



**PERSPECTIVES  
THAT DRIVE  
ENTERPRISE  
SUCCESS**



**PERIOD ENDING: DECEMBER 31, 2018**

Real Assets Review

**San Mateo County Employees' Retirement Association**

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## Observations driving our outlook

### Deflation concerns weigh more on the minds of investors than inflation

Inflation fears have been subdued in the market over the past year. Both core CPI and headline CPI have been declining over the past nine months and came in at 2.0% and 1.9% respectively in March. Over the past twelve months, core CPI has ranged between 2.0 and 2.3%, near the Fed's inflation target. At this stage of the market cycle, we view the risk of deflation from an economic slowdown to be of greater concern than unanticipated inflation.

### Commodity price volatility testing the patience of many investors

Commodity futures likely hold the title for the worst performing asset class over the last 5, 7 and 10-year periods. The Bloomberg Commodity Index has returned a negative 3.8% annually over the trailing 10 years. While it is tempting to conclude that commodities present an opportunity, given the significant underperformance of the asset class, it is difficult to determine whether commodities offer value in the current environment. Our inability to estimate a fair value or confidently project future price movements has led us to a bearish stance in this year's outlook. For investors who are able and willing to take on additional equity risk, we believe investing in commodity producers may be a preferred approach for gaining commodity exposure in the current environment.

### We remain conservatively positioned in real estate

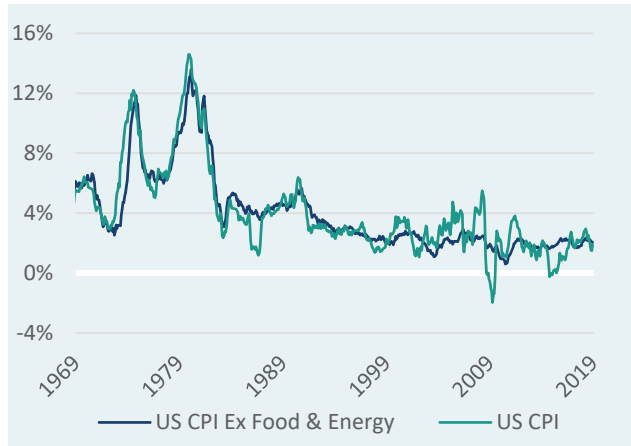
Real estate fundamentals have remained fairly stable with overall declining vacancies and increasing NOI. Valuations continue to climb, and cap rate spreads have returned to average levels. New supply has been moderate with some pockets of excess. Our outlook has changed to neutral as returns have continued to moderate to "normal" levels. Appreciation continues to slow with income becoming a larger portion of overall returns. We favor more conservative strategies with strong cash flows and hands-on asset management. We remain cautious with leverage, illiquidity, quality and long duration value creation strategies.

### Oil/Gas industry investment conundrum

It is fair to say that the least popular industry, at the moment, is the oil/gas industry. Listed Exploration & Production (E&P) companies appear quite cheap, despite improved balance sheets, greater capital discipline and higher oil prices. Fundraising within private energy is as challenging as we've seen in many years. Many institutions from endowments to public pensions are slowing or halting new commitments to upstream energy funds. M&A activity in the upstream market has stalled. In most other industries this would create an attractive investment opportunity, but we would practice restraint.

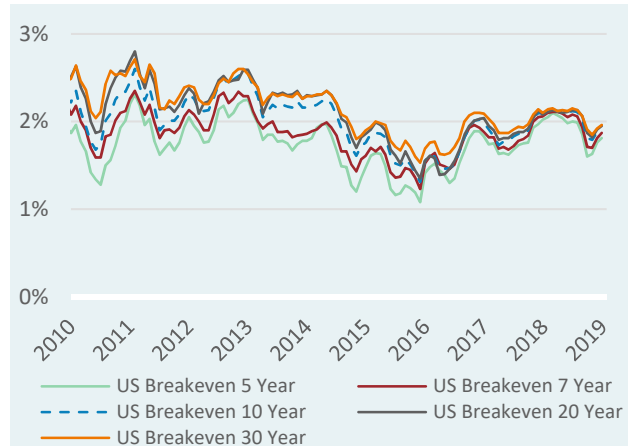
- Core CPI has remained in a tight range between 2.0% and 2.3% for each of the last 12 months, most recently coming in at 2.0% in March.
- Headline CPI moved up to between 2.5% and 2.9% in mid 2018 but has since fallen to a range of 1.5% to 2.5% since. In March, headline CPI was 1.9%, still at levels below that seen in typical late-cycle periods. The Fed appears hesitant to hike interest rates, and has indicated a willingness to let inflation drift slightly higher than the stated 2% inflation target. However, we believe weaker inflation is more likely to materialize.
- In most late-stage business cycles, real assets are often the best performing asset classes due to rising inflation. This cycle appears unique for a number of secular reasons (globalization, automation, low GDP growth, etc.) but there is always some probability that we are wrong, and history repeats itself, in which case it will be advantageous to have exposure to assets which perform well when inflation exceeds expectations.

