

Investment Section

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Report on Investment Activity

May 27, 2021

Board of Trustees
Texas Municipal Retirement System
P.O. Box 149153
Austin, Texas 78714-9153



Dear Trustees,

This letter reports the investment results for the Texas Municipal Retirement System ("TMRS") for the fiscal year ended December 31, 2020.

As of December 31, 2020, the market value of TMRS' investments was \$34.52 billion¹. TMRS' net of fees investment return for the fiscal year was 7.65%¹. For the five- and ten-year periods ended December 30, 2020, TMRS' annualized net of fees return were 7.99% and 6.74%, respectively¹. Investment results were primarily driven by TMRS' asset allocation, which is characterized by a diversified approach that seeks to achieve the 6.75% assumed actuarial rate of return with a low level of risk.

At year-end 2020, all asset classes were within their target allocation ranges as outlined within TMRS' Investment Policy Statement except for Private Equity, which was 0.5% below the minimum allocation of 5%¹. TMRS Staff estimates reaching the targeted 10% allocation to Private Equity by 2026.

2020 was historic, both for markets and for the world at large. The disease caused by the COVID-19 virus infected millions and led to hundreds of thousands of fatalities in the U.S. alone. This led to a sudden slowdown in global economic activity with widespread lockdowns to stem exposure and spread of the virus. During the first quarter of 2020, the S&P 500 Index fell from an all-time high with the fastest 20% sell-off in the history of the Index.

In an effort to limit the negative impact of the pandemic on U.S. financial markets, the Federal Reserve's Open Market Committee lowered the federal funds rate twice over the course of the fiscal year and announced open-ended quantitative easing alongside a host of other liquidity enhancing programs. Central banks outside of the U.S. also adopted many accommodative policies. Meanwhile, the U.S. Federal government passed the Coronavirus Aid, Relief, and Economic Securities (CARES) Act in March 2020, which provided \$2.3 trillion in fiscal stimulus.

These fiscal relief and liquidity reinforcing programs helped many markets rebound significantly during the second half of the year. Global public equity markets led the way, with major U.S. equity and emerging market indices experiencing double digit returns. U.S. equity markets, as measured by the S&P 500 Index, returned 18.40% in 2020. Developed international equity markets, as measured by the MSCI EAFE Index, returned 7.82% in 2020 while emerging markets, as measured by the MSCI EM Index, gained 18.31%.

¹ As reported by State Street Bank & Trust.

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Report on Investment Activity

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The interest rate cuts early in the year combined with record fiscal and monetary stimulus provided strong support for U.S. bond markets as the Bloomberg U.S. Aggregate Bond Index returned 7.51%.

TMRS' investment policies, goals, and objectives, as well as the performance of its assets and transaction costs are regularly monitored by Staff, the Board, and by RVK. These evaluations include analysis of the investment management firms and the custodial bank that serve TMRS. The Investments section of TMRS' website (www.TMRS.com) links to the quarterly investment reports which RVK prepares and presents to the Board. The Investment section also includes the Board's Investment Policy Statement, a review of the Board-approved asset allocation and the Evaluation of Investment Practices dated May 2020 pursuant to Texas Government Code 802.109.

We look forward to continuing to work with the Board and Staff to monitor, review, and best position TMRS' portfolio to meet its long-term goals and objective.

Sincerely,

A handwritten signature in blue ink, appearing to read "Rebecca Gratsinger". The signature is fluid and cursive, with a large initial "R" and "G".

Rebecca Gratsinger
Chief Executive Officer
RVK, Inc.

Chief Investment Officer's Year in Review



To: The Trustees, Members, Retirees, Beneficiaries and Participating Cities of the
Texas Municipal Retirement System

2020 investment markets were extremely volatile and highlighted by two very different investment environments. During the first quarter, the equity markets sold off sharply in response to the global economic impact caused by the COVID pandemic. Two of the largest declines in the history of the S&P 500 index occurred in March, and the index finished down about 20% for the quarter. Because one of our goals is to protect TMRS Trust Fund assets in down markets, the portfolio held up well in the first quarter, on a relative basis, outperforming the median public pension plan by almost 5%.

The last nine months of the year were the exact opposite. With massive global fiscal and monetary support given to the world's economies, the markets rebounded with the S&P 500 ending the year up about 18% and at a record high. As expected, the portfolio's return trailed the median pension plan during this high-risk environment.

