



INVESTMENT GROUP

# City of San Jose Police and Fire Department Retirement Plan

Fourth Quarter 2021

Private Markets Program  
PUBLIC

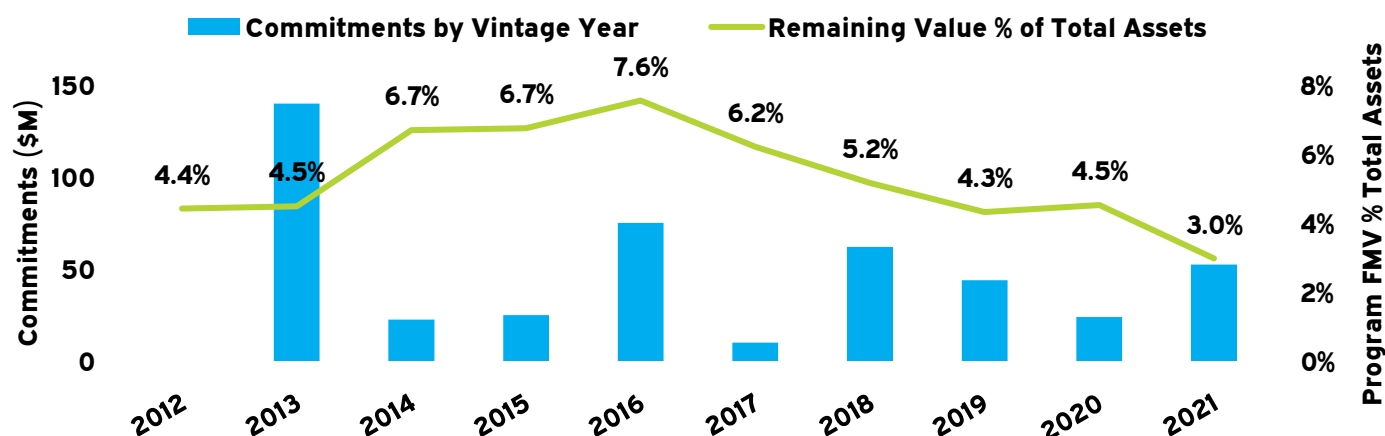
### Snapshot

#### By Account

Account Type	Inception Year	Committed (\$M)	Unfunded (\$M)	Contributed (\$M)	Distributed (\$M)	Remaining Value (\$M)	TVPI (X)	IRR (%)	PME IRR (%)
Legacy Private Equity	2005	291.2	0.0	330.5	435.4	133.3	1.72	10.6	9.0
NB Fund of One	2017	304.8	130.5	174.3	34.2	299.8	1.92	37.3	19.2
Private Debt	2010	651.0	182.1	567.7	537.6	149.1	1.21	6.5	6.2
Real Estate	2012	288.6	85.5	228.1	141.5	176.6	1.39	14.1	11.9
Real Assets	2016	100.2	39.5	63.8	17.7	70.0	1.37	13.4	12.0
Venture Capital	2020	49.2	33.0	16.3	0.0	21.7	1.33	NM	NM
<b>Total</b>		<b>1,685.0</b>	<b>470.6</b>	<b>1,380.7</b>	<b>1,166.5</b>	<b>850.6</b>	<b>1.46</b>	<b>11.1</b>	<b>NA</b>

### Introduction

As of December 31, 2021, the San Jose Police and Fire Department Retirement Plan had committed \$651 million to 20 debt partnerships. The reported fair value of the aggregate Private Debt Program was \$149.1 million at December 31, 2021, which equates to 3.0% of the overall Retirement Plan, matching the 3.0% policy target.



### Program Status

No. of Investments	20
Committed (\$M)	651.0
Contributed (\$M)	567.7
Distributed (\$M)	537.6
Remaining Value (\$M)	149.1

### Performance Since Inception

	Program
DPI	0.95x
TVPI	1.21x
IRR	6.5%

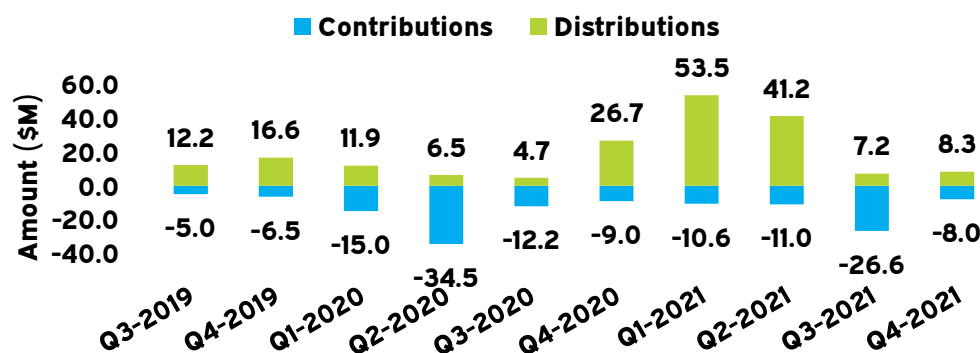
### Commitments

#### Commitments This Quarter

Fund	Region	Amount (M)
Arbour Lane III	North America	21.00

### Cash Flows

#### Recent Quarterly Cash Flows



#### Largest Contributions This Quarter

Fund	Vintage	Region	Amount (\$M)
Arbour Lane III	2021	North America	2.74
Strategic Value V	2021	Global: Developed	1.94
HPS Special Sits.	2019	Global: Developed	1.40

#### Largest Distributions This Quarter

Fund	Vintage	Region	Amount (\$M)
Medley II	2010	North America	4.99
Park Square II	2013	Western Europe	1.73
Crestline Fund II	2020	North America	0.99

### By Vintage

Group	Number	Committed (\$M)	Contributed (\$M)	Unfunded (\$M)	Distributed (\$M)	Remaining Value (\$M)	Exposure (\$M)	DPI (X)	TVPI (X)	IRR (%)	Peer IRR (%)
2010	3	150.0	180.3	0.0	177.8	41.6	41.6	0.99	1.22	5.1	12.6
2011	1	25.0	25.0	0.0	31.1	0.0	0.0	1.24	1.24	8.6	11.7
2013	2	140.0	127.8	18.4	147.5	7.0	25.4	1.15	1.21	6.0	9.5
2014	1	22.5	22.4	1.0	18.6	7.5	8.6	0.83	1.17	4.3	10.5
2015	1	25.0	25.0	0.0	28.5	0.0	0.0	1.14	1.14	11.3	9.2
2016	1	75.0	60.0	59.6	51.8	20.0	79.6	0.86	1.20	6.0	12.8
2017	1	10.0	10.0	0.0	12.2	0.0	0.0	1.22	1.22	12.9	9.0
2018	2	62.0	65.5	7.5	63.3	15.8	23.3	0.97	1.21	18.3	10.3
2019	2	44.0	32.9	12.9	2.6	41.1	54.0	0.08	1.33	20.7	NA
2020	2	24.0	12.1	15.8	4.2	9.0	24.8	0.34	1.09	NM	NM
2021	3	52.5	6.6	45.9	0.0	7.0	52.9	0.00	1.05	NM	NM
2022	1	21.0	0.0	21.0	0.0	0.0	21.0	0.00	NM	NM	NM
<b>Total</b>	<b>20</b>	<b>651.0</b>	<b>567.7</b>	<b>182.1</b>	<b>537.6</b>	<b>149.1</b>	<b>331.2</b>	<b>0.95</b>	<b>1.21</b>	<b>6.5</b>	<b>NA</b>

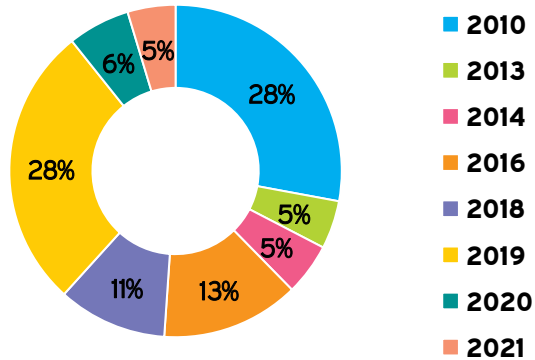
### Fund Performance: Sorted By Vintage And Strategy

By Investment	Vintage	Committed (\$M)	Contributed (\$M)	Unfunded (\$M)	Distributed (\$M)	Remaining Value (\$M)	TVPI (X)	Peer TVPI (X)	IRR (%)	Peer IRR (%)
GSO Direct Lending	2010	50.0	43.4	0.0	45.0	3.8	1.12	1.50	4.1	12.6
Medley II	2010	50.0	51.6	0.0	53.5	4.9	1.13	1.50	2.4	12.6
White Oak DL	2010	50.0	85.4	0.0	79.3	33.0	1.32	1.50	7.8	12.6
Marathon Euro Credit	2011	25.0	25.0	0.0	31.1	0.0	1.24	1.47	8.6	11.7
Park Square II	2013	50.0	51.6	4.6	62.0	0.0	1.20	1.35	4.7	9.5
Cross Ocean ESS I	2013	90.0	76.2	13.8	85.5	7.0	1.21	1.35	7.1	9.5
Shoreline China III	2014	22.5	22.4	1.0	18.6	7.5	1.17	1.43	4.3	10.5
Octagon CLO II	2015	25.0	25.0	0.0	28.5	0.0	1.14	1.32	11.3	9.2
Cross Ocean ESS II	2016	75.0	60.0	59.6	51.8	20.0	1.20	1.33	6.0	12.8
ArrowMark Sep Acct	2017	10.0	10.0	0.0	12.2	0.0	1.22	1.25	12.9	9.0
Arbour Lane II	2018	12.0	23.0	0.0	11.5	15.8	1.18	1.21	24.0	10.3
Octagon CLO III	2018	50.0	42.5	7.5	51.9	0.0	1.22	1.21	16.8	10.3
Cross Ocean ESS III	2019	32.0	25.8	7.4	2.0	33.4	1.37	1.13	20.0	NA
HPS Special Sits.	2019	12.0	7.1	5.5	0.5	7.7	1.17	1.13	NM	NM
Crestline Fund II	2020	12.0	6.0	9.9	4.0	2.2	1.04	1.08	NM	NM
Eagle Point Income	2020	12.0	6.1	5.9	0.2	6.8	1.14	1.08	NM	NM

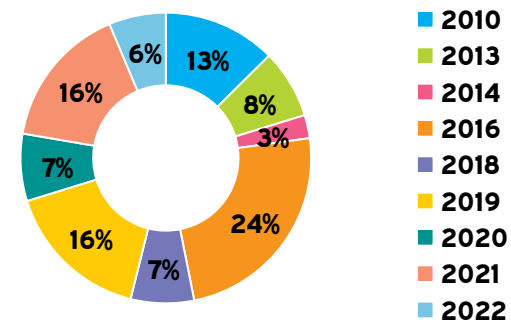
By Investment	Vintage	Committed (\$M)	Contributed (\$M)	Unfunded (\$M)	Distributed (\$M)	Remaining Value (\$M)	TVPI (X)	Peer TVPI (X)	IRR (%)	Peer IRR (%)
Arbour Lane III	2021	21.0	2.7	18.3	0.0	2.7	0.99	1.02	NM	NM
Strategic Value V	2021	15.5	3.9	11.6	0.0	4.2	1.09	1.02	NM	NM
AG Credit Fund II	2021	16.0	0.0	16.0	0.0	0.0	NM	NM	NM	NM
Octagon Fund IV	2022	21.0	0.0	21.0	0.0	0.0	NM	NM	NM	NM
<b>Total</b>		<b>651.0</b>	<b>567.7</b>	<b>182.1</b>	<b>537.6</b>	<b>149.1</b>	<b>1.21</b>	<b>NA</b>	<b>6.5</b>	<b>NA</b>

#### By Vintage

Percent of FMV

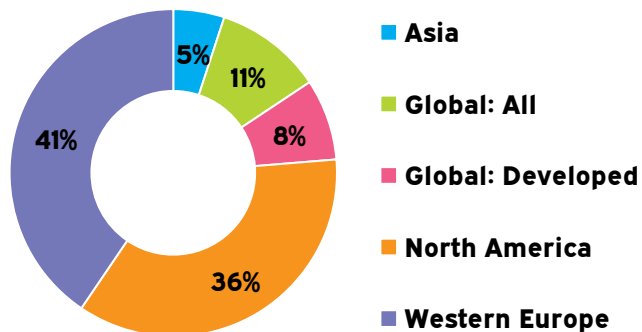


Percent of Exposure

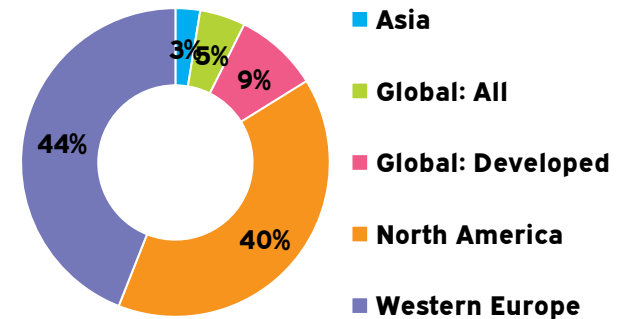


#### By Geographic Focus

Percent of FMV



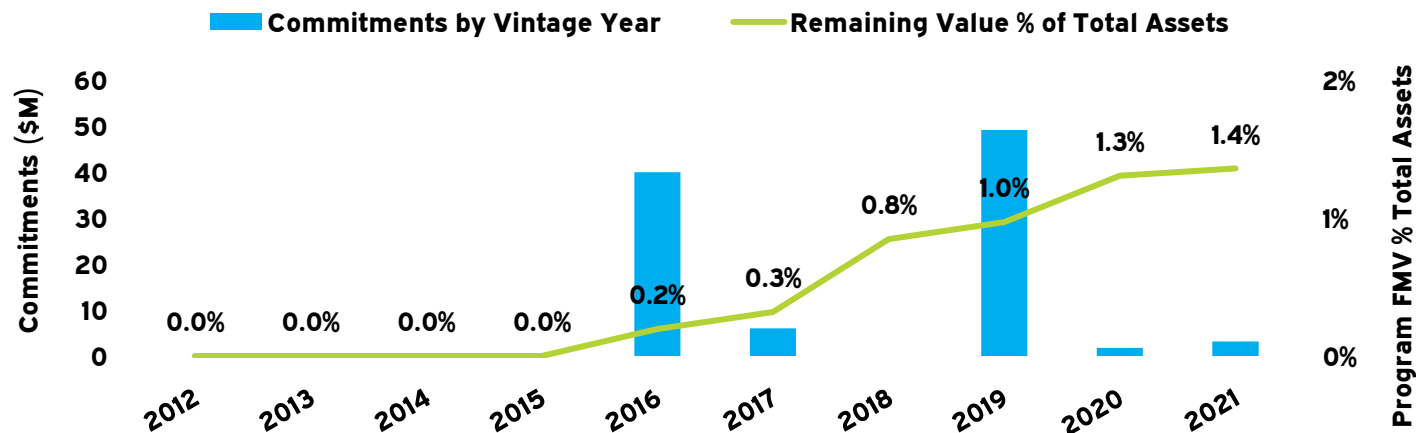
Percent of Exposure





### Introduction

As of December 31, 2021, the Plan had committed \$100.2 million to nine real assets funds and two co-investments. The total reported fair value of real assets investments was \$70.0 million at December 31, 2021, which equates to 1.4% of the overall Retirement Plan, versus a 3.0% policy target.