**U.S. CPI (YOY)**



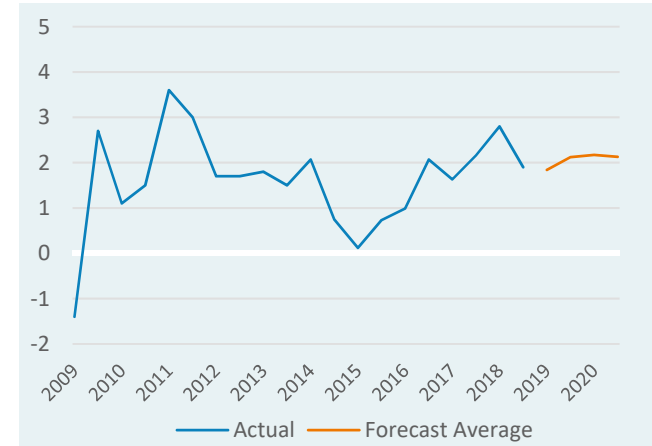
Source: FRED, as of 3/31/19

**U.S. TIPS BREAKEVEN RATES**



Source: FRED, as of 3/31/19

**INFLATION EXPECTATIONS**



Source: Wall Street Journal, 3/31/19

# Outlook Summary Across Real Assets

Period Ending: December 31, 2018

Strategy	Current Environment	Potential Risks	Outlook/Implementation	View
<b>Private Real Estate</b>	Real estate fundamentals have remained fairly stable with overall declining vacancies and increasing NOI. Valuations continue to climb, and cap rate spreads have returned to average levels. New supply has been moderate with some pockets of excess.	<ul style="list-style-type: none"> <li>— A general economic slowdown may drastically impact demand for real estate.</li> <li>— New supply could increase ahead of current projections and outpace demand.</li> <li>— A sharp rise in interest rates could lead to increased cap rates, hurting values.</li> </ul>	Our outlook has changed to neutral as returns have continued to moderate to “normal” levels. Appreciation continues to slow and income is a larger portion of overall returns. We favor more conservative strategies with strong cash flows and hands on asset management. We remain cautious with leverage, illiquidity, quality and long duration value creation strategies.	<b>Neutral</b>
<b>REITs</b>	REITs started the year as the top performing major asset class in 1Q'19. This is following several years of underperforming the equity markets. REITs have benefitted from the overall strength of the real estate market but were depressed by concerns over rising interest rates and a rotation away from yield-oriented assets. REITs now appear to be fairly valued-to-slightly overvalued.	<ul style="list-style-type: none"> <li>— Rising interest rates can have a negative effect on REITs and all yield-sensitive assets over short time periods.</li> <li>— REITs are sensitive to economic decline and general equity market volatility.</li> </ul>	We remain neutral on REITs given current valuations appear fair-to-slightly overvalued. REITs can provide liquid exposure to real estate with the following caveats: high sensitivity to equity market volatility over shorter holding periods, higher leverage and higher exposures to non-core sectors such as hotels, self-storage, for-rent residential, etc.	<b>Neutral</b>
<b>Commodities</b>	Commodities futures have had lackluster performance over the last decade. An upward sloping futures curve for most of the last decade has created a headwind for the asset class. In most commodities, contango continues to create a drag on performance.	<ul style="list-style-type: none"> <li>— Supply responses surprising the market to the upside.</li> <li>— Global growth slowing down, reducing demand for energy and industrial metals.</li> </ul>	Commodity futures continue to face headwinds as futures trade in contango across most commodities. The uptick in interest rates has helped margin returns and prices have stabilized across metals and energy but we expect the asset class to generate low returns going forward.	<b>Negative</b>
<b>TIPS</b>	Low nominal interest rates combined with low to moderate inflation has led to a depressed return environment for TIPS.	<ul style="list-style-type: none"> <li>— Decreasing inflation expectations or rising nominal interest rates would be a headwind to TIPS. Continued low rates create a high cost of carry.</li> </ul>	Low current yields and modest inflation expectations has led to other real assets offering higher total return potential than TIPS.	<b>Negative</b>

