio is developing as expected.
Risk Management		There are no risk management issues.
Operations		The team has moved into new office space to meet their increased needs. Operational resources have improved.
Compliance		There were no compliance breaches.
Client Service		The firm has added resources to the client team.
Other		None

Excellent

In Good Standing

Fair  
*(working with manager)*

Unsatisfactory  
*(remedial action being taken)*

Comprehensive Review

## Searchlight: Buy-out, Middle Market Value

\*As of 12/31/2015

Assessment Area	Grade	Update & Comments
Organization		The fund held a final close on 12/17/2015 for \$1.939 billion in commitments, and is now solely focused on investing the fund. There have been no changes to the organization.
People		There have been no changes to the team.
Philosophy		There were no changes to the investment philosophy.
Process		There were no changes to the investment process.
Performance		There has been no performance for TMRS yet, but the underlying portfolio companies are all performing well.
Portfolio		The fund has 2 portfolio companies, and is roughly 10% called. The portfolio is developing as expected.
Risk Management		There are no risk management issues.
Operations		There are no operational issues.
Compliance		There were no compliance breaches.
Client Service		Client service has been proactive, and statements detailed and completely transparent.
Other		None.

Excellent

In Good Standing

Fair  
*(working with manager)*

Unsatisfactory  
*(remedial action being taken)*

Comprehensive Review

30

## Harvest: Buy-out, Core Middle Market

\*As of 12/31/2015

Assessment Area	Grade	Update & Comments
Organization		The fund has currently closed on approximately \$1.9 towards the hard cap of \$2.0 billion. The organization is stable and remains focused on their core competency.
People		The firm promoted Stephen Carlson to Managing Director (MD), and hired an additional MD, Uzair Dossani, from a strong competitor to replace MD Chris Whalen, who left the firm. Staff believes this to be immaterial.
Philosophy		There were no changes to the investment philosophy.
Process		There were no changes to the investment process.
Performance		The fund has made no investments to date, but the prior fund is performing strongly (net IRR of 20.9%).
Portfolio		The fund has made no investments to date.
Risk Management		There are no risk management issues.
Operations		There are no operational issues.
Compliance		There were no compliance breaches.
Client Service		They have been very responsive so far in the relationship.
Other		None.

Excellent	In Good Standing	Fair <i>(working with manager)</i>	Unsatisfactory <i>(remedial action being taken)</i>	Comprehensive Review
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# PE Strategies Reviewed in 2015

- The Private Equity team took 197 individual meetings in 2015.
- Added 246 distinct private equity managers to the internal database.

	Buy-out	Growth	Special Sits	Secondaries	Other	Total
Meetings In 2015	36	15	58	28	60	<b>197</b>
Managers In Database	52	47	72	27	48	<b>246</b>



# VI. Conclusion



# Conclusion and Recommendations

- All TMRS private equity managers are performing in accordance with expectations
- There are currently no concerns or open issues
- TMRS Investment Staff and consultant StepStone continue to source and diligence attractive candidates for the private equity portfolio

