

3Q2019 IAC Meeting Materials

IAC Meeting – November 18, 2019

Private Real Assets Presentation



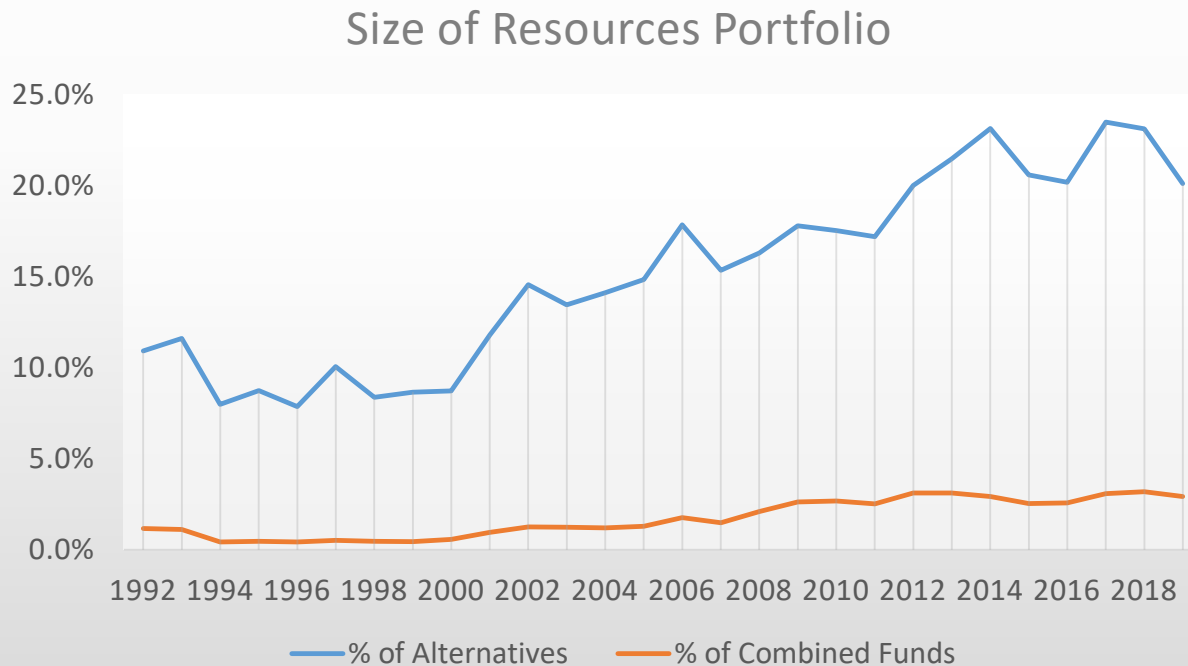
Private Real Assets Portfolio Update

History of the Resources Portfolio

- MSBI made its first private investment in resources
 - \$15 million commitment to AMGO I (later First Reserve) in 1981
- Original investment rationale:
 - Low expected correlation to other asset classes
 - Private capital formation for energy investment was limited at the time
 - Believed to be an inefficient sector providing opportunity for excess return
- Early investments focused on upstream oil and gas, as well as related services and equipment