### Program Status

No. of Investments	11
Committed (\$M)	100.2
Contributed (\$M)	63.8
Distributed (\$M)	17.7
Remaining Value (\$M)	70.0

### Performance Since Inception

	Program
DPI	0.28x
TVPI	1.37x
IRR	13.4%

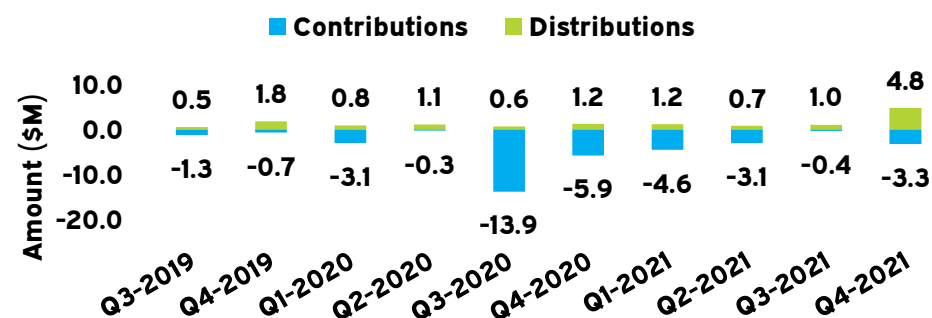
### Commitments

#### Commitments This Quarter

Fund	Region	Amount (M)
Tembo Capital III	Global: Emerging	9.00
Mountain Capital II	North America	9.00

### Cash Flows

#### Recent Quarterly Cash Flows



#### Largest Contributions This Quarter

Fund	Vintage	Region	Amount (\$M)
Tembo Capital III	2019	Global: Emerging	1.94
Orion Mine III	2019	Global: All	1.25
Lime Rock New Energy	2019	Global: Developed	0.11

#### Largest Distributions This Quarter

Fund	Vintage	Region	Amount (\$M)
Lime Rock New Energy	2019	Global: Developed	3.24
Kimmeridge Energy V	2019	North America	0.89
GIP III	2016	Global: Developed	0.28

### By Vintage

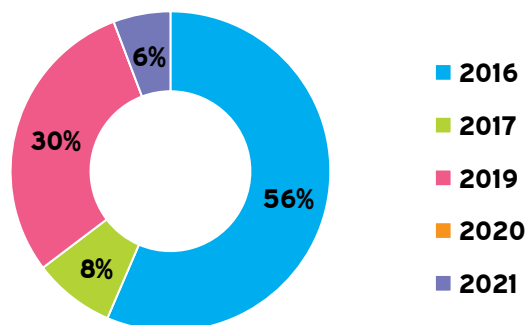
Group	Number	Committed (\$M)	Contributed (\$M)	Unfunded (\$M)	Distributed (\$M)	Remaining Value (\$M)	Exposure (\$M)	DPI (X)	TVPI (X)	IRR (%)	Peer IRR (%)
2016	2	40.0	35.6	6.4	12.0	38.5	44.9	0.34	1.42	11.6	14.6
2017	1	6.0	5.2	1.4	0.5	5.6	7.0	0.10	1.19	7.0	14.7
2019	6	49.2	18.1	31.7	5.2	20.1	51.8	0.29	1.40	27.6	NA
2020	1	1.8	1.8	0.0	0.0	1.8	1.8	0.00	1.00	NM	NM
2021	1	3.2	3.2	0.0	0.0	3.9	3.9	0.00	1.25	NM	NM
<b>Total</b>	<b>11</b>	<b>100.2</b>	<b>63.8</b>	<b>39.5</b>	<b>17.7</b>	<b>70.0</b>	<b>109.4</b>	<b>0.28</b>	<b>1.37</b>	<b>13.4</b>	<b>NA</b>

### Fund Performance: Sorted By Vintage And Strategy

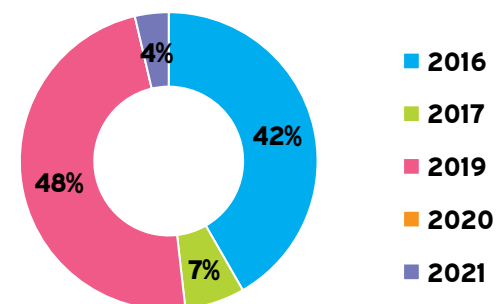
By Investment	Vintage	Committed (\$M)	Contributed (\$M)	Unfunded (\$M)	Distributed (\$M)	Remaining Value (\$M)	TVPI (X)	Peer TVPI (X)	IRR (%)	Peer IRR (%)
Brookfield Infra III	2016	20.0	17.2	2.8	7.1	17.7	1.45	1.61	13.1	14.6
GIP III	2016	20.0	18.5	3.6	4.9	20.8	1.39	1.61	10.4	14.6
Lime Rock VIII	2017	6.0	5.2	1.4	0.5	5.6	1.19	1.34	7.0	14.7
Kimmeridge Energy V	2019	7.2	6.4	0.7	1.5	9.6	1.73	1.12	47.8	NA
Mountain Capital II	2019	9.0	0.0	9.0	0.0	0.0	NM	1.12	NM	NA
Orion Mine III	2019	9.0	4.2	4.7	0.1	4.9	1.18	1.12	NM	NA
GIP IV	2019	6.0	1.4	4.9	0.0	1.2	0.89	1.12	-12.7	NA
Tembo Capital III	2019	9.0	1.9	7.1	0.0	2.0	1.04	1.12	NM	NA
Lime Rock New Energy	2019	9.0	4.1	5.2	3.5	2.4	1.45	1.12	NM	NA
Energy Co-Invest	2020	1.8	1.8	0.0	0.0	1.8	1.00	1.42	NM	NM
Crestline Co-Inv. II	2021	3.2	3.2	0.0	0.0	3.9	1.25	1.02	NM	NM
<b>Total</b>		<b>100.2</b>	<b>63.8</b>	<b>39.5</b>	<b>17.7</b>	<b>70.0</b>	<b>1.37</b>	<b>NA</b>	<b>13.4</b>	<b>NA</b>

#### By Vintage

Percent of FMV

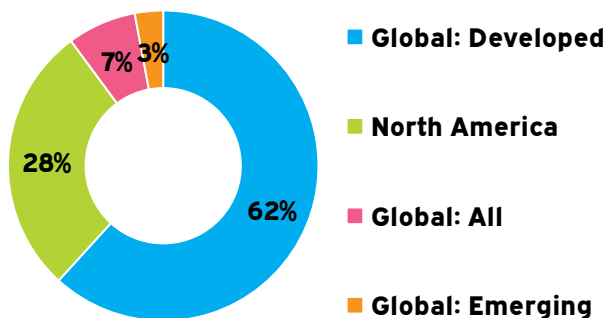


Percent of Exposure

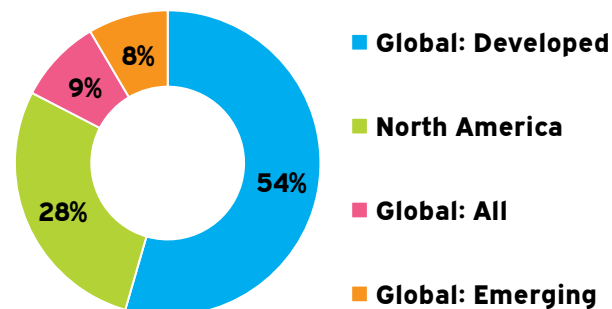


#### By Geographic Focus

Percent of FMV

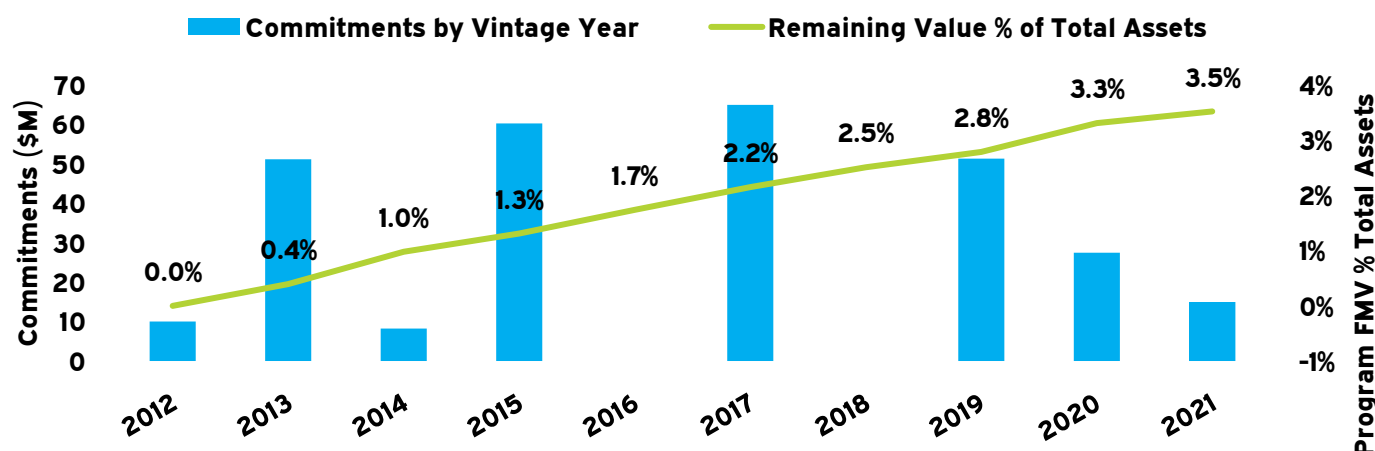


Percent of Exposure



### Introduction

As of December 31, 2021, the Plan had committed \$288.6 million to 19 real estate funds. The total reported fair value of the Real Estate Program's investments was \$176.6 million at December 31, 2021, which equates to 3.5% of the overall Retirement Plan, versus a 3.0% policy target.



### Program Status

No. of Investments	19
Committed (\$M)	288.6
Contributed (\$M)	228.1
Distributed (\$M)	141.5
Remaining Value (\$M)	176.6

### Performance Since Inception

	Program
DPI	0.62x
TVPI	1.39x
IRR	14.1%

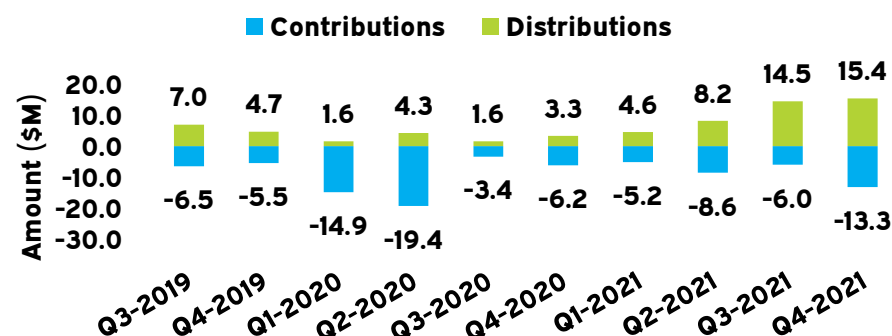
### Commitments

#### Commitments This Quarter

Fund	Region	Amount (M)
HIG Realty IV	North America	9.00

### Cash Flows

#### Recent Quarterly Cash Flows



#### Largest Contributions This Quarter

Fund	Vintage	Region	Amount (\$M)
EPISO 5	2019	Western Europe	3.75
Rockpoint VI	2019	North America	3.65
Exeter V	2020	North America	2.38

#### Largest Distributions This Quarter

Fund	Vintage	Region	Amount (\$M)
KSL IV	2015	North America	4.22
DRA IX	2017	North America	3.70
Torchlight VI	2017	North America	2.88

### By Vintage

Group	Number	Committed (\$M)	Contributed (\$M)	Unfunded (\$M)	Distributed (\$M)	Remaining Value (\$M)	Exposure (\$M)	DPI (X)	TVPI (X)	IRR (%)	Peer IRR (%)
2012	1	10.0	12.0	0.0	18.4	4.5	4.5	1.54	1.92	18.3	13.8
2013	4	51.2	45.4	8.1	55.9	8.1	16.2	1.23	1.41	12.8	15.4
2014	1	8.3	8.6	1.4	4.5	3.7	5.1	0.52	0.95	-1.9	14.6
2015	3	60.3	59.0	3.5	26.2	65.2	68.7	0.44	1.55	14.1	13.3
2017	3	65.0	64.6	14.7	33.0	51.3	66.1	0.51	1.31	14.2	12.8
2019	3	51.3	29.2	24.1	3.0	31.0	55.1	0.10	1.16	21.4	NA
2020	3	27.5	9.4	18.6	0.5	12.7	31.3	0.05	1.41	NM	NM
2021	1	15.0	0.0	15.0	0.0	0.1	15.1	0.00	NM	NM	NM
<b>Total</b>	<b>19</b>	<b>288.6</b>	<b>228.1</b>	<b>85.5</b>	<b>141.5</b>	<b>176.6</b>	<b>262.1</b>	<b>0.62</b>	<b>1.39</b>	<b>14.1</b>	<b>NA</b>



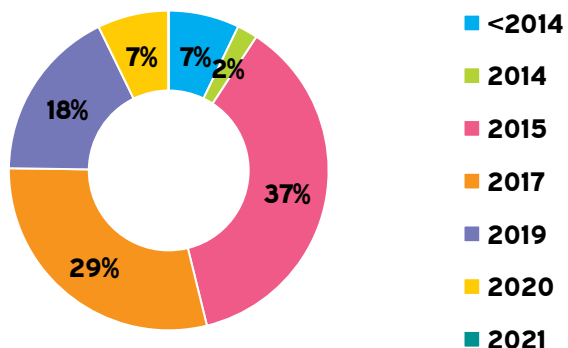
### Fund Performance: Sorted By Vintage And Strategy

By Investment	Vintage	Committed (\$M)	Contributed (\$M)	Unfunded (\$M)	Distributed (\$M)	Remaining Value (\$M)	TVPI (X)	Peer TVPI (X)	IRR (%)	Peer IRR (%)
Brookfield RE I	2012	10.0	12.0	0.0	18.4	4.5	1.92	1.52	18.3	13.8
Blackstone RE Debt 2	2013	12.5	12.8	0.0	14.8	0.0	1.16	1.58	9.2	15.4
Sculptor RE III	2013	20.0	13.4	8.1	16.5	5.2	1.62	1.58	21.1	15.4
EPISO 3	2013	8.7	9.2	0.0	8.7	2.8	1.25	1.58	7.1	15.4
TA Realty X	2013	10.0	10.0	0.0	16.0	0.1	1.61	1.58	12.6	15.4
Orion Euro IV	2014	8.3	8.6	1.4	4.5	3.7	0.95	1.56	-1.9	14.6
Brookfield RE II	2015	20.0	19.6	0.4	9.6	21.6	1.59	1.40	13.3	13.3
KSL IV	2015	20.0	21.0	1.1	10.1	24.3	1.63	1.40	18.8	13.3
EPISO 4	2015	20.3	18.3	2.0	6.5	19.3	1.41	1.40	10.5	13.3
Torchlight VI	2017	30.0	33.2	8.3	13.0	25.1	1.15	1.40	8.0	12.8
GEM VI	2017	15.0	10.1	4.9	3.6	9.7	1.31	1.40	19.8	12.8
DRA IX	2017	20.0	21.3	1.6	16.3	16.5	1.54	1.40	18.7	12.8
Rockpoint VI	2019	11.5	6.7	4.8	0.1	7.9	1.19	1.14	NM	NM
DRA X	2019	18.0	8.2	11.8	2.9	7.7	1.29	1.14	NM	NM
EPISO 5	2019	21.8	14.3	7.6	0.0	15.5	1.08	1.14	9.9	NA
Torchlight Debt VII	2020	9.0	2.7	6.8	0.5	2.3	1.01	1.11	NM	NM
HIG Realty IV	2020	9.0	0.0	9.0	0.0	0.0	NM	1.11	NM	NM
Exeter V	2020	9.5	6.7	2.9	0.0	10.4	1.57	1.11	NM	NM

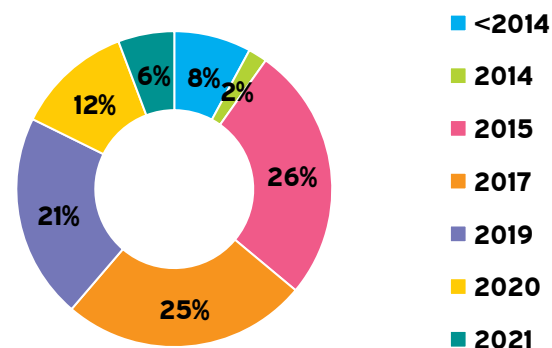
By Investment	Vintage	Committed (\$M)	Contributed (\$M)	Unfunded (\$M)	Distributed (\$M)	Remaining Value (\$M)	TVPI (X)	Peer TVPI (X)	IRR (%)	Peer IRR (%)
Centerbridge RE II	2021	15.0	0.0	15.0	0.0	0.1	NM	NM	NM	NM
<b>Total</b>		<b>288.6</b>	<b>228.1</b>	<b>85.5</b>	<b>141.5</b>	<b>176.6</b>	<b>1.39</b>	<b>NA</b>	<b>14.1</b>	<b>NA</b>

#### By Vintage

Percent of FMV

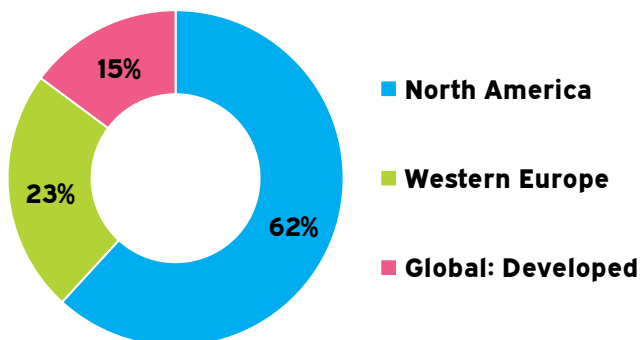


Percent of Exposure

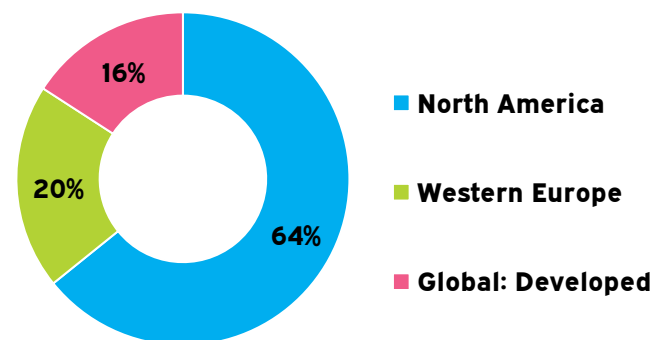


#### By Geographic Focus

Percent of FMV

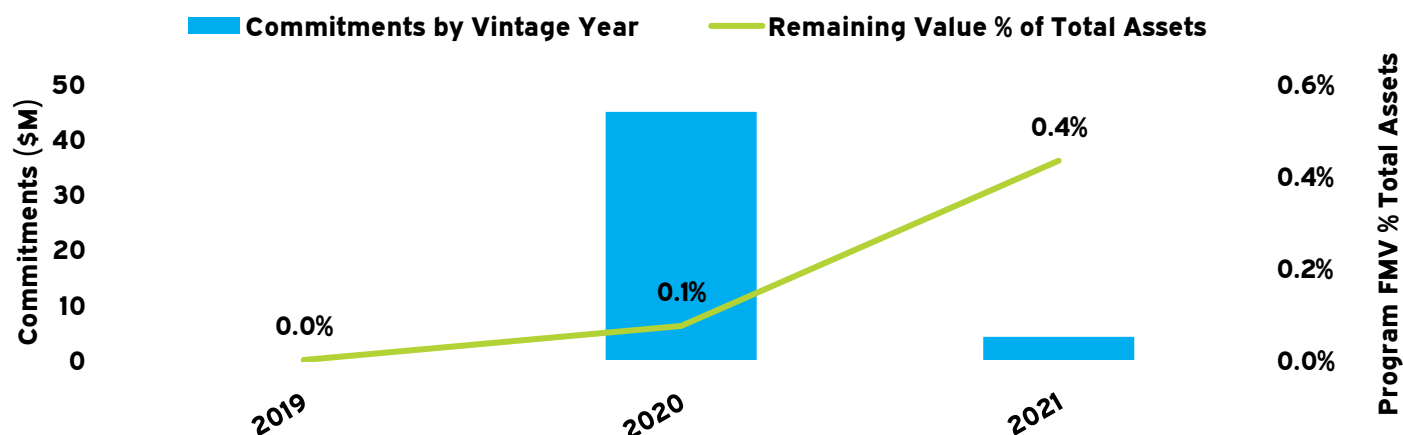


Percent of Exposure



### Introduction

As of December 31, 2021, the Plan had committed \$49.2 million to six venture capital funds. The total reported fair value of the Venture Capital Program's investments was \$21.7 million at December 31, 2021, which equates to 0.4% of the overall Retirement Plan, versus a 3.0% policy target.