# VII. Appendix

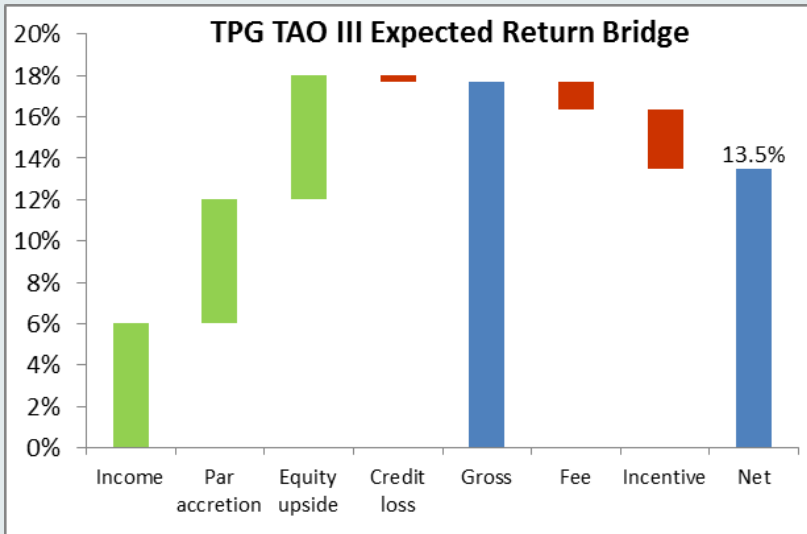


# 2014-15 Board Action & Implementation

- December 2014 – Board authorized manager recommendations for \$300 million of private equity commitments for 2015
- June 2015 – Board approved staff recommendation for hiring StepStone as non-discretionary private equity advisor
  - July 2015, successful contract negotiations completed with StepStone
- October 2015 – Board approved manager recommendations for 6 private equity managers and \$350 million in commitments
  - Contract negotiations begin, ultimately closing on \$317 million by Q1 '16
- December 2015 – Board authorized manager search recommendations for up to \$600 million of private equity commitments for 2016

### Scoring Matrix

Category	TPG	Opportunistic Mgr. 1	Opportunistic Mgr. 2
People	30.0	19.0	25.0
Philosophy	15.0	17.0	12.0
Process	15.0	14.0	17.0
Performance	25.0	16.0	21.0
Terms	15.0	17.0	13.0
<b>Total</b>	<b>100.0</b>	<b>83.0</b>	<b>88.0</b>



#### Reasons to Invest

- Experienced and deep team, tenured track record
- Impressive sourcing engine
- Broad, opportunistic approach
- Very strong credit and structuring capabilities

#### Risks & Mitigants

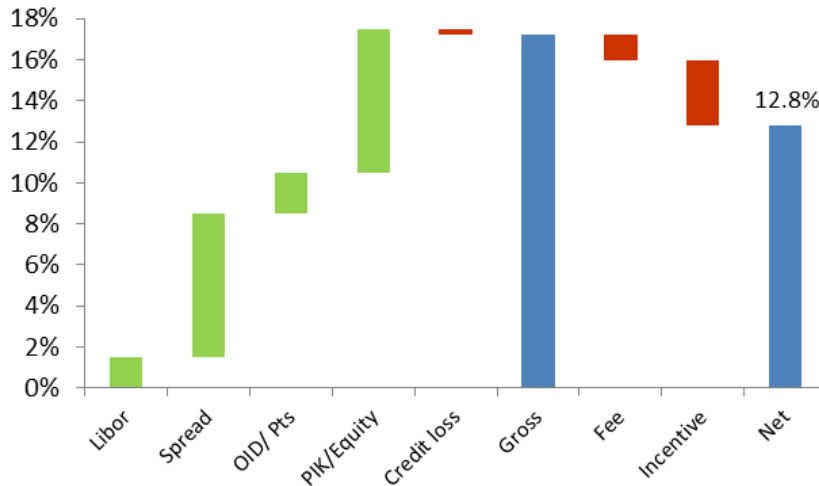
- Part of broader platform – Clear walls and significant economics with investment team
- Significant dry powder – Robust pipeline & current opportunity set
- Low preferred return – Other fees highly favorable

TPG is targeting a fund size of US\$3.5 billion and will have an evergreen fund structure. The fund will look to invest across TSSP’s platform, including the TPG Opportunities Partners distressed for control strategy and the TPG Direct Lending Platform (TSLX and TSLE) senior secured corporate cash flow lending. Additionally, TAO III will opportunistically access special situations such as defensive yield, non-control stressed and distressed and asset special situations.