History of the Resources Portfolio

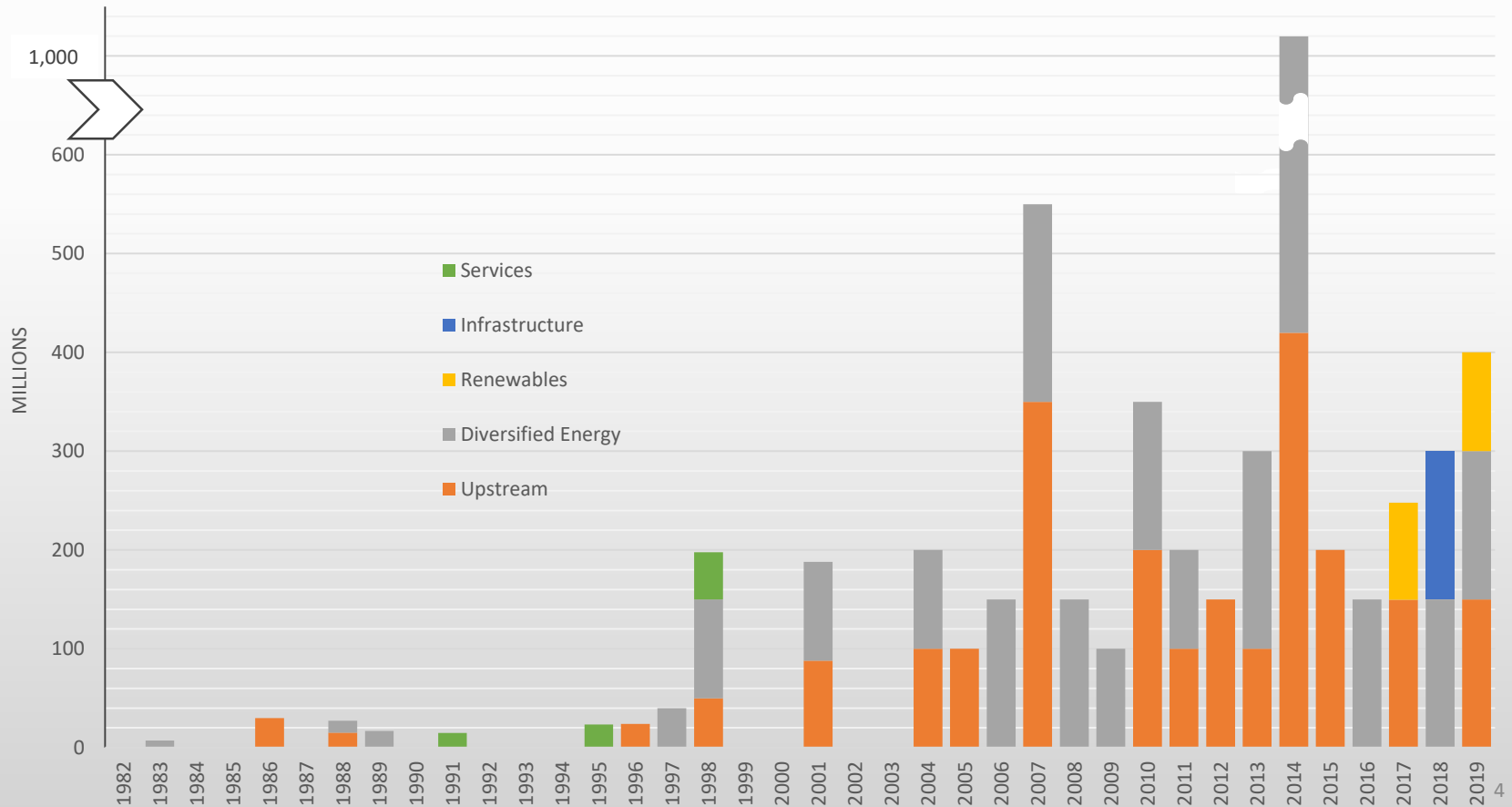
- Resources have been a significant component of Alternatives portfolio ever since:



Portfolio Composition

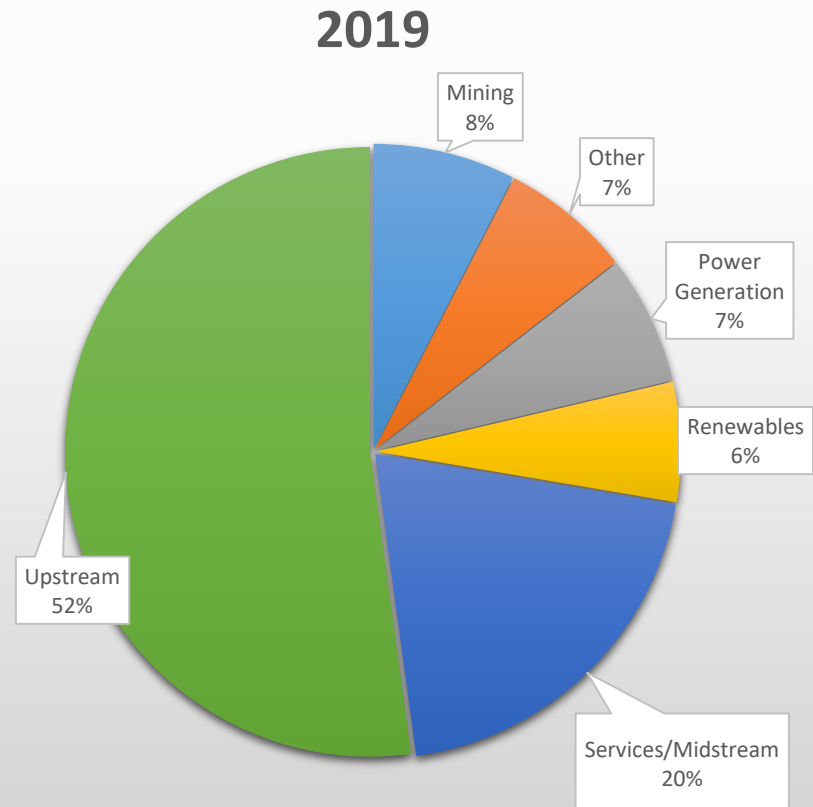
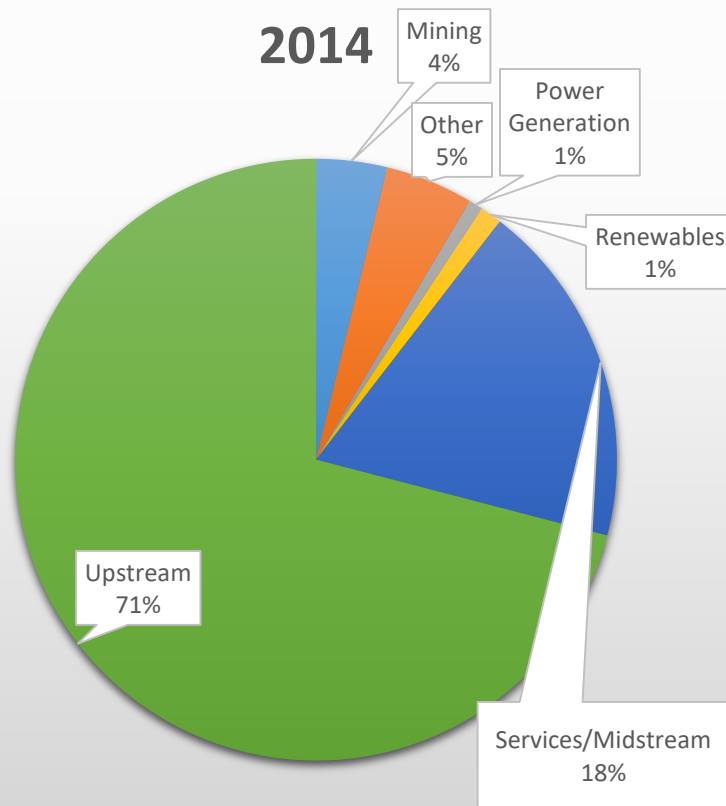
- Over time the composition of the portfolio has changed
 - Expanded mandates for certain managers
 - Commitments by SBI to areas such as infrastructure and renewables

Yearly Private Real Asset Commitments



Portfolio Composition

- Prior to 2007 essentially entire portfolio related to oil and gas sector
- Since then, increasing exposure to other types of real assets



Portfolio Performance

- Resources has been a volatile sector
- Five years ago, resources easily out-performed all other private asset classes over the trailing 10 years.

As of Jun 30 2014	3YR	5YR	10YR
Resources	13.7%	13.5%	25.1%
Private Equity	13.6%	17.6%	16.2%
Real Estate	12.0%	-2.9%	6.8%
Credit	12.5%	13.6%	12.9%

- Today, it underperforms significantly

As of June 30 2019	3YR	5YR	10YR
Resources	10.2%	-1.9%	5.5%
Private Equity	17.8%	14.3%	15.6%
Real Estate	9.6%	11.3%	8.6%
Credit	14.2%	13.2%	13.4%

Portfolio Performance

- Worth comparing private resources performance to publically traded energy stocks:

As of June 30 2014	3YR	5YR	10YR
Resources	13.7%	13.5%	25.1%
Russell 3000 Energy	11.4%	17.4%	12.3%