For 2020, the Trust Fund returned 7.65%, net of fees, and averaged 7.99% annually, net of fees, over the last five years, exceeding TMRS' 6.75% actuarial return assumption. Trust Fund investments totaled \$34.5 billion at December 31, 2020.

In 2020, the Trust Fund's Global Public Equities portfolio returned 14.46%, and Core Fixed Income, Absolute Return Strategies and Private Equity performed well, returning 8.45%, 10.58% and 26.37%, respectively. Real Estate, Real Return and Non-Core Fixed income returned -2.96%, 3.26% and 4.42%, respectively.

The TMRS Total Fund return and all asset class returns for the year ended December 31, 2020 reflect actual year-end results. Detailed performance and asset allocation reports prepared by RVK, the Board's independent investment consultant, are available on the TMRS web site.

At year-end 2020, all Trust Fund asset classes were at or near their target allocation except for Private Equity. Effective January 1, 2020, the Private Equity target allocation was increased from 5% of the portfolio to 10%, and it will take several years to reach this new target.

Sincerely,

A handwritten signature in blue ink, appearing to read "TJ Carlson", with a long horizontal flourish extending to the right.

TJ Carlson
Chief Investment Officer

May 24, 2021

Outline of Investment Policies

The TMRS Board of Trustees (Board) approves the Investment Policy Statement (IPS), which governs the investment of assets for TMRS and is established to provide a framework for the management of those assets. The IPS outlines objectives, benchmarks, restrictions and responsibilities so that the Board, TMRS staff, investment managers, consultants and TMRS stakeholders clearly understand the policies, goals and objectives connected with the TMRS investment program.

Investment Objectives

The overall objective of TMRS' investment program is to ensure that Members, retirees and beneficiaries are provided with their expected pension benefits at a reasonable and predictable cost to participating cities. Assets will be invested for total return with appropriate consideration for portfolio volatility (risk) and liquidity. Emphasis is on both capital appreciation and the production of income, in order to satisfy the short-term and long-term funding needs of TMRS. Total return includes dividends, interest and realized and unrealized capital appreciation.

General Investment Policies

A. Standard of Prudence Applicable. The standard of prudence to be applied by the Board and investment staff is as follows:

1. The Board, the Executive Director and investment staff shall exercise the degree of judgment and care, under the circumstances that persons of prudence, discretion and intelligence exercise in the management of their own affairs, considering the probable income from the securities and probable safety of their capital.
2. Investment and management decisions respecting individual assets will be evaluated, not in isolation, but in the context of the investment portfolio as a whole and as a part of an overall investment strategy having risk and return objectives reasonably suited to TMRS.

B. Conflict of Interest Prohibited. The Board, Executive Director, investment staff, investment managers and consultants involved in the investment of TMRS assets will refrain from any activity that could conflict with the proper execution and management of the TMRS investment program, or that could impair their ability to make impartial recommendations and decisions. These parties are required to disclose, in writing, all relationships that could create, or appear to create, a conflict of interest in their unbiased involvement in the investment process.

Portfolio Management

The Board recognizes that the most important determinant of long-term return and risk is the asset allocation decision. The Board's strategic target allocation is intended to reflect, and be consistent with, the return objective expressed in the IPS. The asset allocation is designed to meet or exceed the Board's objectives at a controlled level of risk and liquidity acceptable to the Board. In establishing the asset allocation, the Board has considered TMRS' ability to withstand both the long-term risk in investment performance and fluctuations in the financial condition of the fund.

Outline of Investment Policies

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The strategic target allocation and acceptable ranges as determined by the Board to facilitate the achievement of long-term investment objectives within acceptable risk parameters are as follows:

Table I-1

Strategic Target Allocation			
Asset Class	Minimum %	Target %	Maximum %
Core fixed income	5%	10%	15%
Non-core fixed income	15%	20%	25%
Global public equity	20%	30%	40%
Real estate	5%	10%	15%
Real return	5%	10%	15%
Absolute return	5%	10%	15%
Private equity	5%	10%	15%
Cash equivalents	0%	0%	10%

To ensure that risk remains appropriate, the strategic target allocation will be reviewed at least annually for reasonableness relative to significant economic and market changes or to changes in the Board's long-term goals and objectives. A formal asset allocation study will be conducted at least every three years to verify or amend the targets, and a formal asset-liability study will be conducted at least every six years.

During 2020, TMRS decreased its strategic target allocation to global public equity by 5% and increased its strategic target allocation to private equity by 5%.