## Scoring Matrix

Category	Carlyle	Energy Mezz Mgr. 1	Energy Mezz Mgr. 2
People	25.0	24.0	30.0
Philosophy	20.0	19.0	15.0
Process	15.0	14.0	15.0
Performance	26.0	23.0	20.0
Terms	14.0	15.0	14.0
<b>Total</b>	<b>100.0</b>	<b>95.0</b>	<b>94.0</b>

## CEMOF II Expected Return Bridge



### Reasons to Invest

- Capital need in energy sector
- Strong performance and focus on current cash income
- Solid project finance underwriting background
- Albourne also recommended & strong ODD report

### Risks & Mitigants

- Fund growth – moving into large market but not too large
- Short and largely unrealized track record – Good transparency at deal level
- Captive platform for large public asset management firm – Fair economics and conflicts /allocations policies

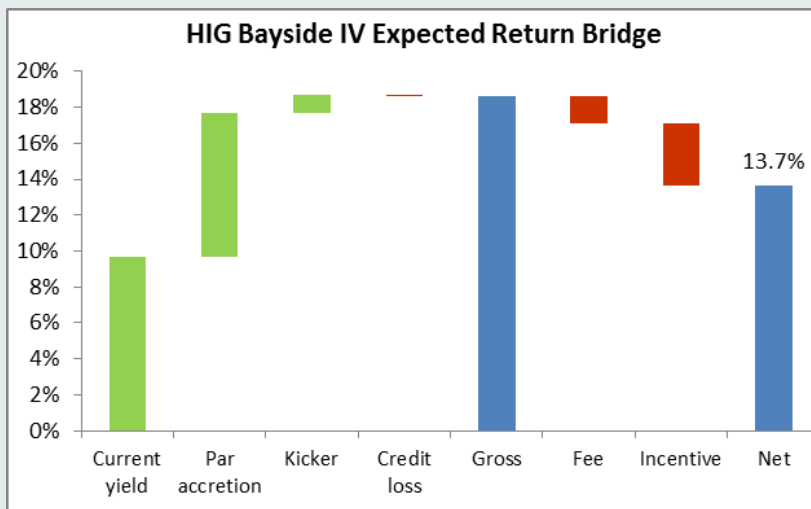
Carlyle will make investments in secured and unsecured debt, working interests, royalty interests and preferred stock of energy companies and projects operating in the United States and Canada. The Fund will pursue privately negotiated transactions and may acquire relevant securities from secondary markets.

# Bayside

**\$60 million Commitment**

## Scoring Matrix

Category	Bayside	Debt Manager 1	Debt Manager 2
People	25.0	11.0	14.0
Philosophy	15.0	15.0	14.0
Process	15.0	12.0	14.0
Performance	30.0	18.0	16.0
Terms	15.0	14.0	14.0
<b>Total</b>	<b>100.0</b>	<b>70.0</b>	<b>72.0</b>



### Reasons to Invest

- Deep experience in low end of middle market
- Fewer competitors in non-control stressed/distressed
- Strong credit abilities and sourcing machine

### Risks & Mitigants

- Current market less attractive for distressed – Credit cycle will turn, likely during fund life
- Prior track benefited from dislocation – Team is very price disciplined, still buying at ~75¢
- Product proliferation – H.I.G. has maintained fund size discipline, growth is horizontal