As of June 30 2019	3YR	5YR	10YR
Resources	10.2%	-1.9%	5.5%
Russell 3000 Energy	-0.7%	-7.5%	4.1%

- Recent downturn in the energy markets affects both public and private markets
- Private energy investments have continued to outperform public energy equities over the long run

Annual Returns

1YR Return:	Resources	Private Equity
Jun 30, 1993	8.36	1.12
Jun 30, 1994	4.77	11.25
Jun 30, 1995	14.31	6.42
Jun 30, 1996	12.45	40.30
Jun 30, 1997	31.31	28.42
Jun 30, 1998	32.56	48.99
Jun 30, 1999	-26.23	-0.09
Jun 30, 2000	24.43	43.14
Jun 30, 2001	39.24	-6.97
Jun 30, 2002	0.44	-7.62
Jun 30, 2003	8.28	-3.48
Jun 30, 2004	11.61	21.17
Jun 30, 2005	47.36	30.28
Jun 30, 2006	115.34	39.32
Jun 30, 2007	31.53	25.30
Jun 30, 2008	26.22	11.05
Jun 30, 2009	-5.19	-21.29
Jun 30, 2010	10.96	27.89
Jun 30, 2011	15.24	20.01
Jun 30, 2012	16.93	7.84
Jun 30, 2013	8.47	12.92
Jun 30, 2014	15.90	20.33
Jun 30, 2015	-8.77	11.86
Jun 30, 2016	-25.46	7.40
Jun 30, 2017	27.31	18.69
Jun 30, 2018	4.31	19.73
Jun 30, 2019	0.86	14.37

- Resources returns have been volatile
- Periods of extreme performance, both positive and negative

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- Resources outperforms Private Equity in approximately half of annual observations
- However, lags in 8 of last 10 years

Observations

- Portfolio has delivered diversification; performed well when PE performed badly
- High volatility (approximately 2x volatility of PE portfolio)
- Portfolio has significant exposure to the energy sector and commodity risk
- Going forward, what kind of returns should we expect?
 - A few years of great performance skew results
 - Is recent underperformance simply cyclical?
 - Can we reasonably expect the good years to be as good?

The Role of Real Assets

- **1981:**
 - Low correlation with other asset classes
 - Opportunity for high returns
- **2012:**
 - Low correlation with other asset classes
 - Long duration
 - Hedge against inflation
 - Intrinsic value provides downside protection
- **2019:**
 - Low correlation with other asset classes
 - Long useful life
 - MAY provide inflation protection
 - MAY provide stable, predictable cash flow
 - MAY have intrinsic value providing downside protection
 - MAY be either growth or income oriented

Defining Real Assets

Exhibit 1: Detail of Real Assets Categories and Sub-Sectors

Infrastructure			
Transportation	Energy/Utilities	Social	Communications
Toll Roads, Bridges, Tunnels Airports Seaports Rail & Mass Transit Parking Facilities	Midstream Transmission & Distribution Systems Storage Facilities Power Generation Water Transportation Water Treatment & Distribution Waste Treatment	Hospitals & Medical Facilities Education Facilities Police & Military Facilities	Cable Networks Communication Towers Satellite Systems
Natural Resources			
Oil & Gas	Metals & Mining	Agriculture	Timber
Exploration & Production ("E&P") Midstream Downstream	Base, Precious, Industrial Metals Proven/Development	Row Crop Permanent Crop Lease/Operate	Conservation Land Mitigation Saw-Timber

Source: Meketa

Characteristics of Real Assets

- Important to recognize that different assets demonstrate different characteristics
- Investors must define and prioritize portfolio objectives

Exhibit 6: Typical Real Assets Characteristics and Return Behavior

		Characteristics			Return Behavior		
		Cash flow Volatility	Yield Generative	GDP Sensitivity	Inflation linkage	Diversification Benefits	Total Return
Infrastructure							
Core	regulated utilities, contracted assets	Low	High	Low	High	High	Low
Value-added	growth opportunities, utilization risk	Medium	Medium	Medium	Medium	High	Medium
Opportunistic	greenfield, emerging markets, pricing risk	High	Low	High	Low	High	High
Natural Resources							
Oil & Gas	E&P, midstream, downstream	Medium	Medium	High	High	High	High
Metals & Mining	base/precious metals, proven/development	Medium	Medium	High	High	High	High
Agriculture	row/permanent crop, lease/operate	Low	High	Medium	Medium	High	Low
Timber	conservation, land mitigation, saw-timber	Low	Medium	Medium	Medium	High	Low