The Board has chosen to adopt a rebalancing policy that is governed by allocation ranges rather than time periods. The ranges, specified in the table above, are a function of the volatility of each asset class and the proportion of the total fund allocated to the asset class. The goal of the rebalancing policy is to ensure that the integrity of the strategic target allocation is preserved through a disciplined process that allows investment staff the flexibility to rebalance the portfolio between managers within an asset class and between asset classes, within the Board-approved ranges, to adjust for market movements and consider current market conditions, or valuations, in portfolio allocations.

In February 2020, the Board adopted amendments to the IPS to delegate limited authority to the Chief Investment Officer, through the Executive Director, to retain and terminate investment managers within each asset class.

Performance measurement will be based on total rate of return and will be monitored over a sufficient time period to reflect the investment expertise of the manager(s) over one full market cycle, or five years, whichever is less. Performance results and evaluation relative to objectives will be reported to the Board on a quarterly basis. Specific total portfolio performance objectives include, but may not be limited to, the following:

- Achieve a total rate of return over rolling 5-year periods that meets or exceeds the actuarial return assumption.
- Exceed an appropriate benchmark reflective of asset class participation over rolling 5-year periods (i.e., the actual allocation index during the implementation period and policy index once fully implemented).

Outline of Investment Policies

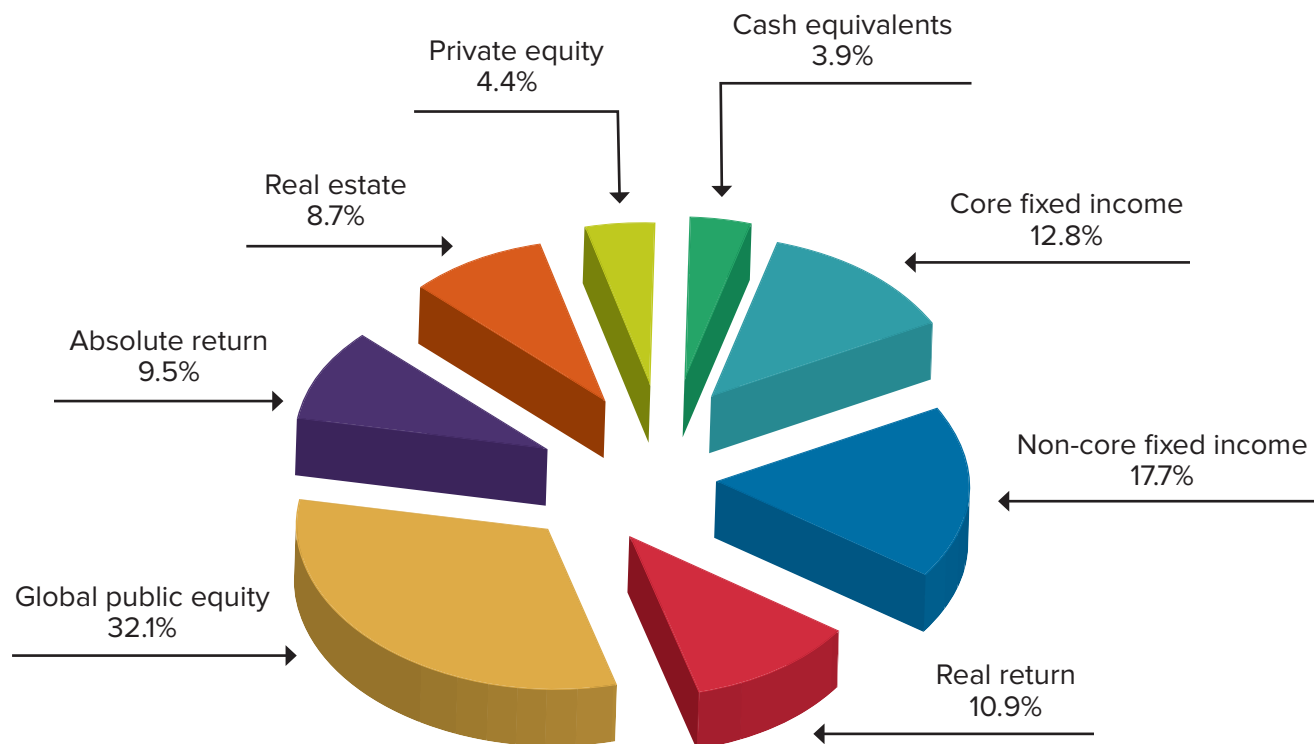
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Based on recommendations by investment staff and the Board's consultant, the Board selected the following policy benchmarks and indices, by asset class:

Table I-2

Asset Class Policy Benchmarks			
Asset Class	Policy Benchmark	Asset Class Goal	Policy Index
Core fixed income	Bloomberg Barclays US Aggregate Bond Index	Benchmark	10%
Non-core fixed income	Rollup of underlying manager benchmarks	50% Bank of America Merrill Lynch US High Yield Constrained Index; 50% Credit Suisse Levered Loan Index	20%
Global public equity	MSCI ACWI IMI, Net	Benchmark	30%
Real estate	NCREF – ODCE Index	CPI + 5%	10%
Real return	Rollup of underlying manager benchmarks	CPI + 4%	10%
Absolute return	HFRI Fund of Funds: Diversified Index	Cash (3-month LIBOR) + 4%	10%
Private equity	Rollup of underlying manager benchmarks	Russell 3000 + 3%	10%
Cash equivalents	30 Day T-Bill	Benchmark	0%

Asset Allocation as of December 31, 2020



Investments Summary

Table I-3

Investments Summary As of December 31, 2020		
	Fair Value	Percent of Total Fair Value
Core fixed income		
Short term investments	\$ 458,066,226	1.3 %
Fixed income securities	3,966,620,617	11.5
Total core fixed income	4,424,686,843	12.8
Non-core fixed income		
Short term investments	37,497,722	0.1
Fixed income securities	1,311,839,282	3.8
Non-core fixed income funds	4,747,661,737	13.8
Total non-core fixed income	6,096,998,741	17.7
Global public equity		
Short term investments	68,395,588	0.2
Domestic public equity securities	1,097,766,599	3.2
International public equity securities	1,143,366,255	3.3
REITS	36,142,774	0.1
Commingled public equity funds	8,731,471,265	25.3
Total global public equity	11,077,142,481	32.1
Real estate		
Private real estate funds	3,017,043,280	8.7
Total real estate	3,017,043,280	8.7
Real return		
Short term investments	21,935,894	0.1
Fixed income securities	873,510,316	2.5
Domestic public equity securities	190,827,348	0.6
International public equity securities	182,342,565	0.5
REITS	289,123,157	0.8
Real return funds	2,221,319,526	6.4
Total real return	3,779,058,806	10.9
Absolute return		
Direct hedge funds	3,259,644,804	9.5
Hedge fund of funds	7,643,957	—
Total absolute return	3,267,288,761	9.5
Private equity		
Private equity funds	1,523,504,987	4.4
Total private equity	1,523,504,987	4.4
Cash equivalents		
Short term investments	1,336,625,802	3.9
Total cash equivalents	1,336,625,802	3.9
TOTAL INVESTMENTS	\$ 34,522,349,701	100.0 %
Other investment-related items		
Custodial cash	2,867,326	
Interest and dividends receivable	40,576,338	
Unsettled trades receivable	663,881,243	
Management fees payable	(8,273,779)	
Unsettled trades payable	(1,044,469,796)	
NET ASSETS UNDER MANAGEMENT	\$ 34,176,931,033	

Largest Holdings (by Fair Value)

Table I-4

Largest Holdings – Fixed Income Securities As of December 31, 2020		
Par Value	Description	Fair Value
\$ 143,320,000	US Treasury N/B: 0.125%, due 6/30/22	\$ 143,353,591
125,855,000	US Treasury N/B: 0.125%; due 5/31/22	125,889,414
88,471,000	US Treasury N/B: 0.25%; due 6/30/25	88,253,278
78,115,000	US Treasury N/B: 0.125%; due 7/31/22	78,133,309
47,014,731	Treasury Inflation Linked GILT: 1.875%, due 11/22/22	70,428,833
68,930,000	US Treasury N/B: 0.125%, due 8/31/22	68,940,770
57,866,000	FNMA TBA 30 YR 2.5: 2.5%; due 3/11/51	60,815,863
41,381,233	US Treasury Inflation Index: 3.875%, due 4/15/29	59,663,996
61,760,000	US Treasury N/B: 1.125%, due 8/15/40	58,488,650
60,250,000	US Treasury N/B: .375%, due 8/15/50	56,442,012