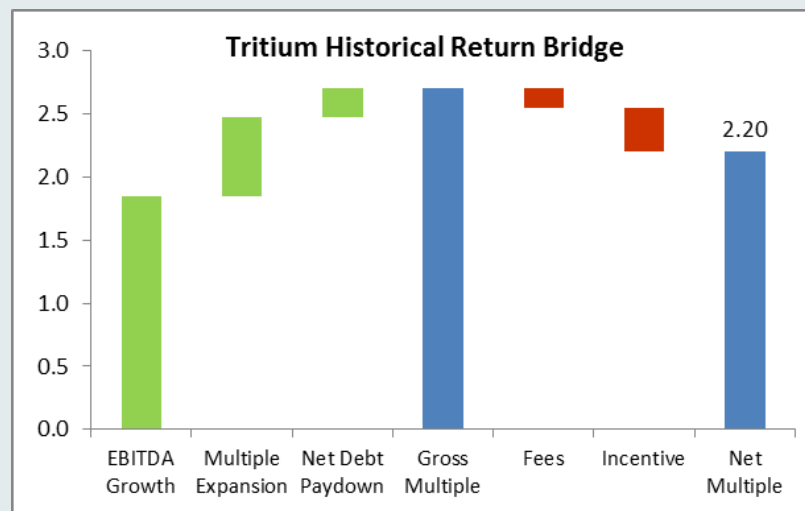
Bayside will make non-control investments in North American complex situations and/or stressed/distressed senior loans for small-cap companies. The fund will invest opportunistically across industries and will target North American small-cap companies that have below a US\$350 million TEV. The fund invests in mostly but not entirely performing debt, and the existing portfolio currently boasts a 9.7% current yield. The fund focuses on strong cash flow metrics, and essentially arbitrages mispriced bankruptcy risk of non-special situations lenders, effectively sitting between default (often, technical) and bankruptcy.

# Tritium

**\$50 million Commitment**

## Scoring Matrix

Category	Tritium	Growth/Buy-out Mgr. 1	Growth/Buy-out Mgr. 2
People	20.0	21.0	19.0
Philosophy	15.0	15.0	15.0
Process	20.0	17.0	17.0
Performance	25.0	17.5	21.0
Terms	20.0	17.0	17.0
<b>Total</b>	<b>100.0</b>	<b>87.5</b>	<b>89.0</b>



### Reasons to Invest

- Experienced and tenured team
- Strong returns and upside potential
- Proprietary deals and less competitive market
- Strong idea generation and CEO-In-Residence program

### Risks & Mitigants

- First time fund – Tenured team and 12 year prior track record
- Concentrated portfolio company performance – Have more control over process & exits than at AV

Tritium will focus on investments in profitable companies in the following three sectors: (i) Supply Chain and Logistics, (ii) Internet and Media, and (iii) Financial and Business Services. The GP will generally seek transactions requiring between US\$15 million and US\$50 million of equity and will target companies with EBITDA between US\$2 million and US\$20 million. The fund is targeting \$250 million with a hard cap of \$300. Tritium focuses on founder lead situations where they can be the first institutional capital provider to a high growth story (20%+). The fund will provide growth equity-like upside returns with buy-out/control-like risk management and downside mitigation.

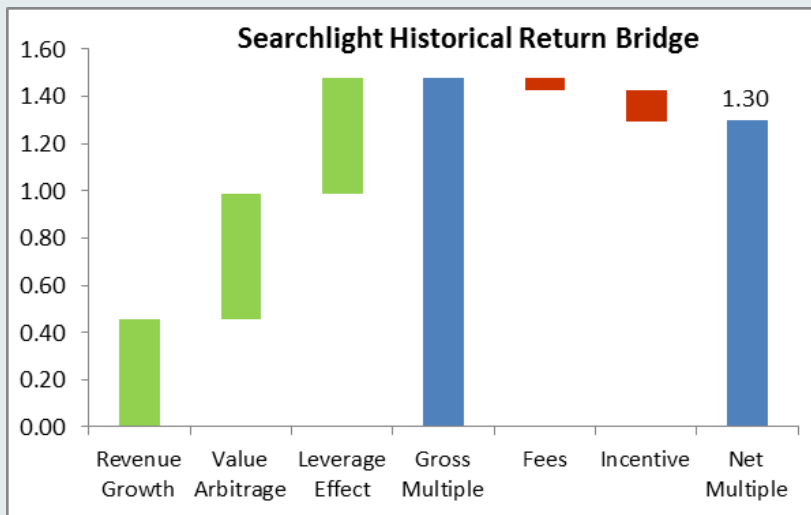


# Searchlight

**\$47million Commitment**

## Scoring Matrix

Category	Searchlight	Turnaround Mgr.1	Turnaround Mgr.2
People	20.0	22.0	20.0
Philosophy	25.0	22.0	17.0
Process	20.0	19.0	18.0
Performance	17.0	20.0	15.0
Terms	18.0	15.0	15.0
<b>Total</b>	<b>100.0</b>	<b>98.0</b>	<b>85.0</b>