## Outlook Summary (continued)

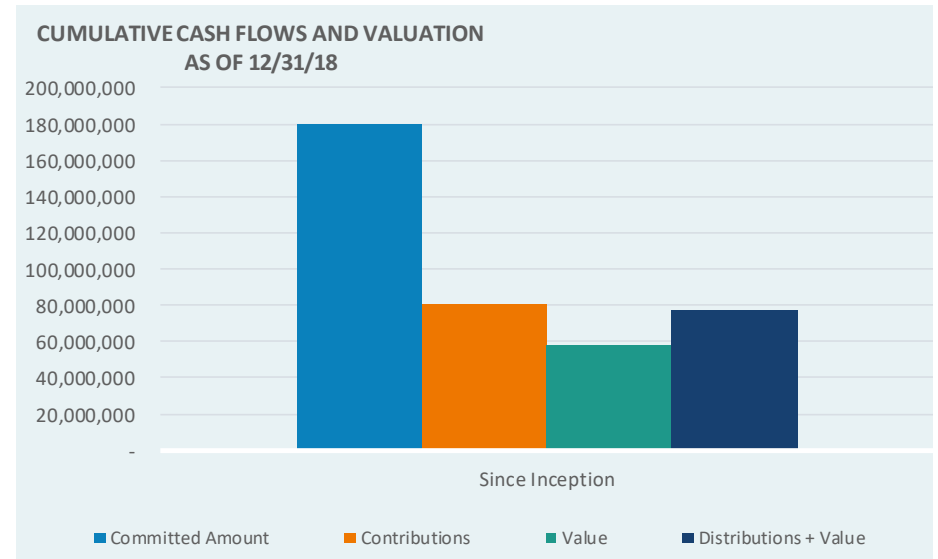
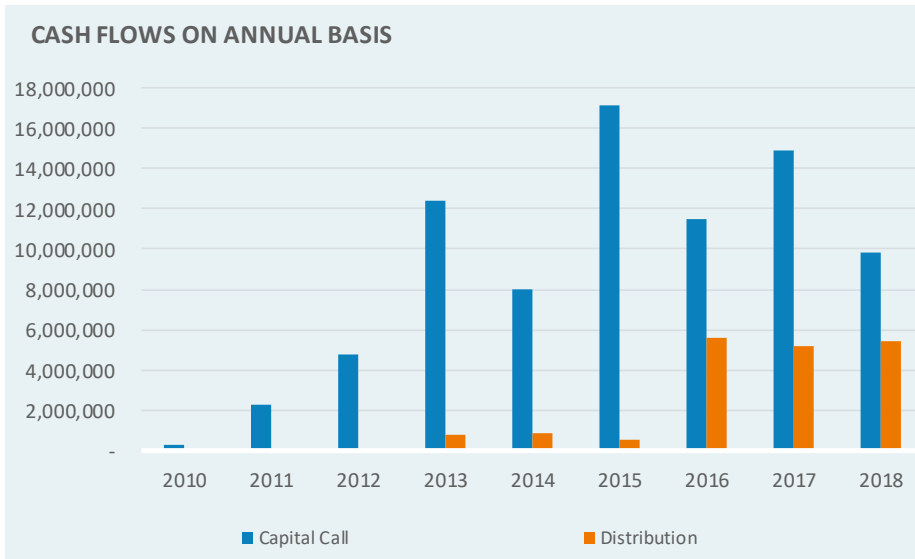
Period Ending: December 31, 2018