### Program Status

No. of Investments	6
Committed (\$M)	49.2
Contributed (\$M)	16.3
Distributed (\$M)	0.0
Remaining Value (\$M)	21.7

### Performance Since Inception

	Program
DPI	0.00x
TVPI	1.33x
IRR	NM

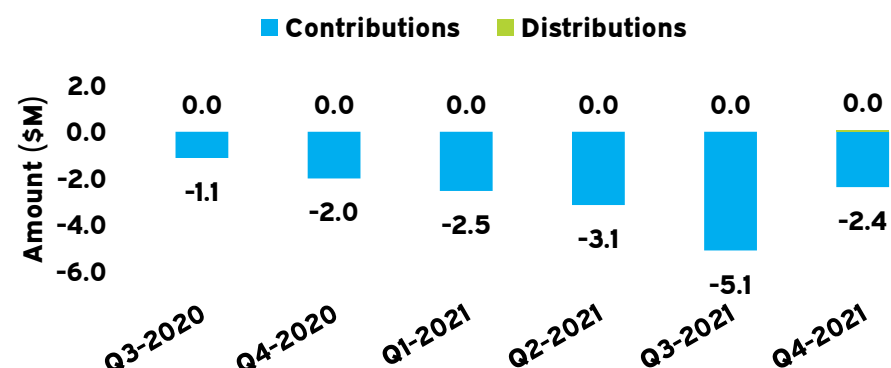
### Commitments

#### Commitments This Quarter

Fund	Region	Amount (M)
Next Play III	North America	10.00

### Cash Flows

#### Recent Quarterly Cash Flows



#### Largest Contributions This Quarter

Fund	Vintage	Region	Amount (\$M)
Top Tier VC IX	2020	North America	1.20
Northgate VP IX	2020	North America	0.70
Canvas Ventures 3	2020	North America	0.38

#### Largest Distributions This Quarter

Fund	Vintage	Region	Amount (\$M)
Top Tier VC IX	2020	North America	0.05

### By Vintage

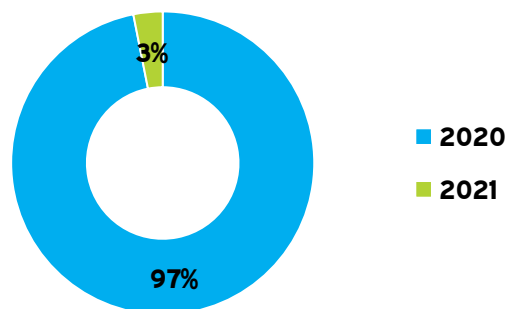
Group	Number	Committed (\$M)	Contributed (\$M)	Unfunded (\$M)	Distributed (\$M)	Remaining Value (\$M)	Exposure (\$M)	DPI (X)	TVPI (X)	IRR (%)
2020	5	45.0	15.6	29.5	0.0	21.1	50.6	0.00	1.35	NM
2021	1	4.2	0.7	3.5	0.0	0.7	4.1	0.00	0.92	NM
<b>Total</b>	<b>6</b>	<b>49.2</b>	<b>16.3</b>	<b>33.0</b>	<b>0.0</b>	<b>21.7</b>	<b>54.7</b>	<b>0.00</b>	<b>1.33</b>	<b>NM</b>

### Fund Performance: Sorted By Vintage And Strategy

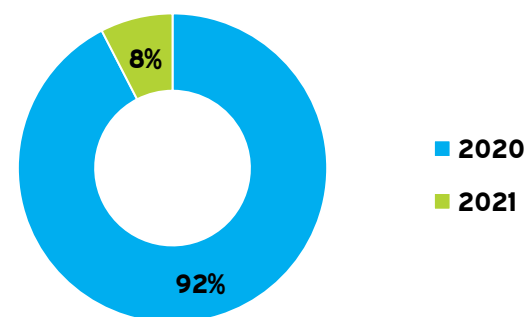
By Investment	Vintage	Committed (\$M)	Contributed (\$M)	Unfunded (\$M)	Distributed (\$M)	Remaining Value (\$M)	TVPI (X)	IRR (%)
Invesco II	2020	10.0	3.1	7.0	0.0	6.2	2.02	NM
Northgate VP IX	2020	10.0	5.7	4.3	0.0	6.1	1.06	NM
Top Tier VC IX	2020	10.0	5.0	5.0	0.0	6.7	1.36	NM
Next Play III	2020	10.0	0.0	10.0	0.0	0.0	NM	NM
Canvas Ventures 3	2020	5.0	1.8	3.2	0.0	2.0	1.12	NM
Innovation Endeavors IV	2021	4.2	0.7	3.5	0.0	0.7	0.92	NM
<b>Total</b>		<b>49.2</b>	<b>16.3</b>	<b>33.0</b>	<b>0.0</b>	<b>21.7</b>	<b>1.33</b>	<b>NM</b>

#### By Vintage

Percent of FMV

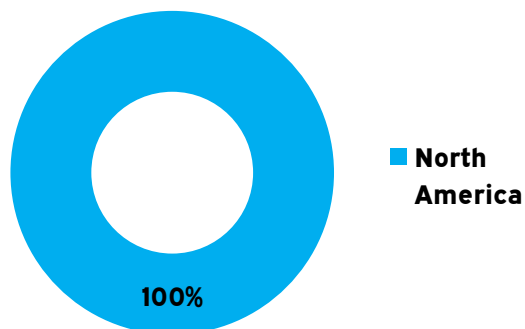


Percent of Exposure

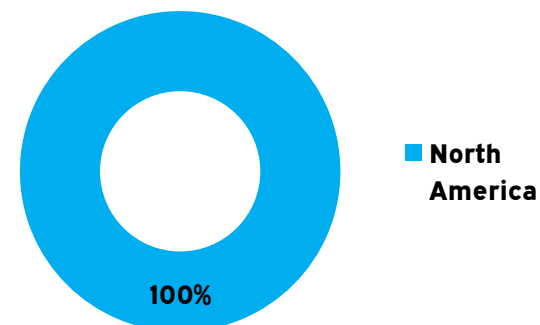


#### By Geographic Focus

Percent of FMV

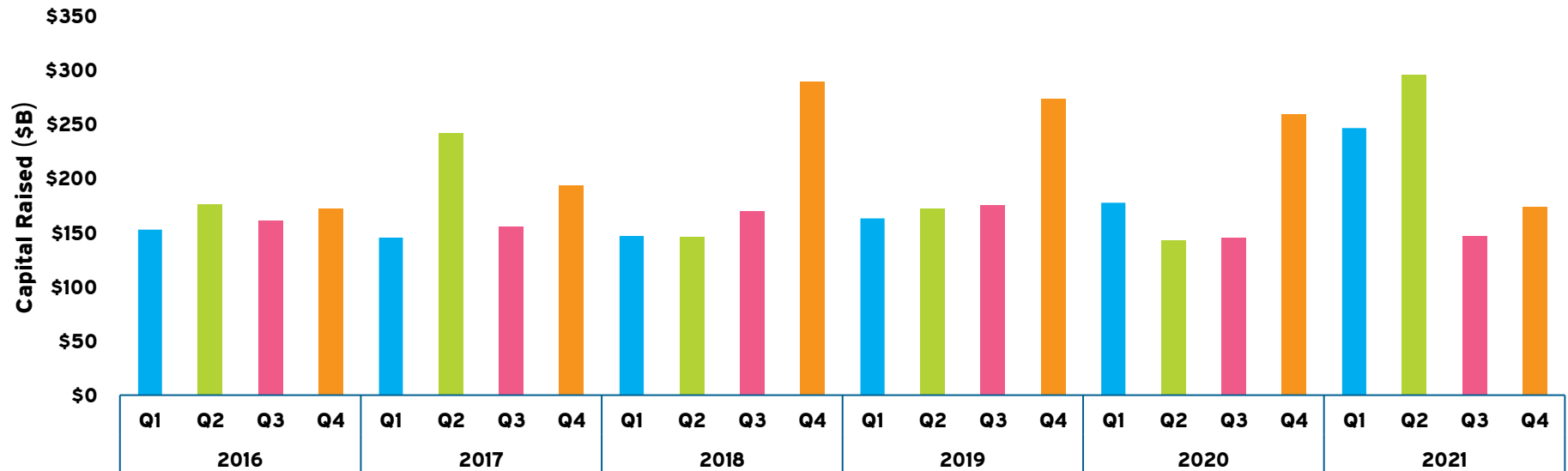


Percent of Exposure





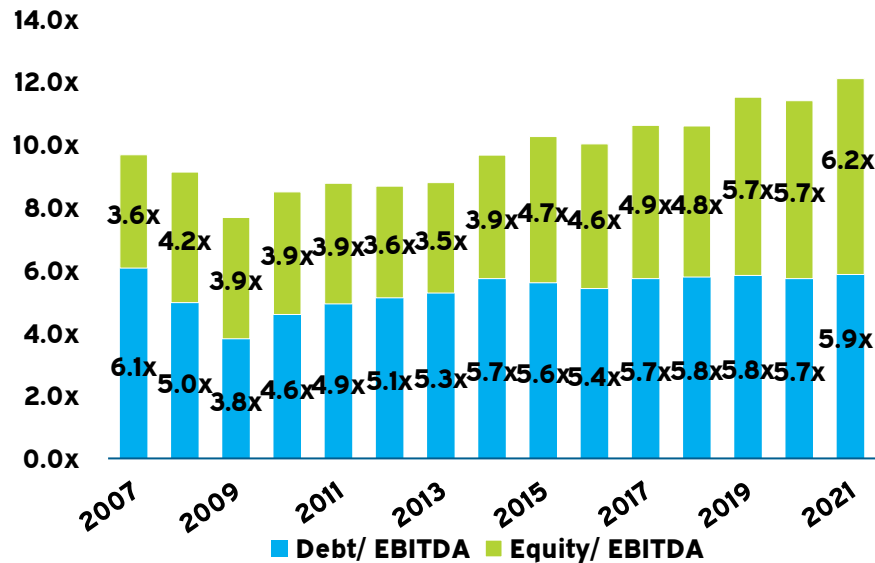
#### Private Equity Global Fundraising<sup>1</sup>



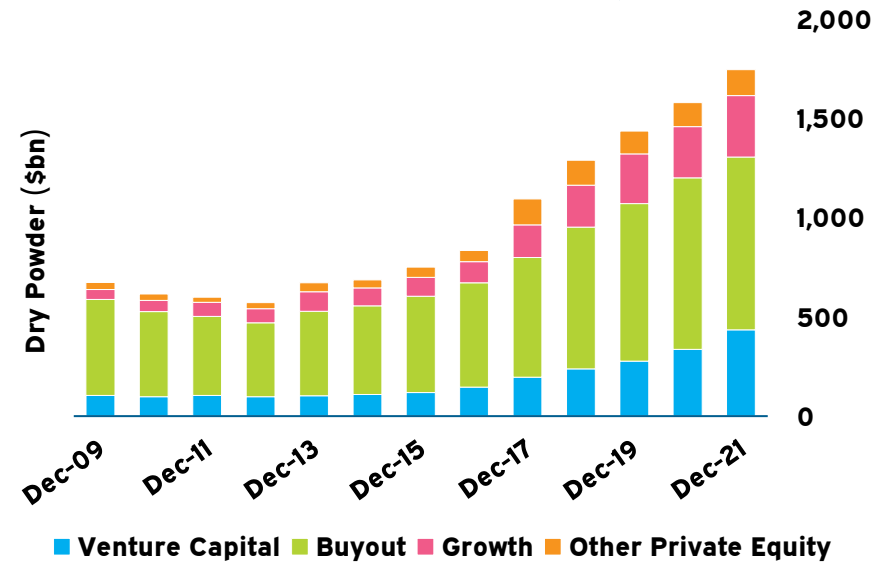
Fundraising activity for private equity funds increased in the fourth quarter of 2021, compared to the prior quarter, with \$173 billion raised. However, it marked the lowest fundraising total for a fourth quarter over the last four years. Fundraising in the fourth quarter decreased 33.2% from the same period in 2020 but increased 18.4% from Q3 2021, driven by funds looking to close by year-end and investors making their final commitments for the year. Despite signs of a possible moderation in the post-pandemic recovery in the global private equity industry, the asset class has demonstrated its resilience and capacity to innovate and respond to change. The fourth quarter showed stronger numbers relative to Q3 due to seasonality that is typically observed. Fundraising continued to demonstrate signs of further capital consolidation with larger, more established managers increasing their market share and investors' ongoing appetite for large and mega-buyout strategies. The average size of funds still in the market has been declining, indicating that smaller funds have been hardest hit by the current environment. That said, differentiation is increasingly important with the private equity industry more competitive than ever.

<sup>1</sup> Preqin

#### Purchase Price Breakdown, All LBOs<sup>1</sup>



#### Dry Powder by Fund Type<sup>2</sup>

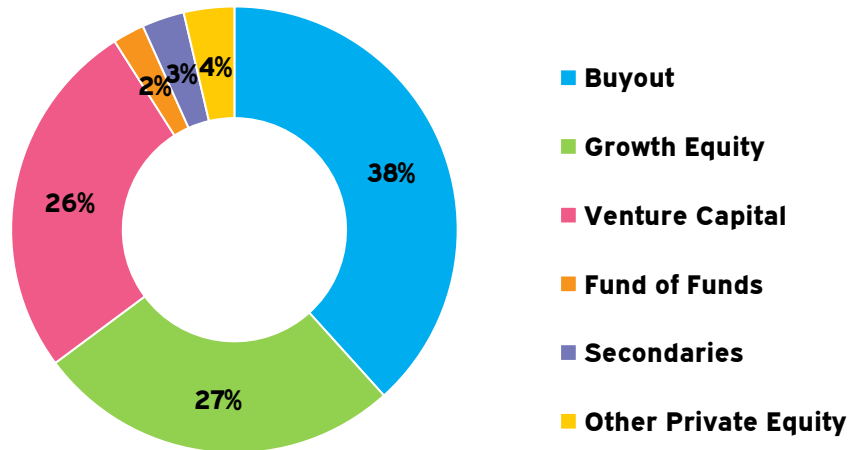


The average private equity purchase price multiple increased in 2021 to 12.1x EBITDA. Equity contribution (relative to total purchase price) has slightly increased to approximately 52% from 50% in 2020, indicating that total purchase prices comprise slightly more equity than debt. More recently, during the three months ended December 31, 2021, the average purchase price multiple increased to 12.2x EBITDA with 48% average equity contribution. Dry powder levels will remain high as long as more capital is being raised than is being deployed, and investors may expect to continue to see high purchase prices as a result of the high levels of capital competing for deals.

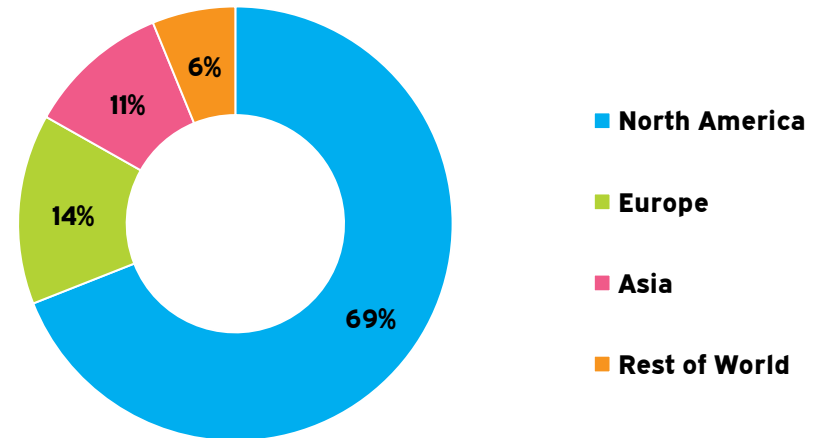
<sup>1</sup> S&P

<sup>2</sup> Preqin

Capital Raised by Strategy<sup>1</sup>



Capital Raised by Geography<sup>2</sup>



Buyout funds continued to be the most popular private equity sub-strategy and increased from 35% of all private equity capital raised in the third quarter of 2021 to 38% in the fourth quarter. Venture Capital strategies, as a percentage of total capital raised, also increased from Q3 2021, jumping from 21% to 26% in the fourth quarter. Growth Equity funds remained consistent at 27% of private equity capital raised. Fund of Funds, Secondaries, and Other Private Equity, which includes co-investment and hybrid vehicles, decreased from 17% to 9% collectively through the fourth quarter compared to the previous quarter.

North America-focused vehicles continued to represent the majority of funds raised during the fourth quarter, representing 69% of total capital. This is a notable increase from the 53% in the prior quarter. Alternatively, commitments to Asia and Europe decreased from a combined 43% to 25% of capital raised during the fourth quarter. Overall, private equity investors continued to favor commitments to North America-focused funds, but investor appetite for Asia and Europe remained strong. In Asia specifically, the threat of government intervention in private companies has made it considerably more difficult for investors and managers to assess the risk of deploying long-term private capital into the region.