### Reasons to Invest

- Flexible investment mandate
- Demonstrated sourcing capability and value focus
- Experienced founders and deep team

### Risks & Mitigants

- Immature track record – Strong gross performance early and good value in portfolio
- Relatively new team, untested together – Deep and seasoned
- European carry waterfall – Provides stability for young firm

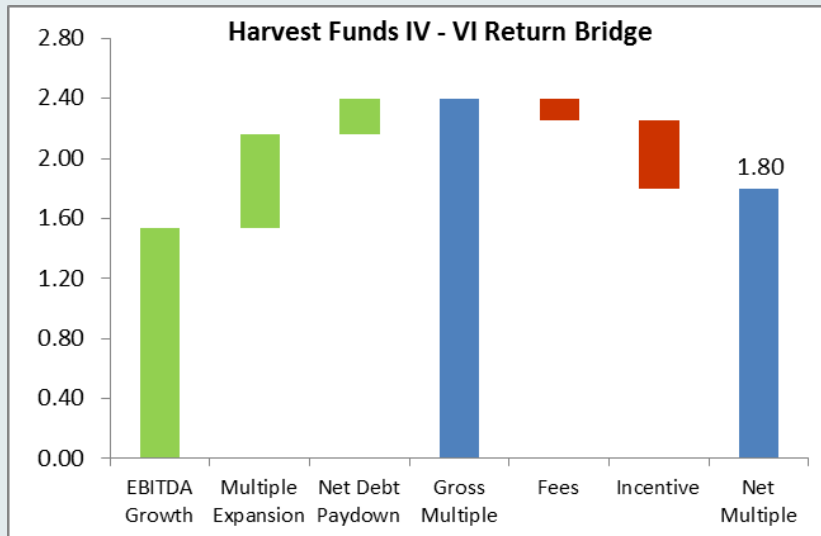
Searchlight is currently raising their second fund, targeting \$1.5 billion to continue the firm's strategy of investing in value-oriented and turnaround corporate situations in North America and Europe. The firm targets complex transactions in middle market companies that can be acquired at below-market purchase prices outside of auction channels or competitive processes. The firm's Transatlantic platform is a differentiator in the middle market, and the opportunistic, capital structure agnostic approach to accessing value and willingness to embrace complexity allows Searchlight to deploy capital at discounts to competitors across the cycle.

# Harvest

**\$20 million Commitment**

## Scoring Matrix

Category	Harvest	Buy-out Mgr. 1	Buy-out Mgr. 2
People	25.0	23.0	18.0
Philosophy	15.0	12.0	15.0
Process	20.0	16.0	15.0
Performance	25.0	22.0	18.0
Terms	15.0	15.0	15.0
<b>Total</b>	<b>100.0</b>	<b>88.0</b>	<b>81.0</b>



### Reasons to Invest

- Large, stable, and experienced team
- Downside focus and low historical loss ratio
- Discipline process and strong realized returns

### Risks & Mitigants

- Fund VI largely unrealized – Companies performing well and fund is still young
- Product expansion – Launching Structured Capital Fund, but only second product in 30+ years
- Fund size step-up – Still \$2.0 billion at hard cap for a Fund VII

Harvest is currently raising their seventh fund, targeting \$1.5 billion (with a hard cap at \$2.0) to continue the firm's strategy of investing in domestic middle market companies across four core sectors: business services & consumer; healthcare services; industrial & energy services; and manufacturing & distribution. Harvest takes a thematic approach to determine which subsectors to focus resources on. Post investment, the firm seeks to drive value in its portfolio companies using its Value Creation Blueprint, an operationally sensitive and systematized framework.