Strategy	Current Environment	Potential Risks	Outlook/Implementation	View
<b>Infrastructure</b>	The early sell-off in listed infrastructure equities during 2018 appeared to signal a welcomed revaluation in the industry but public equities have largely recovered since. Meanwhile, valuations stayed elevated within private markets throughout the volatility. Large sums of capital continue to pour into the private infrastructure market intensifying an already competitive market.	<ul style="list-style-type: none"> <li>— Last year we highlighted rising rates as a headwind to yield-oriented investments. That appears to have dissipated as central banks focus more on slowing economic growth</li> <li>— Assets that are sensitive to growth in GDP carry greater risk today. We would be cautious about deals in transportation where valuations remain rich despite heightened risk of an economic slowdown.</li> </ul>	The asset class offers a compelling return profile that aligns well with long duration pools of capital. We favor private infrastructure funds that have capabilities to improve operations and manage complex deal structures. We would avoid heavy exposure to GDP sensitive assets where volume and pricing risk are present.	<b>Neutral</b>
<b>Oil &amp; Gas</b>	Oil prices have rebounded nicely in 2019, most recently trading around \$65/bbl for WTI. Gas prices have reversed course after reaching seasonal highs and are now trading around \$2.3/Mbtu. Up till now, the energy upstream industry has faced a hostile public and private market as fund flows into the sector have trended away. Whether capital returns in 2019 and company valuations re-rate higher is an open question. Until then, it is likely that private energy funds will struggle to find liquidity for their holdings.	<ul style="list-style-type: none"> <li>— Last year we highlighted the significant volume of dry powder that was waiting to be invested. Given the challenging fundraising environment in 2018, dry powder is less of a concern. However, transactions in the industry have collapsed leading to a scarcity of exit options for private funds.</li> <li>— Future demand growth is a key risk that is incredibly difficult to project. The impact of shifts in oil consumption could lead to significant terminal value risk.</li> </ul>	Given valuations and a lack of access to capital, there will be interesting investment opportunities within the upstream energy market. Given our concerns around terminal value risk, we would look for shorter duration investment opportunities. Investments where the bulk of your capital can be returned within 3-5 years represents a more attractive risk/return.	<b>Neutral</b>
<b>Mining</b>	Despite some fits and starts in the last 3 years, mining has been a challenged sector since 2013. Excess supply in several metals has contributed to low prices, low capital expenditure and weak capital flows. A slowdown in global GDP could present a headwind to the industry but the supply/demand dynamics look favorable for several industrial metals longer term.	<ul style="list-style-type: none"> <li>— Global GDP growth and the economy in China are the two biggest risks in the sector. China represents a disproportionately large buyer of industrial metals, so its economy has a large impact on metal prices.</li> </ul>	Longer-term, we think the supply picture looks favorable for several industrial metals. Investing in mining private equity is challenging, not only because the sector is especially volatile, but the pool of attractive GPs is quite small. Our primary exposure to the sector is to invest through the debt side of a mining project. Mining project finance offers an attractive mid-teen return with high income and an equity kicker.	<b>Positive</b>

Strategy	Current Environment	Potential Risks	Outlook/Implementation	View
Midstream Energy / MLPs	We highlighted a tactical opportunity in MLPs in April of last year. The sector moved higher during the summer but sold-off again in Q418. We still believe there is a compelling opportunity within the asset class, especially relative to private midstream where transactions are priced well above public market comps.	<ul style="list-style-type: none"> <li>— Falling oil/gas prices could curtail drilling programs and reduce production volumes which would hurt MLP cash flows.</li> <li>— Regulatory risk is low and though recent headlines around the Federal Energy Regulatory Commission (FERC) rules changing cost pass-throughs created selling pressure the end result was de minimis for most MLPs.</li> </ul>	MLPs are currently providing a healthy 7+% dividend yield and distribution growth has recovered to a range of 4-6%. In addition, nearly 90% of the MLP sector has eliminated their IDRs and simplified their ownership structure. The sector has made impressive changes in a short time period by improving financial strength, growing cash flow and creating better alignment of interests.	Positive
Timberland	Timber markets in North America continue to face challenges from excess inventory, low interest rates and unfavorable transaction market. Trade wars have impacted timber prices in regions that export trees while somewhat benefiting growers that sell into the U.S. market. Our outlook on timber has been negative for several years due to the headwinds the asset class has faced. Despite broadly negative sentiment towards the timber industry, we struggle to make a case for returns to reach higher than mid-single digits.	<ul style="list-style-type: none"> <li>— Trade wars have both helped and hurt domestic timber markets depending on whether you export or sell into the U.S. market. Investors should be more concerned with homebuilding trends which will have a greater impact on most timber holdings in the U.S.</li> <li>— Timber markets outside the U.S. face varying degrees of currency and political risk which in many cases has resulted in disappointing returns for investors. With few exceptions, returns do not justify the additional risk.</li> </ul>	For most investors, high single-digit expected returns for timberland in the U.S. is too low for the illiquidity and risk assumed within the asset class. However, the unique return drivers and potential for higher than expected prices in softwood lumber may be attractive for some investors with sufficient liquidity and a low cost of capital.	Negative
Agriculture	Farmland prices in the Midwest leveled off after 2014 but remain too expensive for the income and return potential. We are interested in opportunities where we can control more of the value-chain associated with food production.	<ul style="list-style-type: none"> <li>— Similar to timber markets, we have concerns around valuations and the risk/return proposition for farmland investments.</li> <li>— The income potential within farmland is more attractive than timber and the global growth in food is a more compelling macro trend than pulp and paper but we remain bearish on the sector, in general.</li> </ul>	Currently we find the asset class to be broadly expensive. Selectively looking at agriculture business investments where crop and land are a component of a broader value-add investment strategy.	Negative