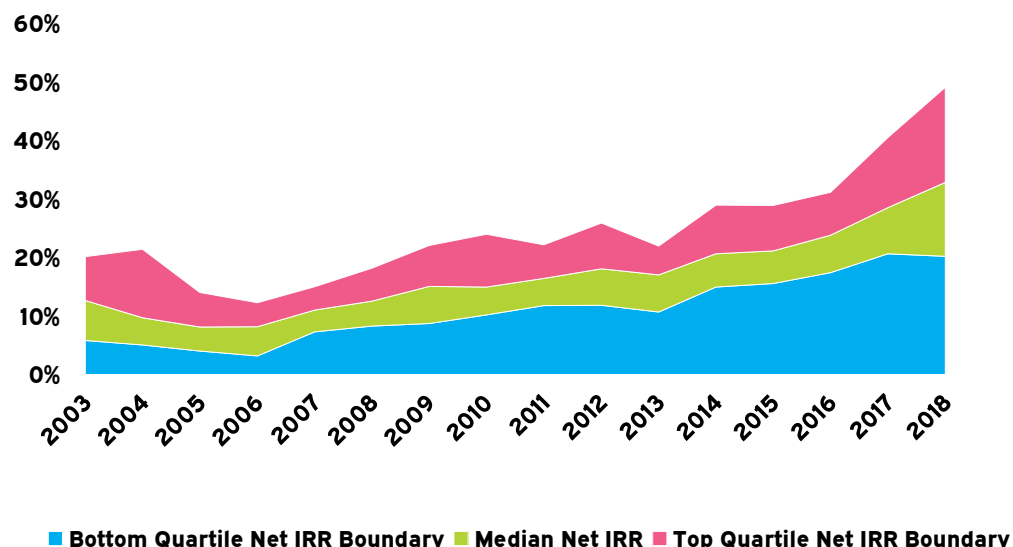
<sup>1</sup> Preqin

<sup>2</sup> Preqin

#### Private Equity Performance by Horizon<sup>1</sup>

Horizon	Private Equity	Buyout	Venture Capital	Growth Equity
1 Year to 9/2021	47.0%	46.5%	50.9%	41.1%
3 Years to 9/2021	23.5	23.2	25.3	25.8
5 Years to 9/2021	21.0	21.1	19.9	23.5
10 Years to 9/2021	17.5	18.1	15.9	18.8

#### Private Equity Performance by Vintage Year<sup>2</sup>



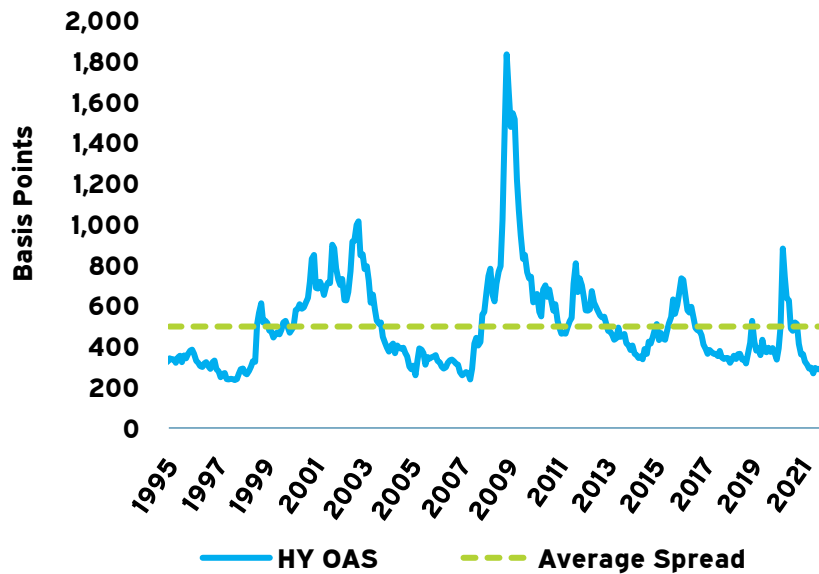
Recent private equity returns have been very strong, with Private Equity generating a 47.0% IRR over the past year, following the outbreak of the COVID-19 pandemic in Q1 2020 and write-downs across most portfolios at that time related to the associated uncertainty. In general, performance has been strong in each vintage year since the Global Financial Crisis. Buyout, Venture Capital, and Growth Equity funds have all generally performed well over the various horizons on an absolute basis, with Venture funds outperforming Buyout and Growth funds over the past year. The spread between first and third quartile performance in private equity has grown consistently since the Global Financial Crisis; 2007 vintage funds reported a 7.7% spread while 2018 vintage funds reported a 28.9% spread.

<sup>1</sup> Prequin Horizon IRRs as of 9/30/2021. Data as of 12/31/2021 not yet available.

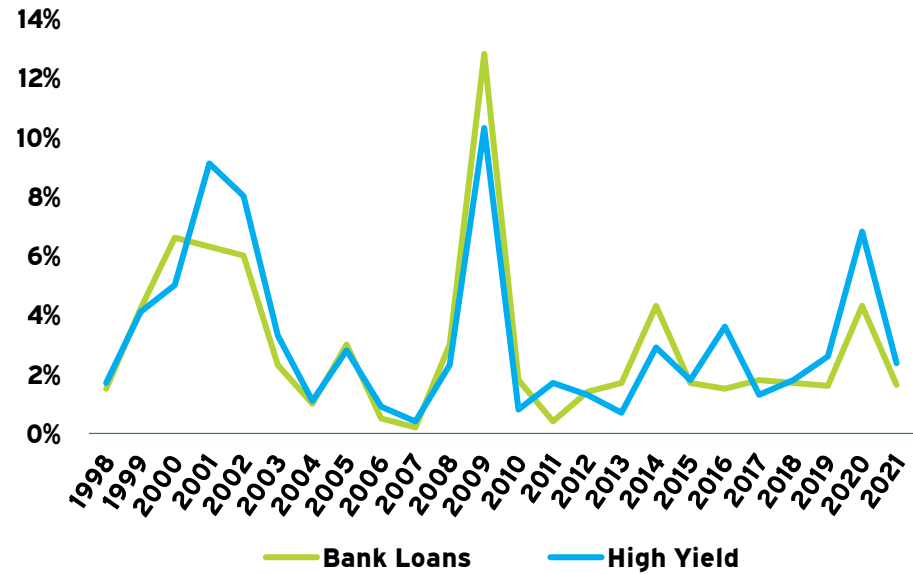
<sup>2</sup> Prequin Global Quartile Returns as of 9/30/2021.

#### Private Debt

##### US Corporate High Yield Spread<sup>1</sup>



##### US Corporate Default Rate<sup>2</sup>



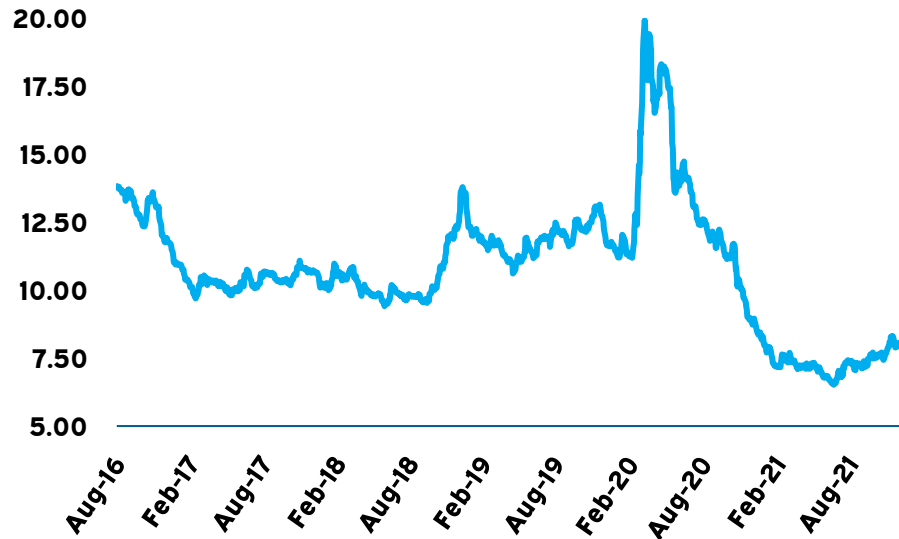
The high yield market ended 2021 on a positive note, returning over 5.3% for the year. High yield spreads finished the quarter at 283 basis points, notably tighter than the wide levels of 360 basis points one year prior and inside of long-term historical averages. High yield bonds continue to touch new historic yield lows as the market yield-to-worst finished the quarter at 4.3%. Default activity remained muted, ending the year at 0.5%. Rating upgrades outpaced downgrades.

<sup>1</sup> Source: Barclays Capital

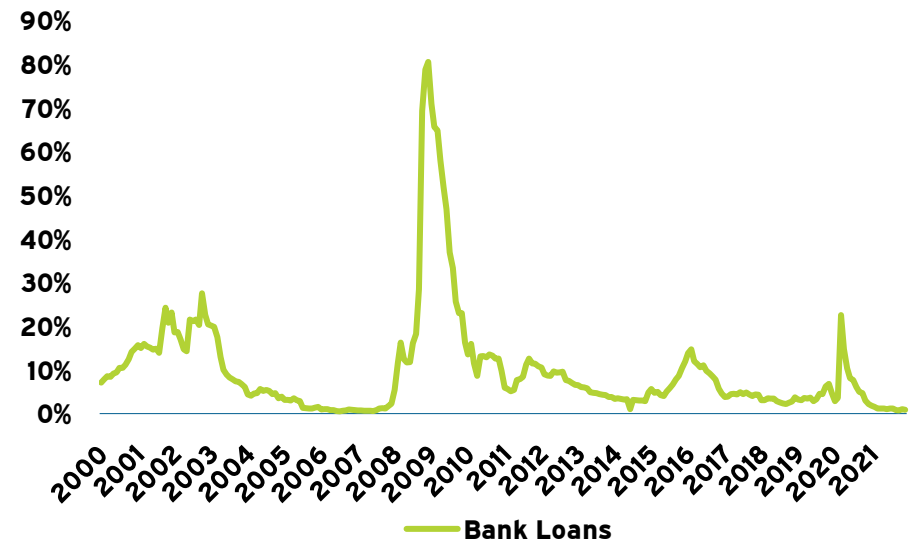
<sup>2</sup> Source: JP Morgan

#### Distressed & Opportunistic Debt

##### Lower Rated Debt Yield<sup>1</sup>



##### Distressed Ratio<sup>2</sup>

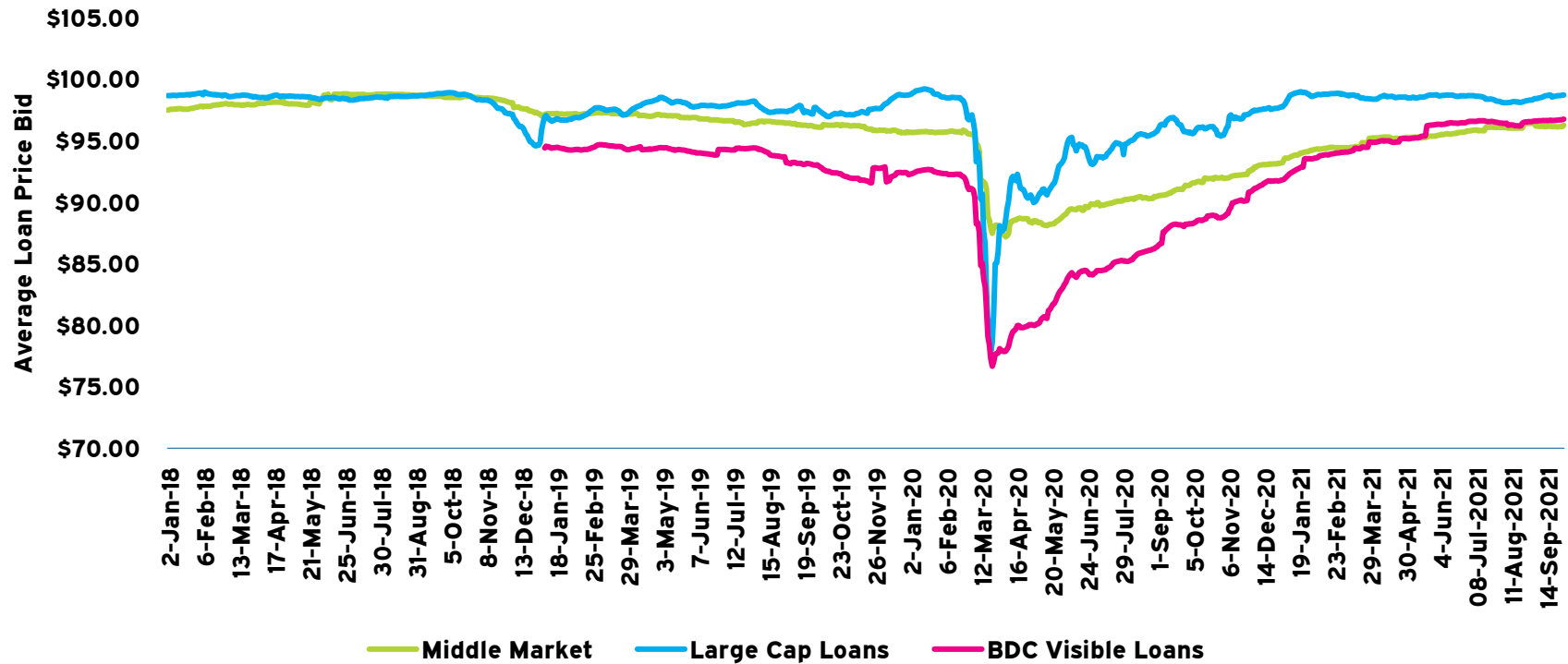


The yields on lower rated debt remained near historical low levels as did the distressed ratio. Opportunities in traditional large cap corporate distressed remained very limited. Within the past few quarters, many opportunistic managers have pivoted from rescue financing to growth financing and other opportunities tied reconstruction. Investor appetite favored more yield-oriented strategies throughout the second half of the year.

<sup>1</sup> Source: St. Louis FRED data

<sup>2</sup> Source: Bank Loans trading below \$80, Credit Suisse

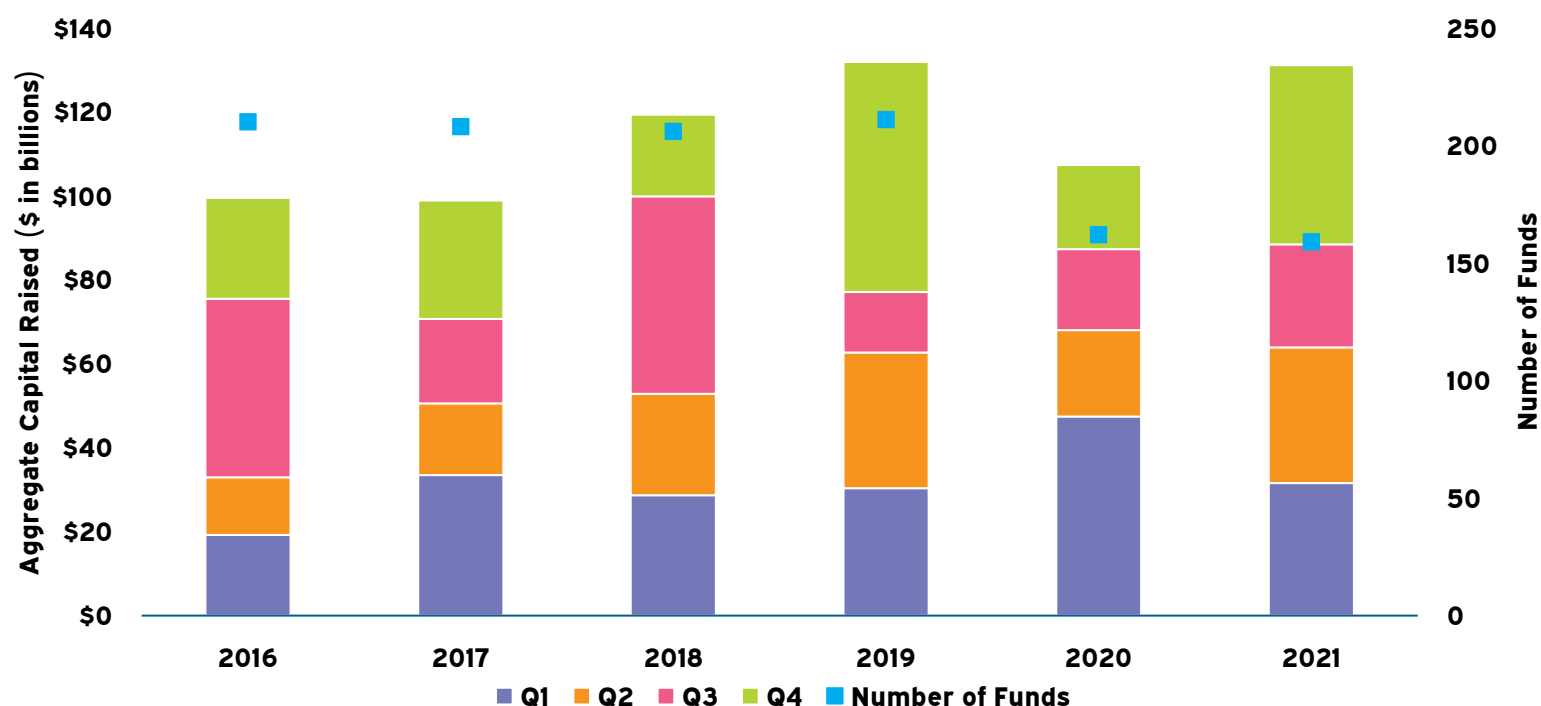
#### Private Senior Debt Senior Loan Secondary Market Pricing<sup>1</sup>



Secondary market pricing of middle market loans remained largely unchanged during the quarter.