Table I-5

Largest Holdings – Public Equities As of December 31, 2020		
Shares/Units	Description	Fair Value
79,337,483.100	NTGI - QM Collective Daily	\$ 4,649,097,172
13,316,936.360	NTGI - QM Collective Daily All Country World Ex-US IMI Index-Fund - Non Lending	2,520,323,425
4,361,689.610	UBS US Equity Minimum Volatility Index Collective Fund	1,208,929,072
1,993,399.750	UBS World (Ex-U.S.) Equity Minimum Volatility Index Collective Fund	353,121,596
643,100.000	Tencent Holdings Ltd	46,777,846
421,860.000	Samsung Electronics Co Ltd	31,456,007
247,171.000	Taiwan Semiconductor SP ADR	26,951,526
99,320.000	Alibaba Group Holdings SP ADR	23,114,744
725,305.000	Mediatek Inc	19,282,612
585,680.000	Alibaba Group Holdings Ltd	17,569,229

Note: Space and cost restrictions make it impractical to print a detailed listing of the investment portfolio in this Report; however, a portfolio listing is available and will be mailed upon request.

2020 Investment Results

Total fund and asset class returns for the year ended December 31, 2020 are set out below. These returns reflect actual year-end results. Certain private investments in prior Comprehensive Annual Financial Reports had “lagged” returns that reflected valuations one-month or one-quarter prior to December 31.

Table I-6

Total Fund and Asset Class Returns				
	1 Year	3 Years	5 Years	10 Years
Total fund	7.65%	6.46%	7.99%	6.74%
Total fund active weighted benchmark	7.38	6.09	7.63	6.45
Core fixed income	8.45	5.77	4.80	4.09
Core fixed income benchmark	7.51	5.34	4.44	3.84
Non-core fixed income	4.42	5.23	6.31	N/A
Non-core fixed income benchmark	3.16	4.34	5.07	N/A
Global public equity	14.46	9.09	11.98	9.57
Global public equity benchmark	16.25	9.88	12.47	9.77
Real estate	-2.96	4.44	6.76	N/A
Real estate benchmark	1.39	5.17	6.61	N/A
Real return	3.26	4.13	5.61	N/A
Real return benchmark	2.26	3.32	5.33	N/A
Absolute return	10.58	6.13	6.04	N/A
Absolute return benchmark	8.25	4.01	3.52	N/A
Private equity	26.37	20.43	14.58	N/A
Private equity benchmark	16.23	18.95	13.76	N/A
Cash equivalents	0.41	1.45	1.13	0.69
Cash equivalents benchmark	0.45	1.49	1.09	0.56

Notes: N/A means TMRS was not invested in the asset class for ten years.

Rates of return presented for all available time periods are calculated using a time-weighted rate of return methodology based on December 31, 2020 fair values. Returns are presented net of external investment management fees.

Total fund active weighted benchmark return is the weighted-average balance of all funds and comprises asset class composite benchmarks associated with each fund. The benchmark return for the asset classes noted below reflects a lag of one-month or one-quarter because they were not available in time for this Report.

Core fixed income benchmark return is the Bloomberg Barclays Capital US Aggregate Bond Index.

Non-core fixed income benchmark return is a weighted-average rollup of the underlying manager benchmarks and reflects a lag of one-month or one-quarter.

Global public equity benchmark return is the MSCI ACWI Investable Market Index (IMI), Net.

Real estate benchmark return is the National Council of Real Estate Fiduciaries – Open-End Diversified Core Equity Index (NCREF–ODCE) and reflects a lag of one-month or one-quarter.

Real return benchmark return is a weighted-average rollup of the underlying manager benchmarks and reflects a lag of one-month or one-quarter.

Absolute return benchmark return is the HFRI Fund of Funds Diversified Index and reflects a lag of one-month.

Private equity benchmark return is a weighted-average rollup of the underlying manager benchmarks and reflects a lag of one-quarter.

Cash equivalent benchmark return is the FTSE 1 Month US T-Bill Index.

Investment Expenses

Table I-7

Schedule of Investment Expenses	
For the Year Ended December 31, 2020	
Internal operating expenses	
Staff salaries and benefits	\$ 4,645,216
Payroll taxes	224,156
Online investment services	1,501,806
Travel	39,692
Dues, subscriptions and training	95,657
Other administrative expenses	2,884
Total	6,509,411
Investment management and other external expenses	
Investment management fees	30,103,591
Investment transaction costs	2,530,011
Custodial services	2,027,596
Consulting	1,705,784
Legal	772,837
Total	37,139,819
Total investment expenses	\$ 43,649,230