## Performance

- The portfolio is currently valued at \$58.4 million. Together with \$18.4 million in realized distributions, the Total Value at \$76.8 million is approximately \$4.1 million below \$81.0 million total capital contributions, resulting in a total value multiple of 0.95x and a net IRR of -1.85%. Capital weighted average investment age of the portfolio is 3.31 years.
- SamCERA funded a liquid real asset pool in 2016 that seeks to proxy many of the risk exposures targeted in private real assets. SSgA is managing the pool in a mix of passive exposures to infrastructure, natural resource equities and commodities.
- Within Private Real Assets, the current allocation of invested capital is 14.8% to Agriculture, 26.9% to Energy, 21.6% to Mining, and 36.7% to Infrastructure. The Portfolio is expected to be diversified over a period of 3 to 5 years.



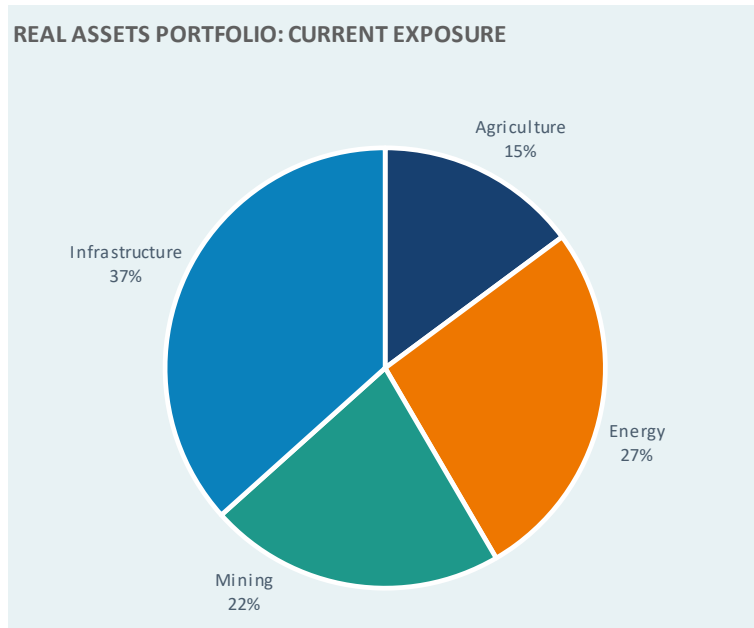


# Strategy

## Portfolio Diversification

Period Ending: December 31, 2018

Investment Type	Commitment	Current Exposure	Current Exposure as % of Portfolio
Agriculture	15,000,000	8,669,911	14.8%
Energy	49,800,000	15,722,928	26.9%
Mining	30,000,000	12,616,870	21.6%
Infrastructure	85,000,000	21,435,681	36.7%
<b>Total Portfolio</b>	<b>179,800,000</b>	<b>58,445,390</b>	<b>100.0%</b>