<sup>1</sup> Source: Refinitiv LPC

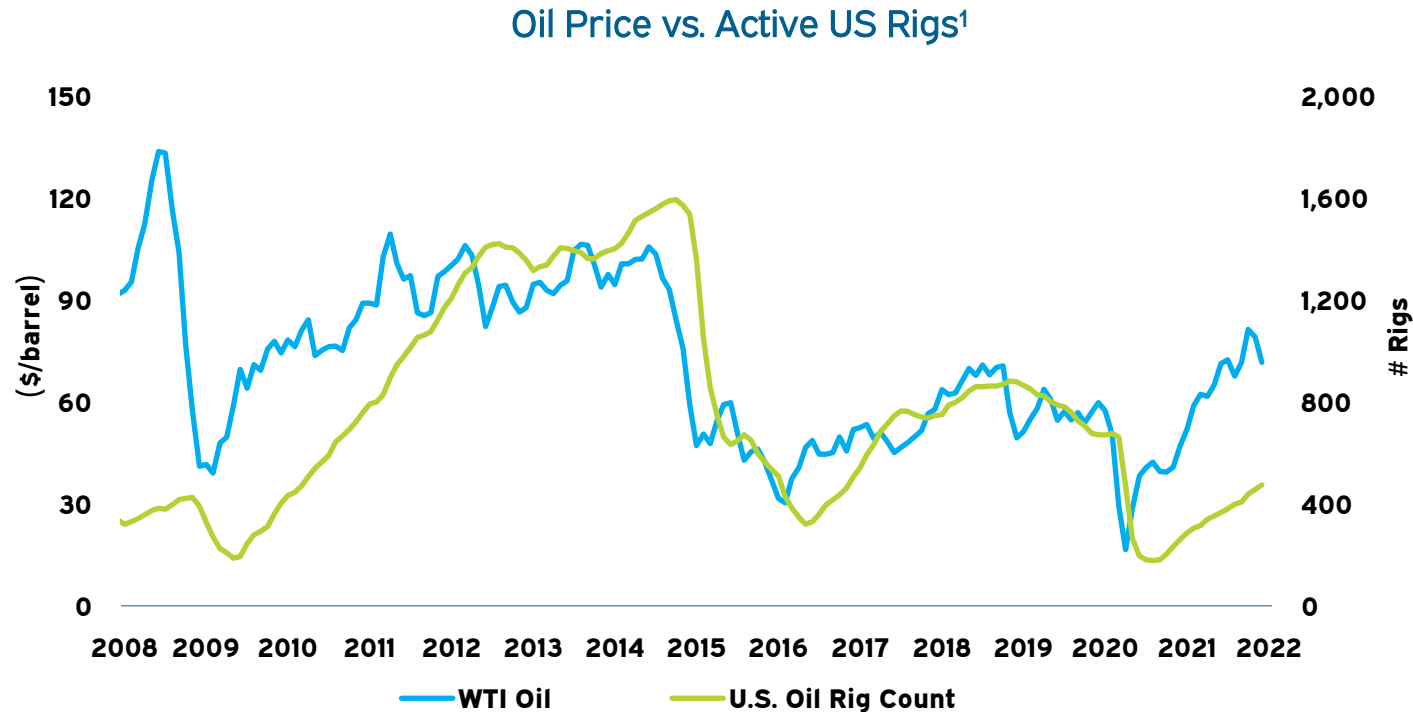
#### Global Quarterly Unlisted Natural Resource Fundraising<sup>1</sup>



During the fourth quarter, \$43 billion was raised across 31 funds with the average fund size raised averaging approximately \$1.4 billion of commitments. This represented the largest fundraising quarter since the start of the global COVID-19 pandemic. The majority of natural resources managers raising capital during the fourth quarter were focused on North America, accounting for nearly half of cumulative targeted capitalization in the market.

<sup>1</sup> Source: Preqin Private Capital Fundraising Update, 4Q 2021.

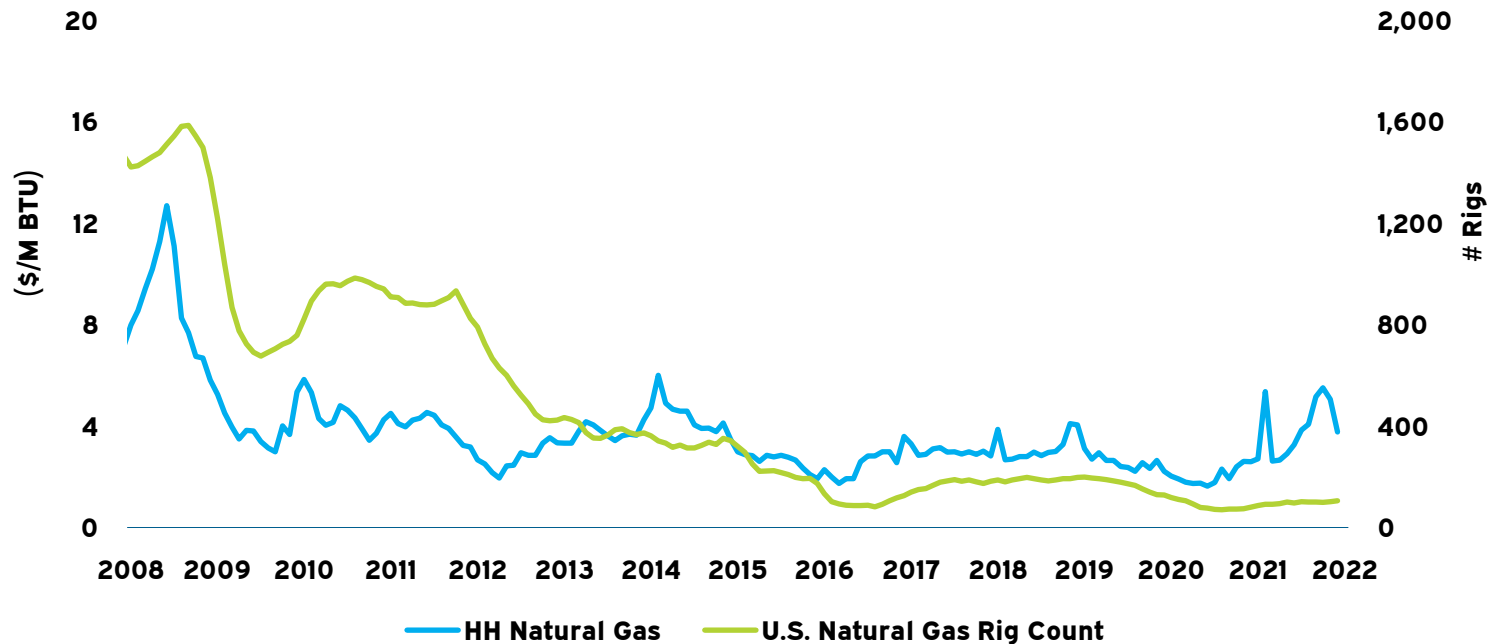




West Texas Intermediate oil prices experienced some fluctuations during the quarter but ended flat at approximately \$72 per barrel. Relative to one year prior, prices were 53% higher. As prices increased in 2021, the number of rigs increased by 215 from one year prior to a total of 475. As the industry, in general, prioritized capital spending discipline and returns to investors over growth, a rebound in exploration and production activity has been less pronounced than historical observations. The US achieved peak oil production of 13.0 million barrels of oil equivalent per day (BOEPD) in November 2019 and produced approximately 11.6 million BOEPD in December 2021. Gasoline prices for regular blend in the US reached an average of \$3.78 per gallon representing a 7% quarterly increase and a 51% increase from one year prior.

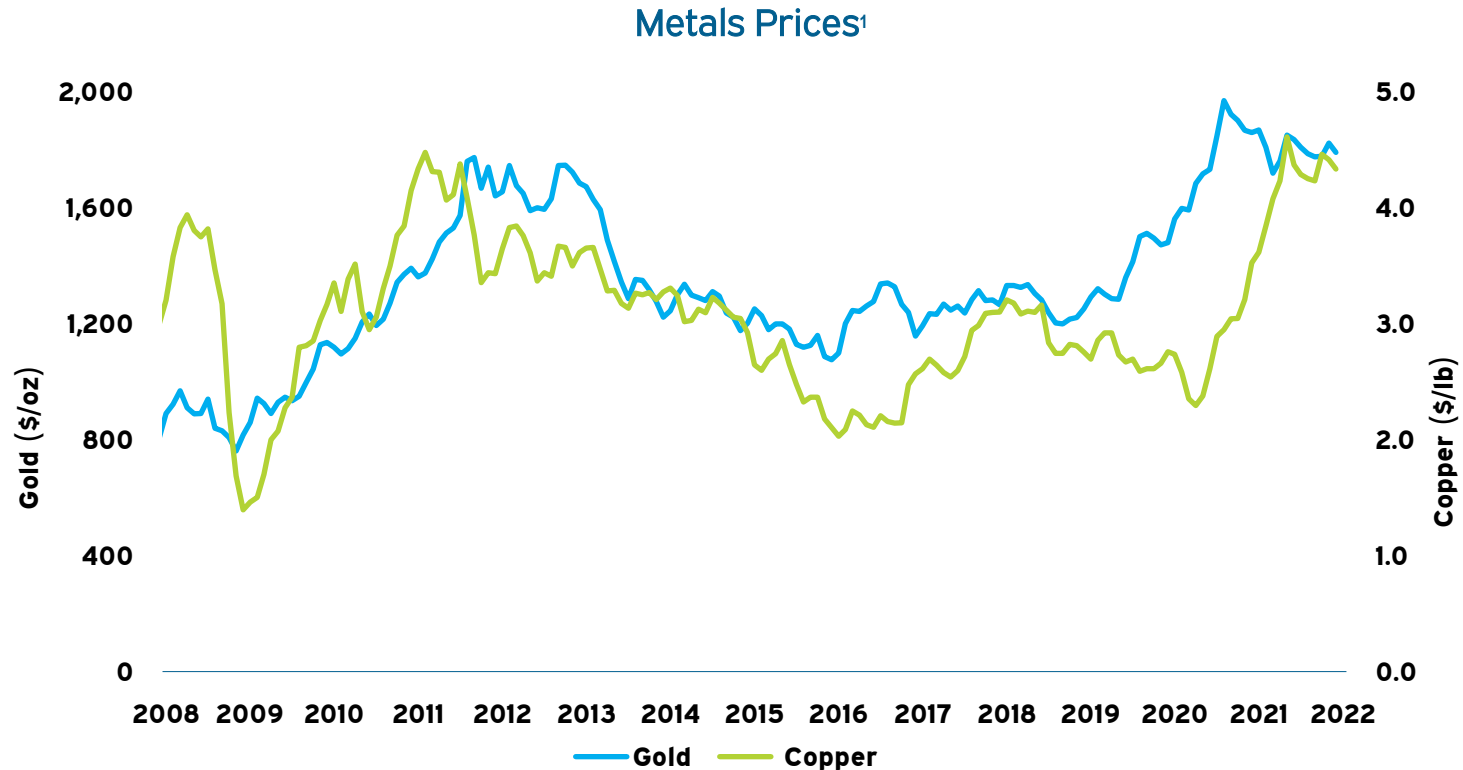
<sup>1</sup> Source: EIA and Baker Hughes.

### Natural Gas Price vs. Active US Rigs<sup>1</sup>



Natural gas demand continued to remain robust while production reached an all time high in December 2021. Henry Hub gas prices averaged \$4.76/million BTU during the quarter and ended the year at \$3.76/million BTU resulting in a 27% quarterly decrease and a 45% increase from one year prior. The US natural gas rig count increased by four to 105 during the quarter. The US produced record high levels of natural gas in December amounting to approximately 109 billion cubic feet per day. Liquefied natural gas prices are much higher outside the US, and export facilities have the potential to benefit from increased demand and prices in international markets.

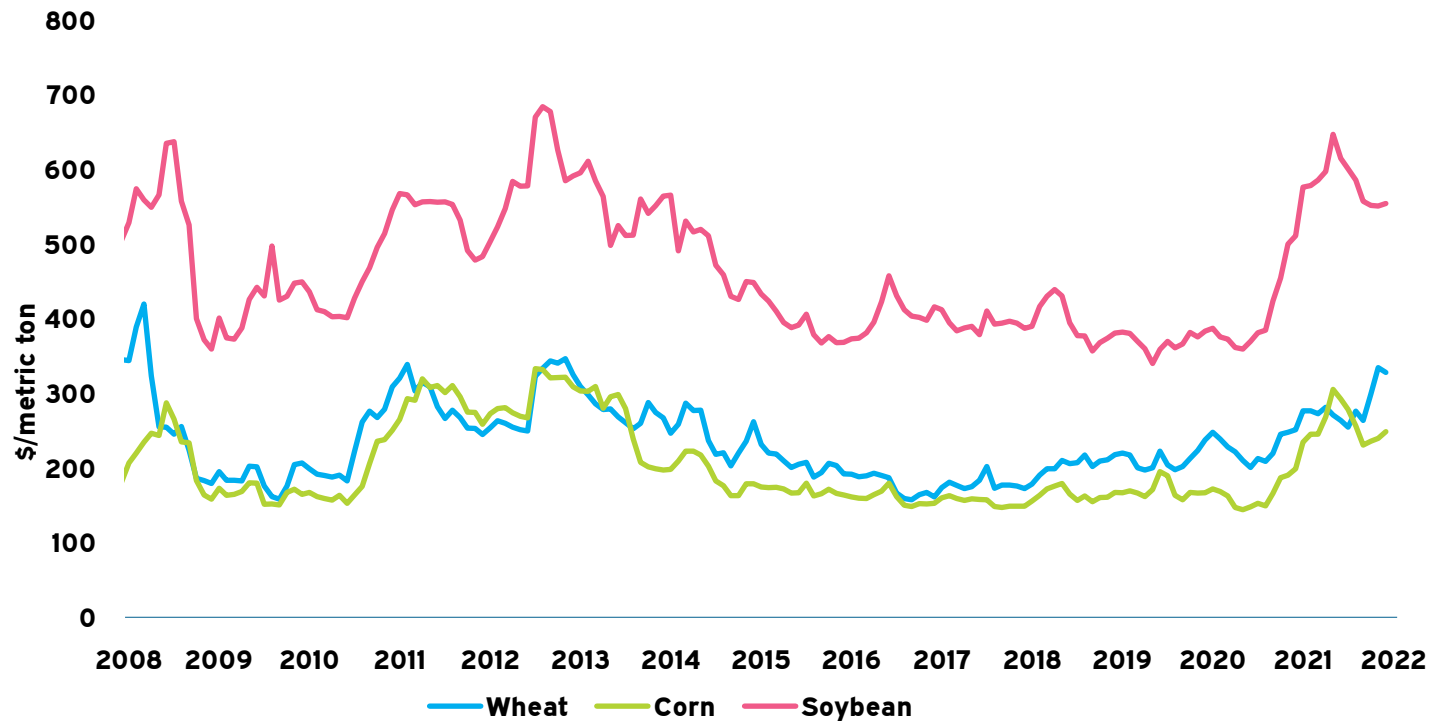
<sup>1</sup> Source: EIA and Baker Hughes.



In general, many metals and minerals experienced a run up in prices over the past couple of years contributed by inflationary pressures, increased demand, and supply considerations. During the fourth quarter, gold and copper prices each increased by 1% and 2%, respectively. Relative to one year prior, gold prices were down by 4%, while copper prices were up by 23% and correspondingly ended at \$1,790 per ounce and \$4.33 per pound. Other metals, such as tin, aluminum, and nickel, were up 100%, 34%, and 19%, respectively, over the past year.

<sup>1</sup> Source: World Bank.

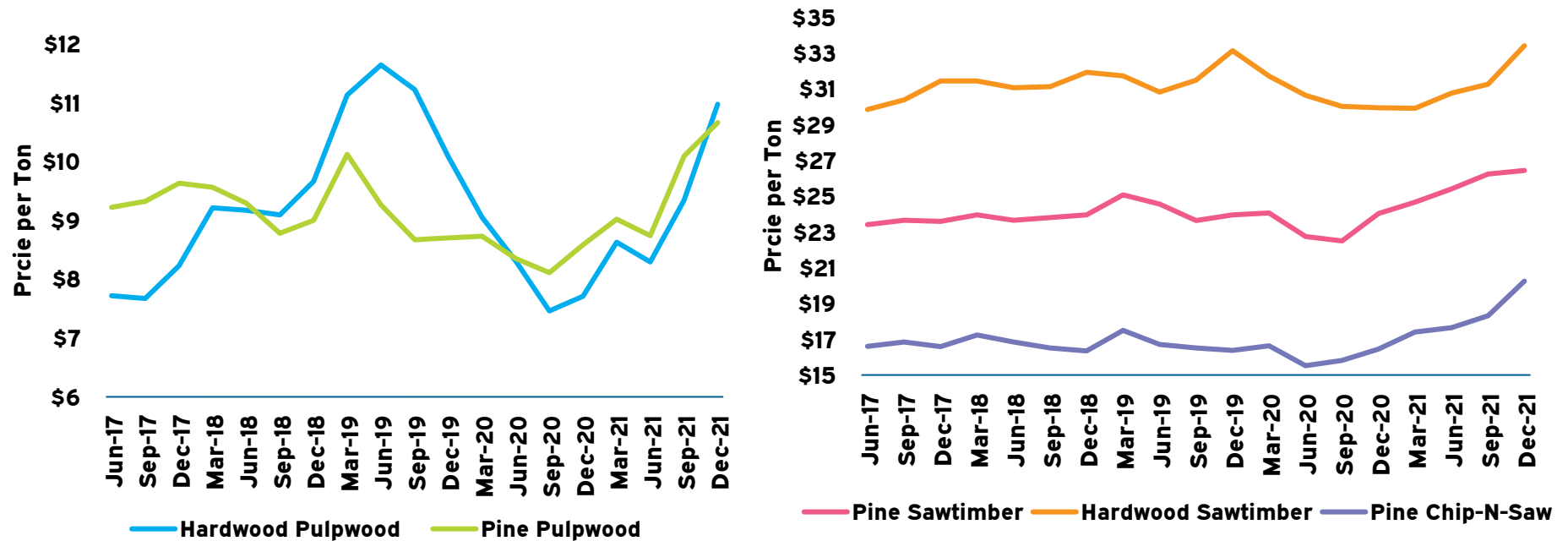
#### Wheat, Corn, & Soybean<sup>1</sup>



Grain prices continued to exhibit strength over the past several quarters after a multi-year, lower commodity price environment. During the fourth quarter, wheat, corn, and soybean prices experienced a 24%, 81%, and -1% change, respectively. Relative to one year prior, the grains were up by 31%, 25%, and 8%, respectively. The NCREIF Farmland index increased by 7.8% during 2021 driven by income returns of 3.9% and appreciation of 3.8%.