Conclusions

- Resources portfolio has served the SBI well
 - Provided diversification
 - Periods of very high absolute returns
- However...
 - Portfolio has been very volatile
 - Significant exposure to commodity prices
- Staff believes that a more broadly invested Real Assets portfolio can offer
 - Diversification
 - Downside protection
 - More stable return profile
 - A mix of growth-oriented and income-generating assets

Additional Topics for Discussion

- How have others implemented Real Asset portfolios?
- What is the role of real estate? Why do we consider it a separate asset class?
- What about intangible assets such as data, intellectual property, royalties, etc?
- Can we invest in the same assets through public markets?
- Why haven't we invested in agriculture and timber?

Additional Materials


Correlation Matrix

REAL ASSETS CORRELATION MATRIX

ASSET CLASS	Core Real Estate	Value-add Real Estate	Opportunistic Real Estate	Public Real Estate	Timber	AG Row Crops	AG Perm Crops	Private Infra.	Public Infra.	Private Equity	Public Equities	Fixed Income
Core Real Estate	1.00	0.81	0.85	-0.04	0.26	0.08	0.21	0.75	-0.14	0.38	-0.05	-0.09
Value-add Real Estate	0.81	1.00	0.53	-0.18	0.53	0.07	0.23	0.40	-0.30	0.20	-0.14	-0.12
Opportunistic Real Estate	0.85	0.53	1.00	0.11	0.22	0.12	0.25	0.71	0.05	0.42	0.11	-0.04
Public Real Estate	-0.04	-0.18	0.11	1.00	-0.10	0.09	0.09	0.17	0.61	0.48	0.73	0.30
Timber	0.26	0.53	0.22	-0.10	1.00	0.32	0.64	0.01	-0.26	0.04	-0.04	-0.09
Farmland Row Crops	0.08	0.07	0.12	0.09	0.32	1.00	0.49	-0.03	0.20	0.15	0.24	-0.16
Farmland Perm. Crops	0.21	0.23	0.25	0.09	0.64	0.49	1.00	0.20	-0.01	0.16	0.17	-0.21
Private Infra.	0.75	0.40	0.71	0.17	0.01	-0.03	0.20	1.00	0.11	0.55	0.07	-0.03
Public Infra.	-0.14	-0.30	0.05	0.61	-0.26	0.20	-0.01	0.11	1.00	0.44	0.63	0.32
Private Equity	0.38	0.20	0.42	0.48	0.04	0.15	0.16	0.55	0.44	1.00	0.71	-0.25
Public Equities	-0.05	-0.14	0.11	0.73	-0.04	0.24	0.17	0.07	0.63	0.71	1.00	-0.18
Fixed Income	-0.09	-0.12	-0.04	0.30	-0.09	-0.16	-0.21	-0.03	0.32	-0.25	-0.18	1.00

POTENTIAL BENEFITS FOR INVESTING IN THE REAL ASSET OPPORTUNITY SET

Asset Class	Diversification	Capital Preservation	Current Income	Long-Term Growth	Volatility	Inflation Protection	Liquidity
Real Estate							
Core	Medium	High	High	Low	Low	High	Medium
Value-Add	Medium	Medium	Medium	Medium	Medium	Medium	Low
Opportunistic	Medium	Low	Low	High	High	Low	Low
Listed Real Estate	Low	Low	Medium	High	High	Medium	High
Infrastructure							
OECD - Core and Core+	Medium	High	High	Low	Low	High	Medium
Emerging Markets	High	Low	Low	High	Medium	Medium	Low
Listed Infrastructure	Low	Medium	Medium	Medium	High	Low	High
Timber							
Timber	High	Medium	Medium	Medium	Low	Low	Low
Agriculture							
Permanent Crop	High	Medium	Medium	High	Low	Medium	Low
Row Crop	High	Medium	Medium	High	Low	Medium	Low


 High Medium Low

Source: Townsend Group