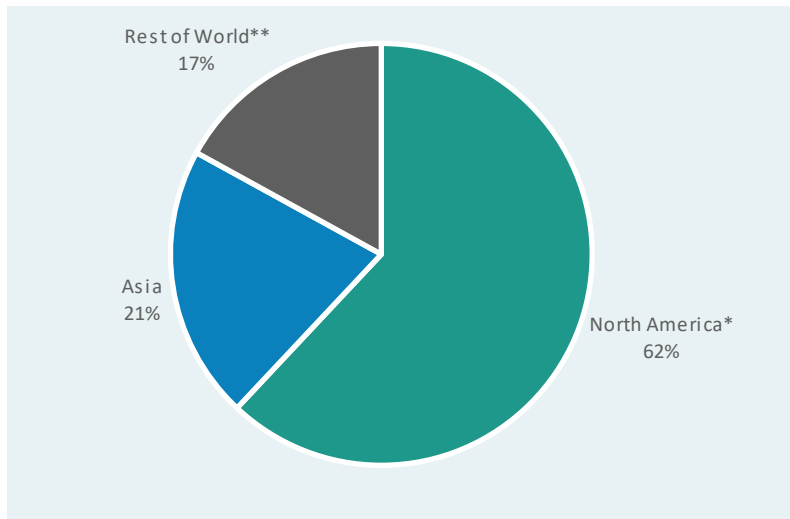


# Geography

## Portfolio Diversification

Period Ending: December 31, 2018

Geography	Reported Fair Value
North America*	36,211,171
Asia	12,100,688
Rest of World**	10,133,532
<b>Total Portfolio</b>	<b>58,445,391</b>



Based on invested capital as of December 31, 2018, if provided by the partnerships. The portfolio is expected to be US-biased given the mandate to hedge domestic inflation.

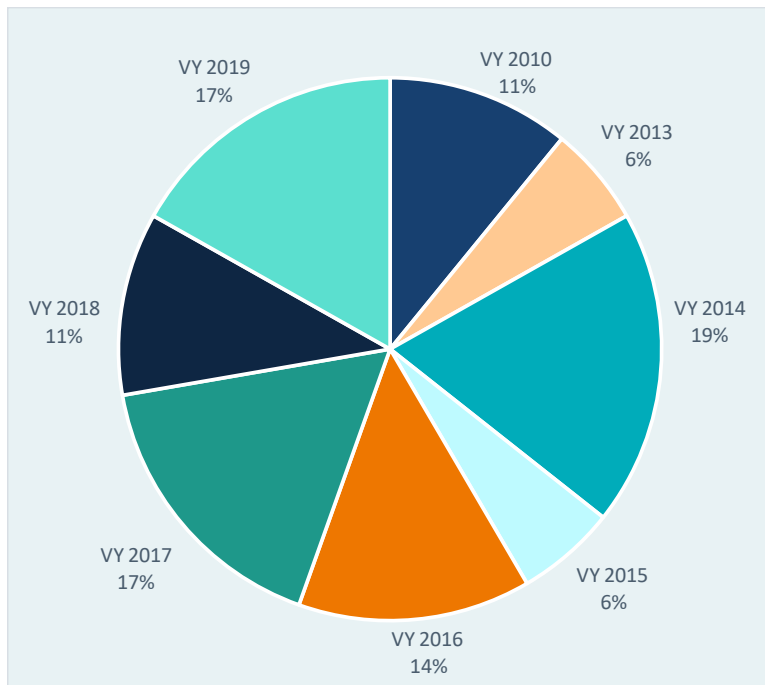
\* North America includes 100% market value from Sheridan II-B.

\*\* Rest of World includes Australia, Chile, and Senegal.

# Vintage Year Portfolio Diversification

Period Ending: December 31, 2018

Vintage Year	Commitment as of 12/31/18	% of Portfolio Commitment	Reported Value as of 12/31/18
2010	20,000,000	11.1%	1,312,000
2013	10,000,000	5.6%	6,925,659
2014	35,000,000	19.5%	18,090,254
2015	10,000,000	5.6%	13,828,253
2016	25,000,000	13.9%	7,746,976
2017	29,800,000	16.6%	10,681,796
2018	20,000,000	11.1%	-139,548
2019	30,000,000	16.7%	0
<b>Total Portfolio</b>	<b>179,800,000</b>	<b>100%</b>	<b>58,445,390</b>



The portfolio is increasingly diversified by vintage year with larger capital commitments expected over the next 2-3 years.

- SamCERA committed \$25.0 million to Taurus Mining Finance II, a re-up with an existing manager in Natural Resources.
- Verus and Staff are actively looking at an opportunity in Core Infrastructure which we may bring to SamCERA's Board in late Summer.
- Valuations across most asset classes has made it challenging to find attractive opportunities. There has been a slowing of capital deployed among private market funds, generally, reflecting a highly competitive market that is valued richly. For now, we are being patient which could result in a reduced level of commitments.