<sup>1</sup> Source: World Bank.

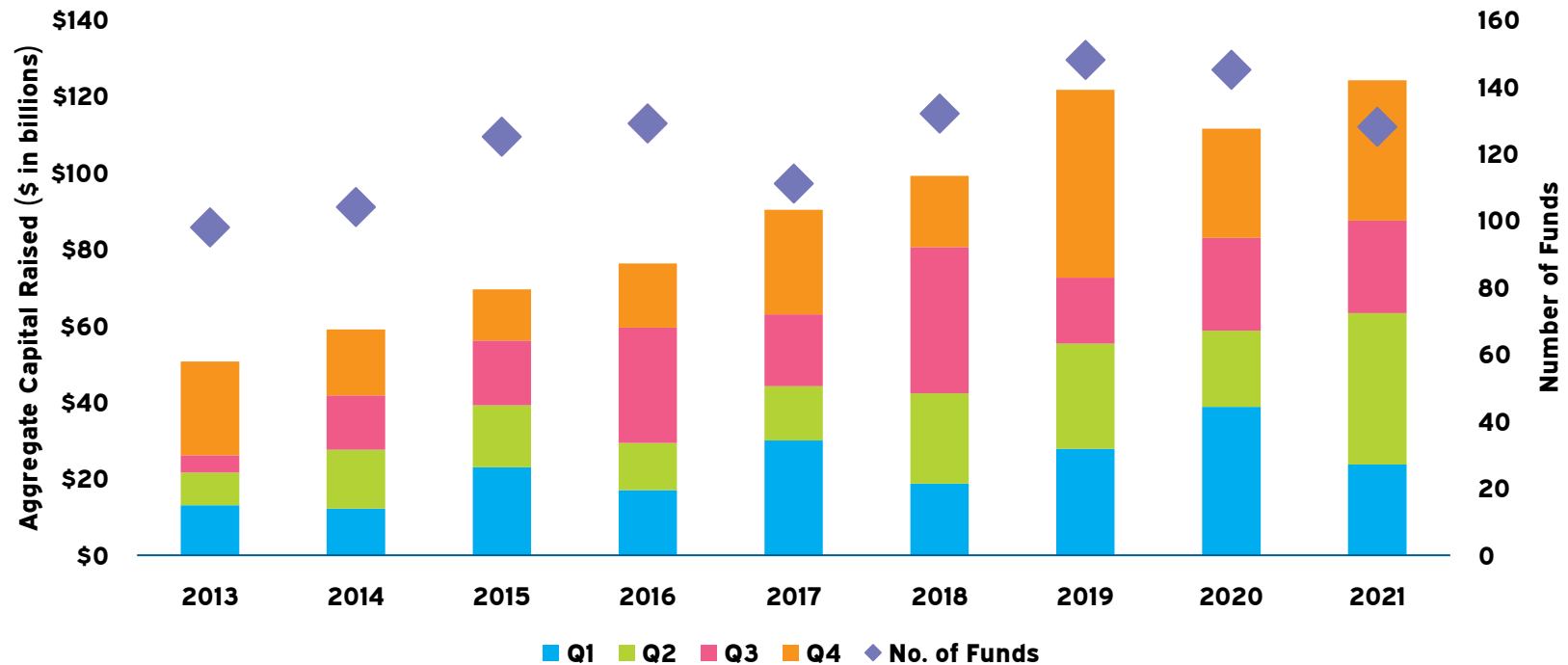
#### US South Timber Prices<sup>1</sup>



US South average timber prices for sawtimber and chip-n-saw have increased over 2021 after being flat for several years prior. Pulpwood has experienced more volatility since 2017 with significant increases over the past year. Hardwood pulpwood experienced a quarterly increase of 18% and was up 42% for the trailing one-year period. Pine pulpwood increased 6% during the fourth quarter and was up 24% over the past year. In 2021, the NCREIF Timberland index increase of 9.2% was driven by income returns of 3.4% and appreciation of 5.6%.

<sup>1</sup> Source: Bloomberg and TimberMart South.

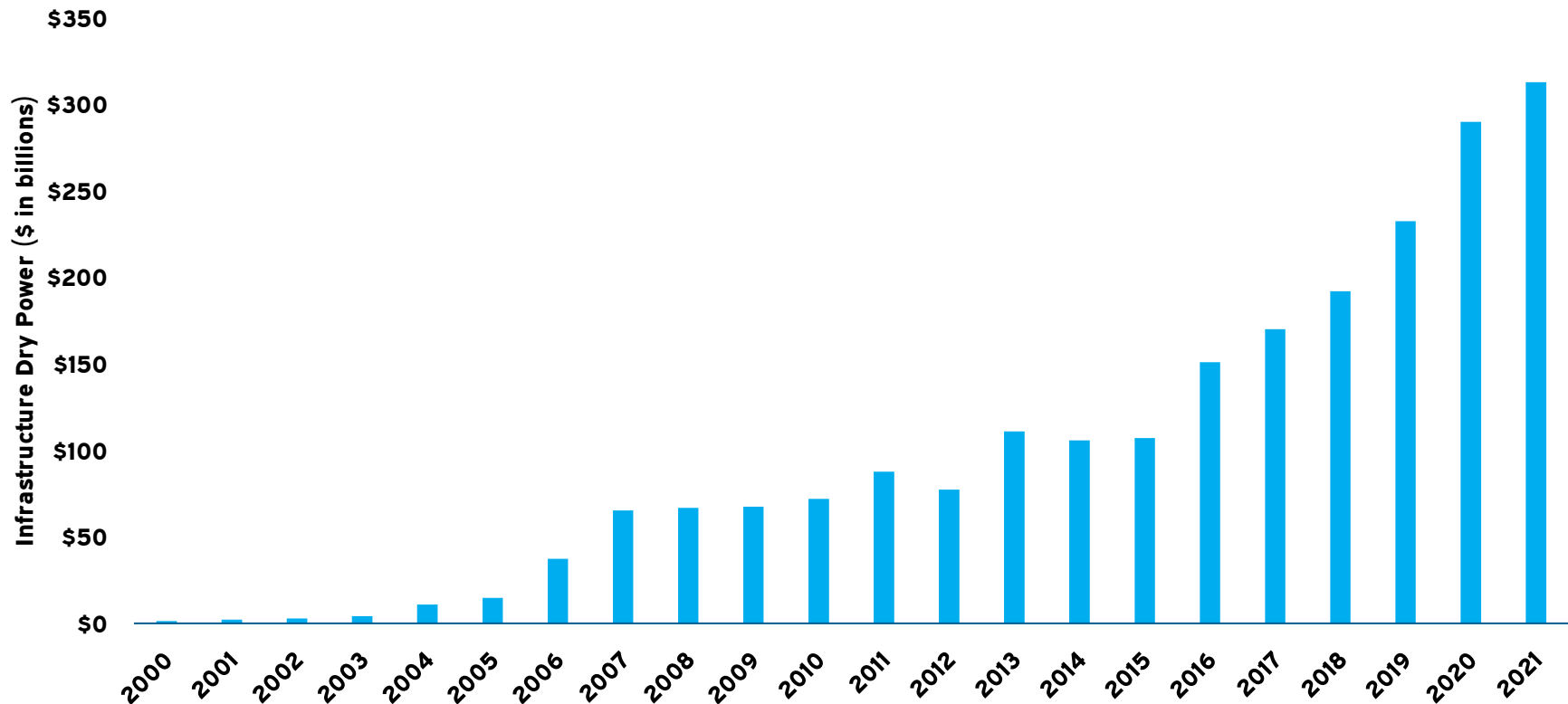
#### Global Quarterly Unlisted Infrastructure Fundraising<sup>1</sup>



Capital raised in the fourth quarter of 2021 increased compared to the prior quarter. The average fund raised in 2021 was \$1.0 billion, which is an increase over the 2020 average of \$0.8 billion.

<sup>1</sup> Source: Preqin 3Q 2021 Global Infrastructure Report.

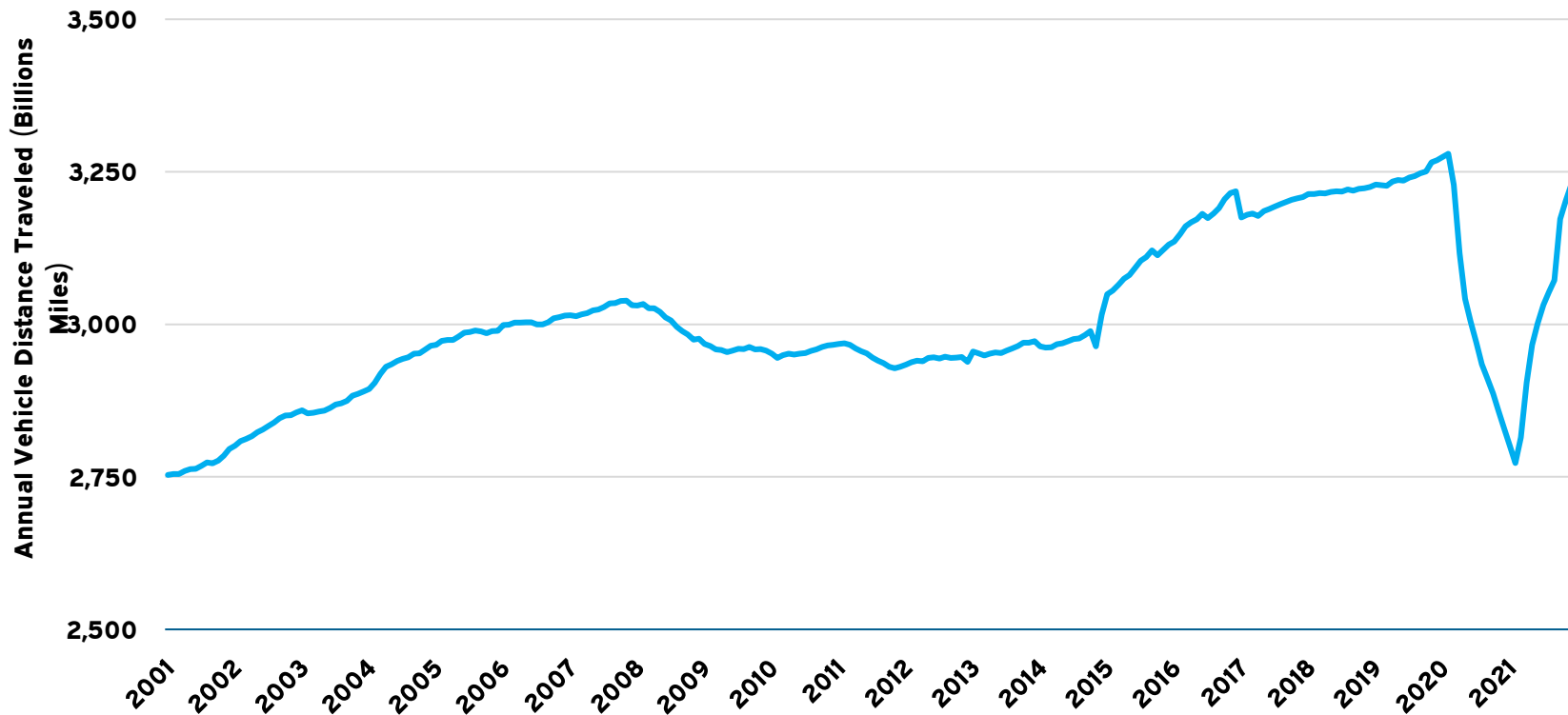
### Global Infrastructure Dry Power<sup>1</sup>



Infrastructure dry powder remains at an all time high, with every year since 2015 increasing year-over-year. The early days of the asset class are evident in the sub-\$50 billion levels until 2006, after which levels stayed between \$50 billion and \$100 billion until they reached \$150 billion in 2016. After that, the level began to climb to the over \$300 billion today.

<sup>1</sup> Source: Preqin 4Q 2021 Global Infrastructure Report.

#### Moving 12-month Total on All US Roads<sup>1</sup>

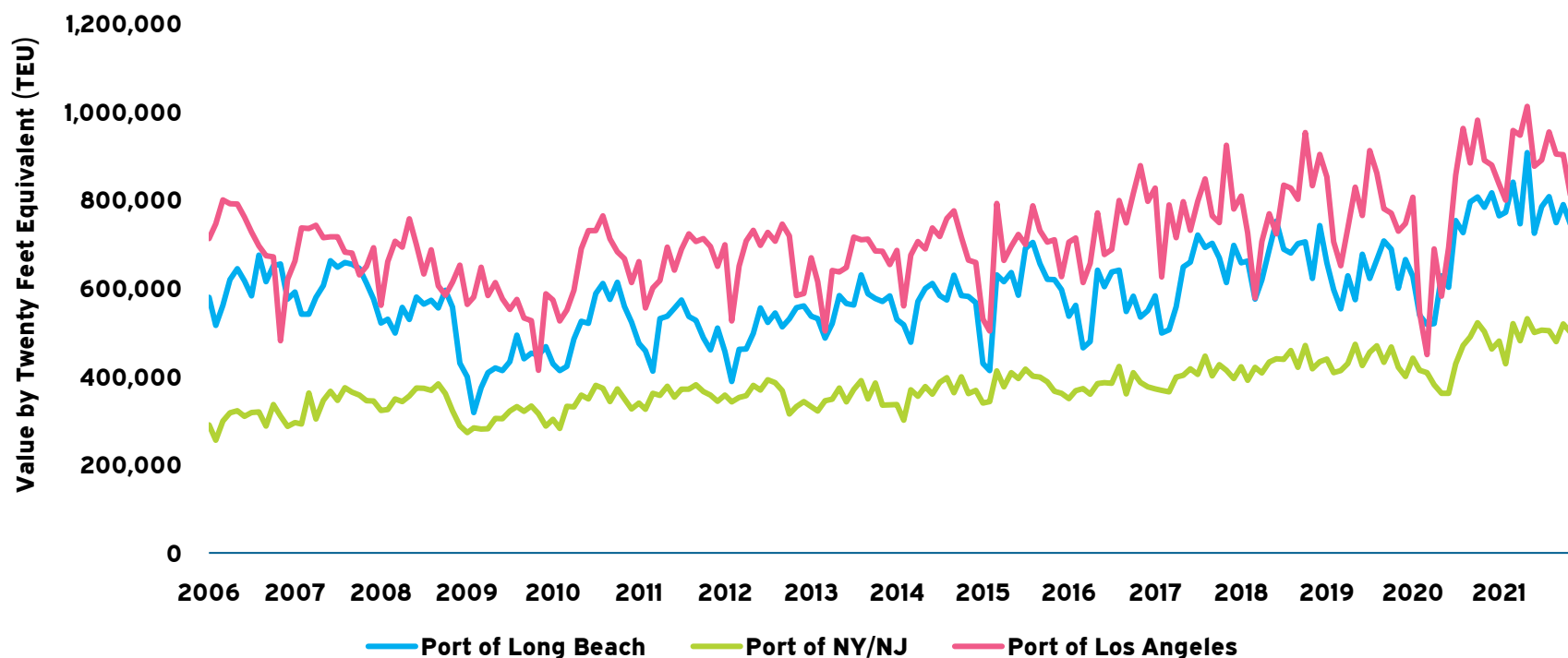


The fourth quarter continued to recovery in travel since the global pandemic with a total of approximately 822 billion miles. This represented an increase of 10% over the same period in 2020. The travel data is trending back to higher values, indicating a natural return to travel as COVID-19 restrictions loosened. The fourth quarter continued to show an increase in the US price of a gallon of gas, which steadily increased to finish the month at an average price of \$3.41 per gallon. This compares to \$2.26 per gallon average in 2020.

<sup>1</sup> Source: US Department of Transportation, Federal Highway Administration: Office of Highway Policy Information.