Table I-8

Schedule of External Investment Fees						
For the Year Ended December 31, 2020						
Asset Class	Management Fees Paid from Trust	Management Fees Netted from NAV	Total Investment Management Fees	Brokerage Fees / Commissions	Performance Fees / Carried Interest Netted from NAV	Total Direct / Indirect Fees and Commissions
Fixed income	\$ 8,417,767	\$ 30,915,719	\$ 39,333,486	\$ —	\$ 9,287,826	\$ 48,621,312
Public equity	16,400,393	—	16,400,393	1,395,337	—	17,795,730
Real assets	5,285,431	58,735,944	64,021,375	1,161,351	28,650,685	93,833,411
Alternative/other	—	73,752,769	73,752,769	—	179,625,632	253,378,401
Cash equivalents	—	1,434,610	1,434,610	—	—	1,434,610
Totals	\$ 30,103,591	\$ 164,839,042	\$ 194,942,633	\$ 2,556,688	\$ 217,564,143	\$ 415,063,464

Note: Fees for private investments are not reflected as investment expenses in TMRS' financial statements but are instead included in the net appreciation in fair value of investments as reported in the Statement of Changes in Fiduciary Net Position.

List of Alternative/Other Investments
<i>Absolute Return (Hedge Funds)</i>
<i>Private Equity</i>

Investment Managers

Table I-9

Investment Managers As of December 31, 2020			
Abacus	Columbia Management Investment Advisers	Lubert-Adler Management Company	SDC Capital Partners
Acadian Asset Management	D.E. Shaw & Co.	Madison Realty Capital	Searchlight Capital Partners
Actis Capital	Diameter Capital Partners	Magnetar Capital	Sixth Street Partners
Adams Street Credit Advisors	DivcoWest	Main Post Partners	Southern Ridges Capital Pte. Ltd.
AHL Partners	Dragoneer Investment Group	Marathon Asset Management	Southpoint Capital Advisors
Alcion Ventures	DSAM Partners	Marlin Management Company	Sprott Resource Lending Corp
Alliance Bernstein	Dunes Point Capital	Mercato Partners	Stellex Capital Management
Alpstone Capital	East Lodge Capital Partners	Miller Global Properties	Stockbridge Partners
Altaris Capital Partners	Ellington Management Group	Moorfield Investment Management	Stonepeak Partners
Altimeter Capital	Flagship Pioneering, Inc.	Myriad Asset Management Limited	Symmetry Investments
Alyeska Investment Group	Foundry Group	Neuberger Berman Trust Company	TCW Asset Management Company
Amerra Capital Management	FTV Management Company	NGP Energy Capital Management	The Blackstone Group
Angelo, Gordon & Co	GC Advisors	Northern Trust Investments, Inc.	The Carlyle Group
Appian Capital Advisory	Global Infrastructure Management, Inc	Northlane Capital Partners	Torchlight Investors
Arcline Investment Management	GoldenTree Asset Management	Nuveen Asset Management	TPG Holdings
Bain Capital Credit	Grain Management	Oak Street Real Estate Capital	Transwestern Strategic Partners
Bayview Asset Management	Graticule Asia Macro Advisors	Oberland Capital Management	Tristan Capital Partners
Beach Point Capital Management	Greenfield Partners	Octagon Credit Investors	Tritium Partners
BentallGreenOak	GTCR	One Rock Capital Partners	UBS Global Asset Management Inc.
Berkeley Partners Management	H.I.G. Capital	Orion Resource Partners	Udata Management
BlackChamber Partners	H/2 Capital Partners	Pacific Investment Management Co	USAA Real Estate Company
BlackRock Financial Management Inc.	HarbourVest Partners	Parthenon Capital Partners	Varde Partners, Inc.
BlackStone Credit	Harrison Street Advisors	PDT Partners	Virtus Real Estate
Blue Sky Water Partners	Harvest Partners	Pennybacker Capital Management	Voya Investment Management
BlueBay Asset Management	I Squared Capital	Pharo Global Advisors	Walton Street Managers
Boussard & Gavaudan Investment Mgmt	Incline Management	Platform Investments	Wasatch Advisors
Brookfield Investment Management	Infinity Q Capital Management	Providence Equity Partners	Waterfall Asset Management
Capital Partners	Insight Venture Management	Red Cliff Asset Management	Wellington Management
CapVest Partners	InstarAGF Asset Management Inc.	Redmile Group	White Oak Global Advisors
Cerberus Capital Management	Invesco Advisers, Inc.	Reverence Capital Partners	William Blair & Company
Champlain Investment Partners	Kainos Capital Partners	River Birch Capital	
Cohen & Steers	Kildare Partners	Roystone Capital Partners	
Colchester Global Advisors	LightBay Capital	Rubenstein Partners	

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