#### US Port Activity – Container Trade in TEUs<sup>1</sup>

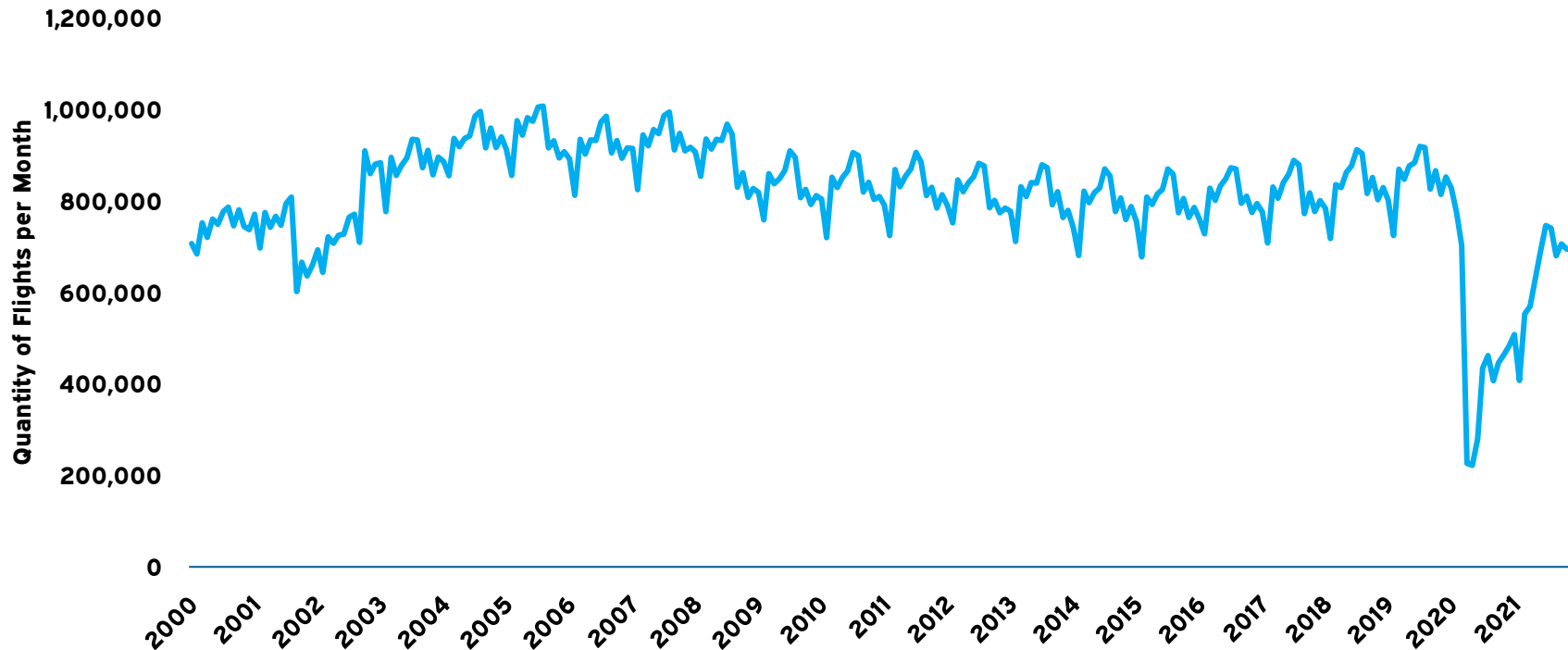


The chart presents the top three US ports by container volume, as measured by twenty-foot equivalent units (TEU). Activity at the three ports provides a high-level representation of the volume at US ports more broadly.

During the fourth quarter of 2021, volumes at the three ports decreased by 0.3 million units relative to the same period in 2020. On a year-over-year basis, the combined port volumes increased by 3.4 million TEU, or 15%, over the prior 12-month period. The Port of Long Beach recorded an increase of 16% (1.3 million TEU), the Port of NY/NJ reported an increase of 13% (0.7 million TEU) and the Port of Los Angeles recorded an increase of 16% (1.5 million TEU) over the prior 12 months.

<sup>1</sup> Source: [www.polb.com](http://www.polb.com), [www.panynj.gov](http://www.panynj.gov), and [www.portoflosangeles.org](http://www.portoflosangeles.org).

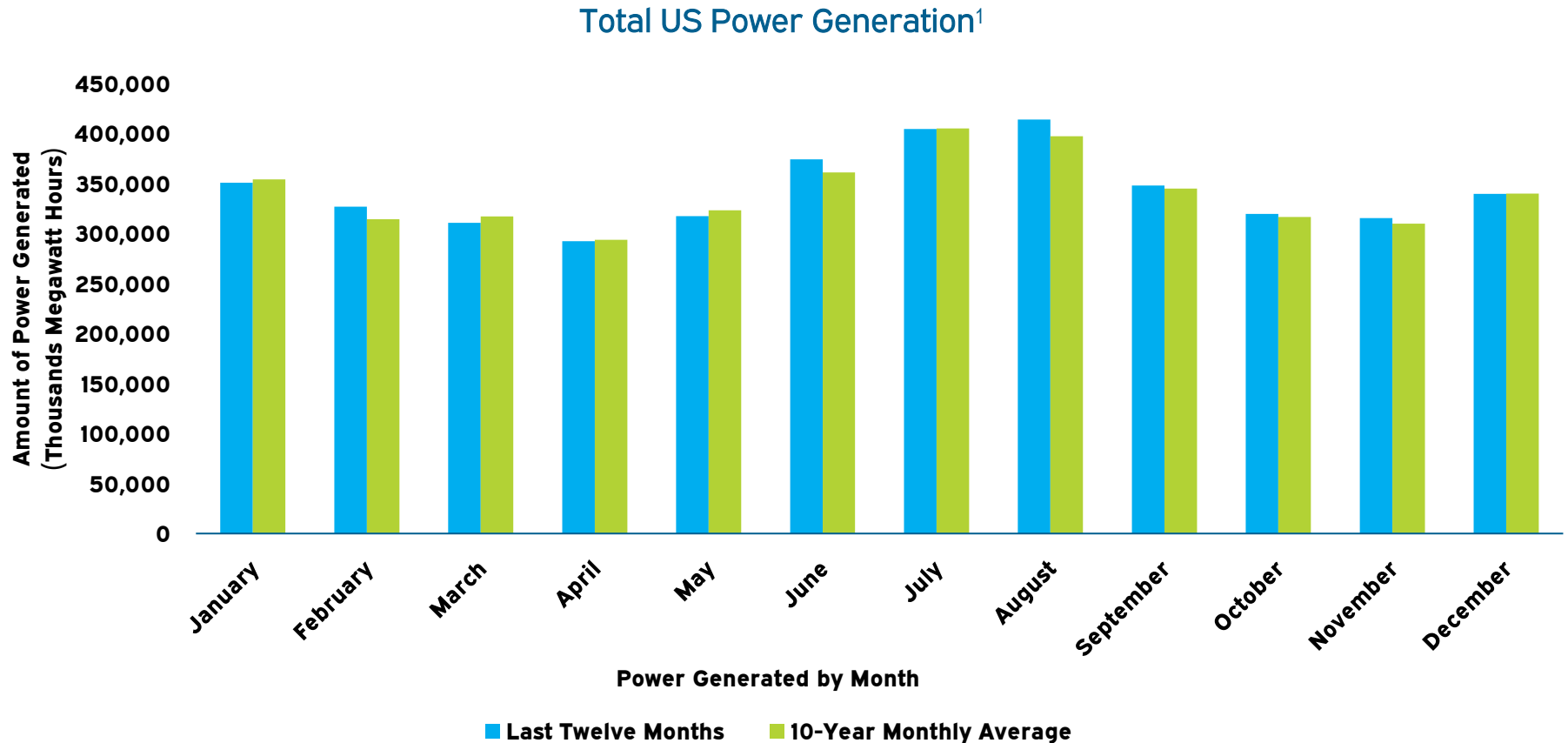
#### Total US Domestic and International Flights<sup>1</sup>



The chart above presents all US domestic and international flights, excluding foreign point-to-point flights by month. Historically, air traffic is cyclical with peaks in the summer months and troughs in the winter months.

There were 0.7 million more flights during the fourth quarter of 2021 over same period in 2020, representing a 50% increase. In 2021, Air traffic activity increased by 33.0% over 2020. In addition to the number of flights, the total number of passengers travelling on US and international airlines increased by 78% from 2020 to 2021.

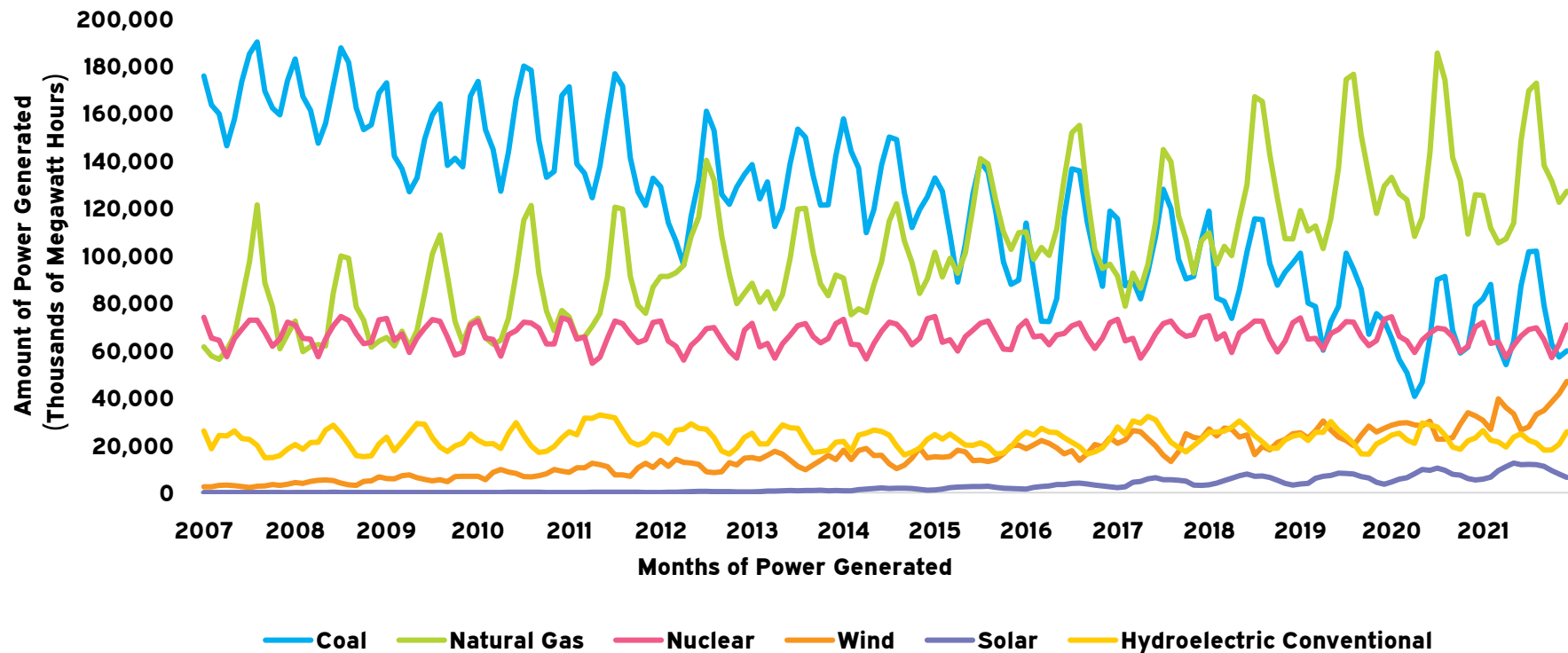
<sup>1</sup> Source: Bureau of Transportation Statistics: Flights, All US, and Foreign Carriers.



The graph above presents the total net generation for the past 12 months compared to the 10-year average for each month. Net energy generation in the US remained flat with a slight increase by 1.4% during the fourth quarter, compared to the same period in 2020.

<sup>1</sup> Source: US Energy Information Administration: Electric Power Monthly, December 2021.

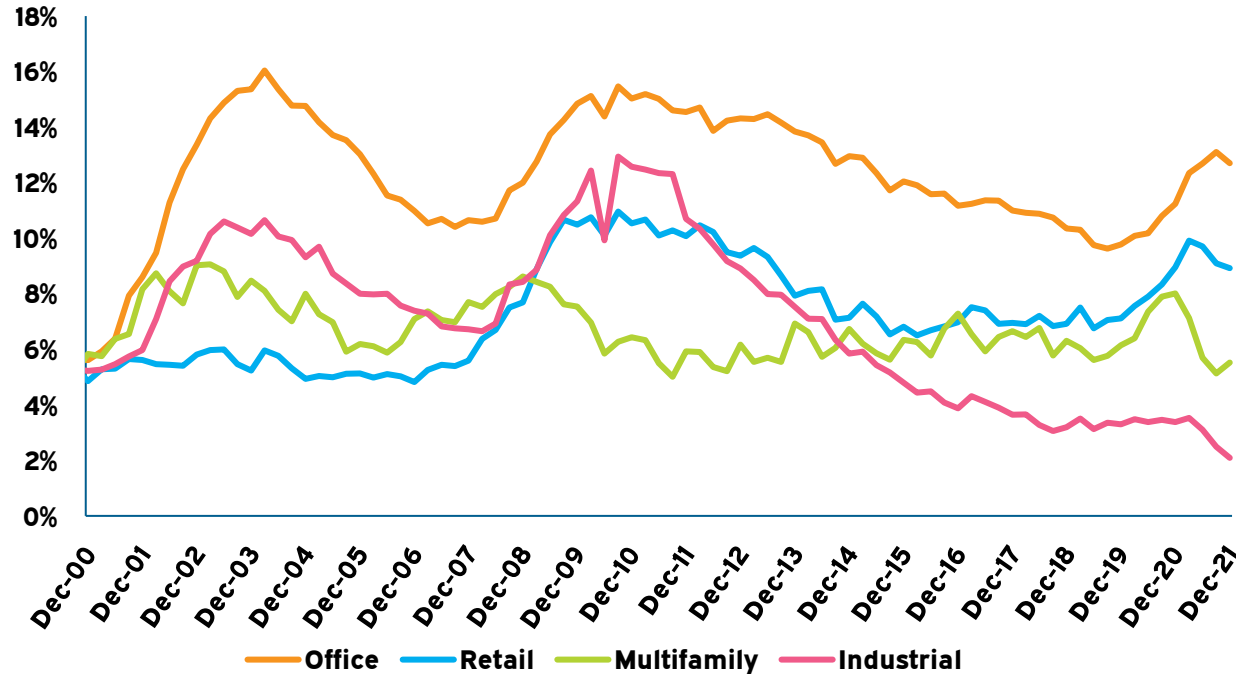
#### US Power Generation by Source<sup>1</sup>



In 2021, total US power generated increased by 3% over 2020 with the largest increase from coal, wind, and solar. Natural gas had the largest decrease at approximately 45,000 thousands of megawatt hours. Wind and utility-scale solar continue to make up a small portion of total net energy generation in the US, accounting for only 10% and 3% of energy generation, respectively. Natural gas, coal, and nuclear accounted for 38%, 22%, and 19%, respectively. However, the growth of wind and solar as sources of energy generation continues to increase at a faster rate than coal and natural gas, especially over the last couple of years.

<sup>1</sup> Source: US Energy Information Administration: Electric Power Monthly, December 2021.

#### Real Estate Fundamentals Vacancy by Property Type<sup>1</sup>



In the fourth quarter of 2021, vacancy rates continued to decrease for all property types except multifamily. Multifamily vacancies increased slightly by 39 basis points in Q4 2021. Industrial vacancies set a new all-time low at 2.1%. Retail vacancies have decreased slightly over the last three quarters and are currently at 8.9%. Office vacancies decreased in Q4 2021 to 12.7%. Office saw increases in vacancy over the trailing twelve months, while industrial and retail have seen decreases over the same period. Compared to one year ago, vacancy rates in multifamily decreased 249 basis points, industrial decreased 129 basis points, retail decreased 4 basis points, and office increased 146 basis points. Overall, the vacancy rate across all property types decreased 125 basis point from Q4 2020.

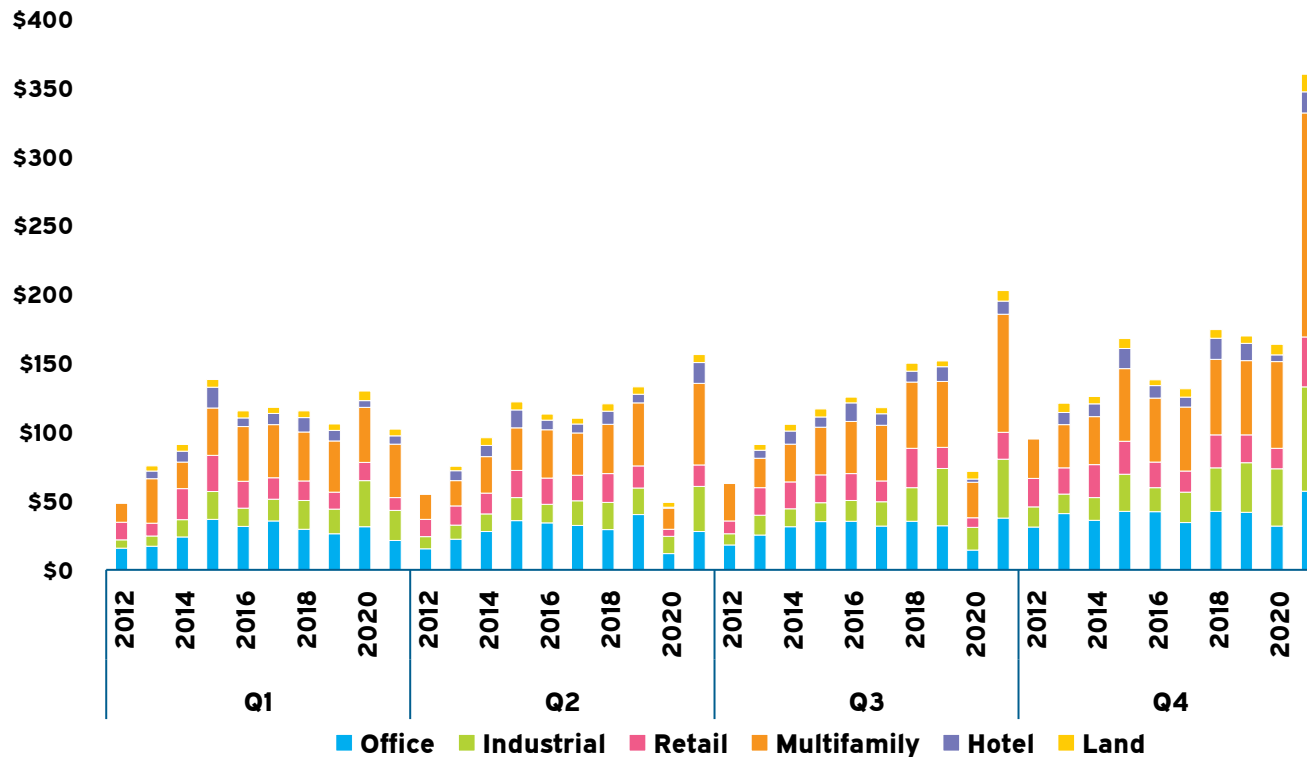
<sup>1</sup> Source: NCREIF



The trailing twelve-month rate of NOI growth continued to increase significantly in Q4 2021 to 12.4%. This growth rate was supported by improved rent collections and the expiry of pandemic-related delinquencies/deferrals. Industrial NOI growth is trending above 10.0% for the trailing year ending Q4 2021. Office NOI growth trended down slightly to 2.3% year-over-year, and Apartment NOI (a sector with “gross” rents, compared to “net” rents in other property types) experienced positive NOI growth at 24.8% year-over-year as occupancy levels improved. Retail NOI growth has improved significantly from the previous four quarters, now at 17.6% year-over-year.

<sup>1</sup> Source: NCREIF

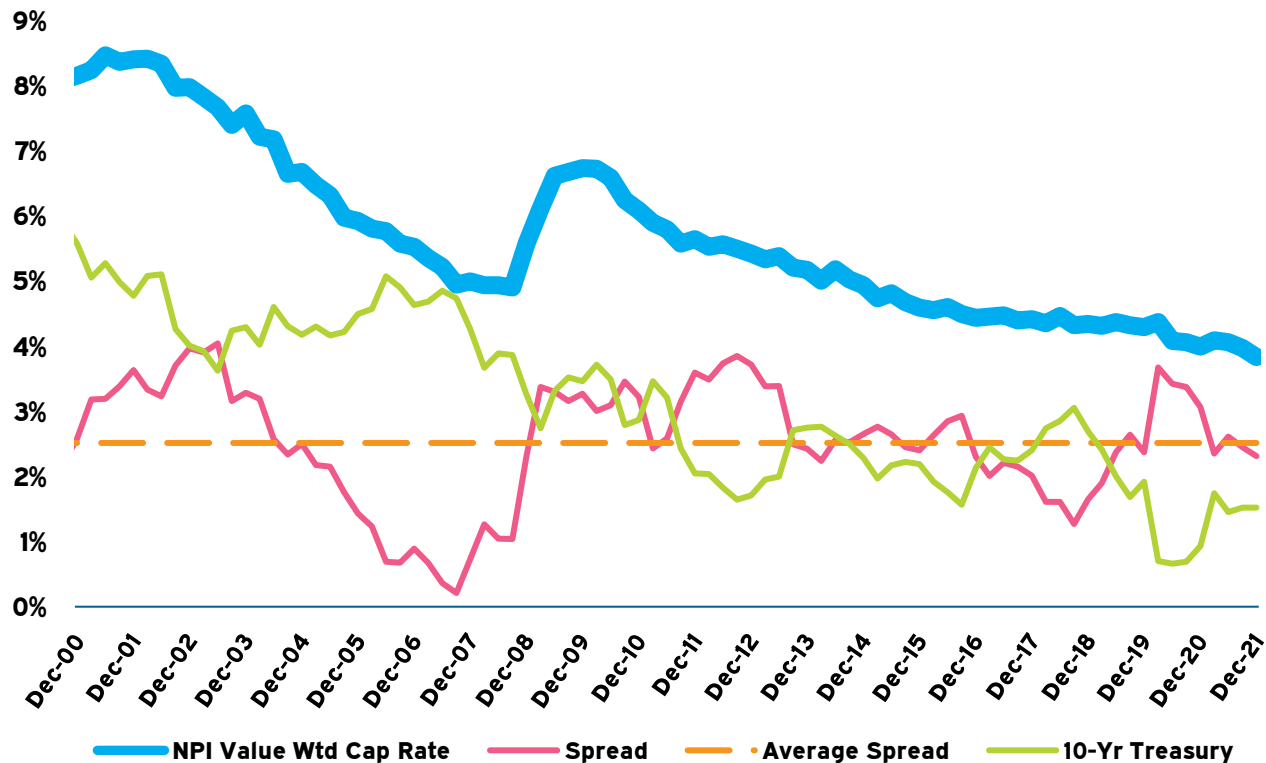
#### Transaction Volume (\$B)<sup>1</sup>



Private real estate transaction volume for properties valued over \$2.5 million for Q4 2021 was up significantly from Q4 2020 to \$360 billion, representing the highest transaction volume for a single quarter since 2012. Compared to a year ago, all property types saw major increases in transaction volume: office (+79%), industrial (+83%), retail (+142%), multifamily (+158%), hotel (+219%) and land (+68%). Multifamily and industrial properties made up the largest percentages of total transaction volume during the quarter, at 45% and 21%, respectively.

<sup>1</sup> Source: PREA

#### Real Estate Capital Markets Cap Rates vs. 10-Year Treasury<sup>1</sup>



The NPI Value Weighted Cap Rate decreased 14 basis points in Q4 2021 to 3.8%. The 10-year Treasury yield stayed the same in Q4 2021 from the previous quarter and is still well below historical yields. The spread between cap rates and treasury yields (231 basis points) is slightly below the long-term average spread of 251 basis points.

<sup>1</sup> Source: NCREIF and US Department of the Treasury



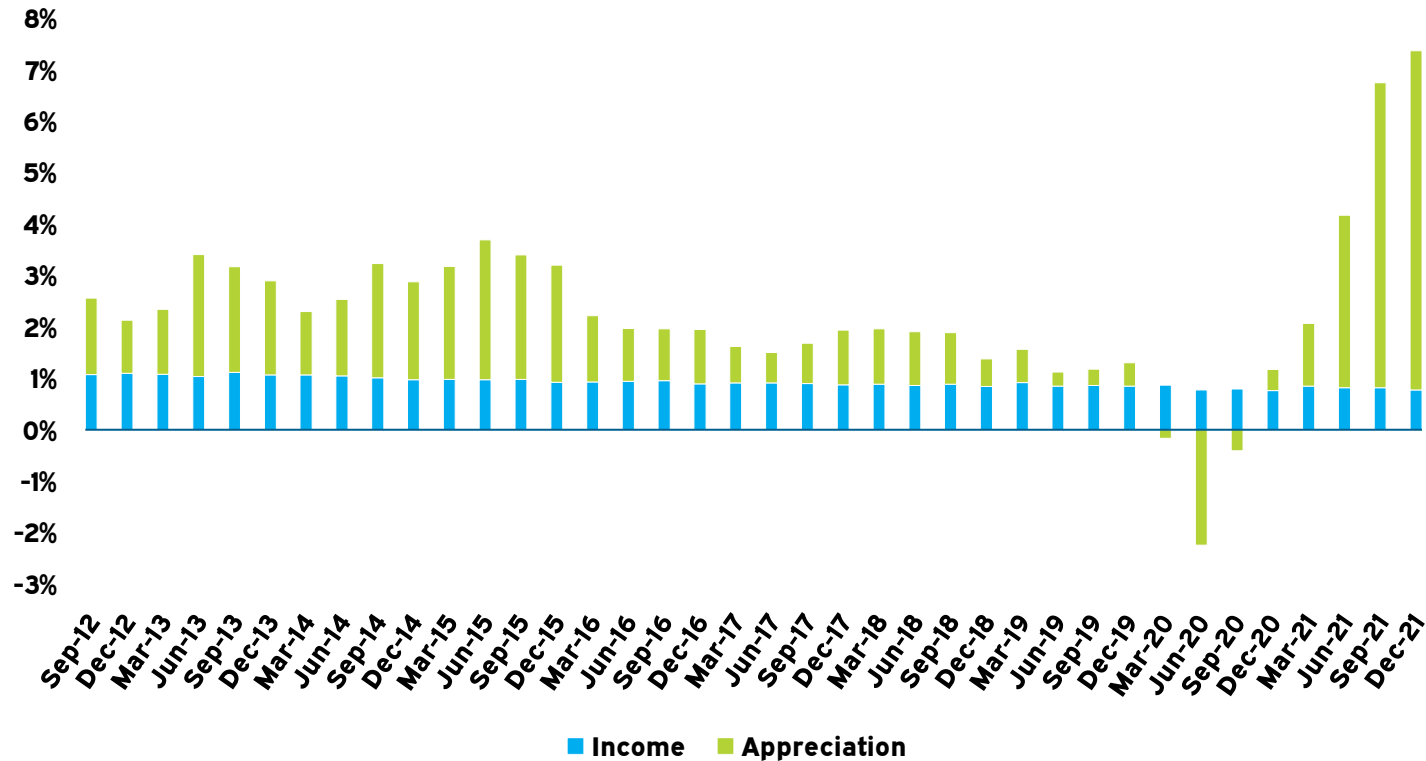
### Trailing Period Returns<sup>1</sup>

<i>As of December 31, 2021</i>	1 Year	3 Years	5 Years	10 Years
NFI-ODCE (EW, net)	21.9%	8.9%	8.1%	9.7%
NFI-ODCE (VW, net)	21.0	8.2	7.7	9.4
NCREIF Property Index	17.7	8.4	7.8	9.3
NAREIT Equity REIT Index	41.3	19.9	12.4	12.2

Private real estate indices were positive in Q4 2021 and continue to be positive over the 1-year, 3-year, 5-year, and 10-year time horizons. The NFI-ODCE Equal Weight Index posted the highest yearly return in history in 2021. Public real estate performance in 2020 and into 2021 has been volatile, returning 16.2% in Q4 2021, after posting a 0.2% return in the prior quarter and a negative return (-5.1%) over the course of 2020.

<sup>1</sup> Source: NCREIF

#### ODCE Return Components <sup>1</sup> (Equal Weight, Net)



The NFI-ODCE Equal Weight return for Q4 2021 was positive at 7.4%, posting the highest quarterly return in the history of the index. The income component of the quarterly return was consistent at 0.8%, and appreciation for the quarter was very strong at 6.6%.

<sup>1</sup> Source: NCREIF

Below are details on specific terminology and calculation methodologies used throughout this report:

<b>Committed</b>	The original commitment amount made to a given fund. Some funds may be denominated in non-USD currencies, and such commitment amounts represent the sum of fund contributions translated to USD at their daily conversion rates plus the unfunded balance translated at the rate as of the date of this report.
<b>Contributed</b>	The amount of capital called by a fund manager against the commitment amount. Contributions may be used for new or follow-on investments, fees, and expenses, as outlined in each fund's limited partnership agreement. Some capital distributions from funds may reduce contributed capital balances. Some funds may be denominated in non-USD currencies, and such aggregate contributions represent the sum of each fund contribution translated to USD at its daily conversion rate.
<b>Distributed</b>	The amount of capital returned from a fund manager for returns of invested capital, profits, interest, and other investment related income. Some distributions may be subject to re-investment, as outlined in each fund's limited partnership agreement. Some funds may be denominated in non-USD currencies, and such aggregate distributions represent the sum of each fund distribution translated to USD at its daily conversion rate.
<b>DPI</b>	Acronym for "Distributed-to-Paid-In", which is a performance measurement for Private Market investments. The performance calculation equals Distributed divided by Contributed. DPIs for funds and groupings of funds are net of all fund fees and expenses as reported to by fund managers to Meketa.
<b>Exposure</b>	Represents the sum of the investor's Unfunded and Remaining Value.
<b>IRR</b>	Acronym for "Internal Rate of Return", which is a performance measurement for Private Market investments. IRRs are calculated by Meketa based on daily cash flows and Remaining Values as of the date of this report. IRRs for funds and groupings of funds are net of all fund fees and expenses as reported by fund managers to Meketa.
<b>NCV</b>	Acronym for "Net Change in Value", which is a performance measurement for Private Market investments. The performance calculation equals the appreciation or depreciation over a time period neutralized for the impact of cash flows that occurred during the time period.
<b>NM</b>	Acronym for "Not Meaningful", which indicates that a performance calculation is based on data over too short a timeframe to yet be meaningful or not yet possible due to inadequate data. Meketa begins reporting IRR calculations for investments once they have reached more than two years since first capital call. NM is also used within this report in uncommon cases where the manager has reported a negative Remaining Value for an investment.

### Peer Universe

The performance for a set of comparable private market funds. The peer returns used in this report are based on data from Preqin as of the date of this report. Fund-level peer performance represents the median return for a set of funds of the same vintage and the program's set of corresponding strategies across all regions globally. Data sets that include less than five funds display performance as "NM". Meketa utilizes the following Preqin strategies for peer universes:

Infrastructure: Infrastructure

Natural Resources: Natural Resources

Private Debt: Private Debt

Private Equity (including Private Debt): Private Equity, Private Debt

Private Equity (excluding Private Debt): Private Equity

Real Assets (excluding Real Estate): Infrastructure, Natural Resources

Real Assets (including Real Estate): Infrastructure, Natural Resources, Real Estate

Real Estate: Real Estate

### Public Market Equivalent ("PME")

A calculation methodology that seeks to compare the performance of a portfolio of private market investments with public market indices. The figures presented in this report are based on the PME+ framework, which represents a net IRR value based on the actual timing and size of the private market program's daily cash flows and the daily appreciation or depreciation of an equivalent public market index. Meketa utilizes the following indices for private market program PME+ calculations:

Infrastructure: Dow Jones Brookfield Global Infrastructure Index

Natural Resources: S&P Global Natural Resources Index

Private Debt: Barclays Capital U.S. Corporate High Yield Bond Index

Private Equity: MSCI ACWI Investable Market Index

Real Assets (excluding Real Estate): Equal blend of Dow Jones Brookfield Global Infrastructure Index and S&P Global Natural Resources Index

Real Assets (including Real Estate): Equal blend of Dow Jones Brookfield Global Infrastructure Index, S&P Global Natural Resources Index, and Dow Jones U.S. Select Real Estate Securities Index

Real Estate: Dow Jones U.S. Select Real Estate Securities Index

Remaining Value	The investor’s value as reported by a fund manager on the investor’s capital account statement. All investor values in this report are as of the date of this report, unless otherwise noted. Some funds may be denominated in non-USD currencies, and such remaining values represent the fund’s local currency value translated to USD at the rate as of the date of this report.
TVPI	Acronym for “Total Value-to-Paid-In”, which is a performance measurement for Private Market investments. The performance calculations represents Distributed plus Remaining Value, then divided by Contributed. TVPIs for funds and groupings of funds are net of all fund fees and expenses as reported to by fund managers to Meketa.
Unfunded	The remaining balance of capital that a fund manager has yet to call against a commitment amount. Meketa updates unfunded balances for funds to reflect all information provided by fund managers provided in their cash flow notices. Some funds may be denominated in non-USD currencies, and such unfunded balances represent the fund’s local currency unfunded balance translated to USD at the rate as of the date of this report.

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Meketa Investment Group has prepared this report on the basis of sources believed to be reliable. The data are based on matters as they are known as of the date of preparation of the report, and not as of any future date, and will not be updated or otherwise revised to reflect information that subsequently becomes available.

If we manage your assets on a discretionary basis, please contact us if there are any changes in your financial situation or investment objectives, or if you want to impose any reasonable restrictions on our management of your account or reasonably modify existing restrictions.

In general, the valuation numbers presented in this report are prepared by the custodian bank for listed securities, and by the fund manager or appropriate General Partner in the case of unlisted securities. The data used in the market comparison sections of this report are sourced from various databases. These data are continuously updated and are subject to change.

This report does not contain all the information necessary to fully evaluate the potential risks of any of the investments described herein. Because of inherent uncertainties involved in the valuations of investments that are not publicly traded, any estimated fair values shown in this report may differ significantly from the values that would have been used had a ready market for the underlying securities existed, and the differences could be material.

This document may contain certain forward-looking statements, forecasts, estimates, projections, and opinions ("Forward Statements"). No representation is made or will be made that any Forward Statements will be achieved or will prove to be correct. A number of factors, in addition to any risk factors stated in this material, could cause actual future results to vary materially from the Forward Statements. No representation is given that the assumptions disclosed in this document upon which Forward Statements may be based are reasonable. There can be no assurance that the investment strategy or objective of any fund or investment will be achieved, or that the client will receive a return of the amount invested.

In some cases Meketa Investment Group assists the client in handling capital calls or asset transfers among investment managers. In these cases we do not make any representations as to the managers' use of the funds, but do confirm that the capital called or transferred is within the amounts authorized by the client.

Because there is no readily accessible market for private markets assets (companies and partnerships), the values placed on private markets assets are calculated by General Partners using conservative and industry standard pricing procedures. Annually, an independent auditor reviews the pricing procedures employed by the General Partner of each partnership.

The values of companies and partnerships are audited at year-end, and are not audited at other quarter-end periods. While financial information may be audited, there is some discretion as to the method employed to price private companies and, therefore, private markets partnerships. At all times, Meketa Investment Group expects General Partners to utilize conservative and industry standard pricing procedures, and requires the General Partners to disclose those procedures in their reports. However, because of the inherent uncertainty of valuation, these estimated values may differ from the values that would be used if a ready market for the investments existed, and the differences could be significant.