

NEW JERSEY DIVISION OF INVESTMENT

ANNUAL MEETING

State Investment Council

January 25, 2023

“The mission of the New Jersey Division of Investment is to achieve the best possible return at an acceptable level of risk using the highest fiduciary standards.”

Background: The New Jersey State Investment Council

New Jersey State Investment Council (the “Council”)

- **The Council is responsible for the formulation of policies that govern the investment of funds by the Division of Investment consistent with the fiduciary duties set forth by statute**
 - The Council provides fiduciary oversight for the assets managed by the Division
 - The Pension Fund, with \$87.4 billion in assets, comprises the bulk of assets managed by the Division
 - Pursuant to P.L. 2018, c. 55, the authority to direct investment policy of the Police and Firemen’s Retirement System (“PFRS”) was transferred from the Council to the Board of Trustees of PFRS
 - The Council retains its oversight responsibility for the non-PFRS portion of the Pension Fund
- **The Council is NOT responsible for:**
 - Funding Policy (plan contributions)
 - Benefits Policy (plan design)
 - Actuarial Activities (setting actuarial expected return)

Background: The State of New Jersey Division of Investment

New Jersey Division of Investment (the “Division”)

Division of Investment Assets under Management	
Assets as of 6/30/22 (\$ millions)	
Pension Fund ⁽¹⁾	\$87,493
Cash Management Fund (CMF)	40,209
Deferred Compensation Plan funds (DCP)	644
NJBEST Funds (NJBEST)	133
Supplemental Annuity Collective Trust (SACT)	257
Trustees for the Support of Public Schools Fund (TSPSF)	158
Total ⁽²⁾	\$120,865

Division of Investment “At a Glance”
<ul style="list-style-type: none"> ● 20th largest U.S. pension fund manager ⁽³⁾ ● 55 active employees with a \$9.5 million personnel budget ⁽⁴⁾ ● During Fiscal Year 2022, the Division traded: <ul style="list-style-type: none"> ➤ 480 million shares of stock worth \$13.9 billion ➤ \$14.2 billion in fixed income securities ⁽⁵⁾ ➤ \$1.1 billion in foreign currency transactions ● During Fiscal Year 2022, the Pension Fund earned: <ul style="list-style-type: none"> ➤ \$ 1.06 billion in stock dividends ➤ \$ 393 million in bond interest

Note: All figures are as of June 30, 2022 unless otherwise noted.

(1) Throughout this presentation, Pension Fund totals include PFRS assets.

(2) The total excludes \$8 billion held in CMF which is included in the totals for the Pension Fund, the DCP, NJBEST, SACT, and TSPSF. Additionally, the Division held \$2.3 thousands in a separate account on behalf of the State of New Jersey.

(3) Measured by assets as of September 30, 2020. Reported by P&I on February 10, 2021

(4) As of January 2023

(5) The total trades in fixed income securities include only the Pension Fund

Division of Investment Update: 2022 Year in Review

The Division has been working in a hybrid “Telework” program for most of the year

- Upon rollout of the State’s Telework pilot program, the Division made it available to its team members and has successfully implemented the program at the Division.
- Most team members are in the office 3 days each week while a select few have opted for the alternative work program.

The Division developed an Emerging Managers program for private market asset classes

- Primary objective is to increase the Division’s allocations to smaller, emerging, diverse and off-the-radar investment managers.
- The first sleeve being rolled out is focused on allocations to private equity.
- The investment team is currently working on the next sleeve of the program.

The Division completed an Asset/Liability Study

- At the direction of the SIC, the Division’s general consultant RVK, Inc. has conducted an asset/liability study which is now completed and being presented today.
- An updated asset/liability study provides important information about the Pension Fund and also assists Council members in evaluating and establishing an appropriate asset allocation plan.
- The asset allocation plan is currently being reviewed subsequent to which Council members will review it to determine if any changes are required.

The Division expanded its senior investment team

- The Division is pleased to welcome Lisa Walker as Deputy Director and Pamela Morone as Senior Legal Specialist. Additionally, we are pleased to announce the promotion of Bill Connors to the role of Deputy Executive Director. Bill has been with the Division since 2020, serving in the role of Head of Fixed Income.

NJ Pension Fund Annual Performance: Fiscal Years 2003-2022

Fiscal Year	NJ Pension Fund ⁽¹⁾	Policy Benchmark	Variance (in bps)
2003	3.31%	3.47%	-16
2004	14.16%	14.44%	-28
2005	8.77%	8.07%	70
2006	9.79%	8.13%	166
2007	17.14%	16.49%	65
2008	-2.61%	-6.00%	339
2009	-15.49%	-14.76%	-73
2010	13.34%	13.51%	-17
2011	17.97%	17.13%	84
2012	2.47%	0.26%	221
2013	11.72%	10.96%	76
2014	16.79%	15.79%	100
2015	4.09%	2.93%	116
2016	-0.93%	0.23%	-116
2017	13.07%	13.14%	-7
2018	9.06%	8.65%	41
2019	6.27%	7.07%	-80
2020	1.21%	4.13%	-292
2021	28.63%	26.28%	235
2022 ⁽²⁾	-7.90%	-4.67%	-323
5 Year Annualized Returns	6.80%	7.84%	-103
10 Year Annualized Returns	7.77%	8.14%	-37
20 Year Annualized Returns	7.09%	6.85%	23

(1) Throughout this presentation, NJ Pension Fund returns exclude Police and Fire Mortgage program assets.

(2) Throughout this presentation, returns are preliminary, unaudited, and net of fees. Certain asset class returns, including private equity, real assets, real estate, and private credit do not include up-to-date valuations and benchmark returns for these asset classes are calculated on a lagged basis. This results in performance comparisons that may be less meaningful.

Long-Term Capital Market Returns

	Annualized Returns for Periods Ending December 31, 2022 (%)				
	One Year	Three Years	Five Years	Ten Years	Fifteen Years

Global Equity Indices

MSCI ALL Country World Index	-18.36	4.00	5.22	8.05	4.81
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US Equity Indices

MSCI USA	-19.46	7.46	9.30	12.63	8.72
Russell 1000	-19.14	7.33	9.12	12.54	8.71
Russell 2000	-20.46	3.07	4.10	9.21	7.08
Russell 3000	-19.22	7.04	8.77	12.30	8.60
Russell Growth	-28.97	7.31	10.44	13.94	10.03
Russell Value	-8.01	5.84	6.47	10.32	6.90

Non-US Equity Indices

MSCI EAFE	-14.45	0.87	1.54	4.66	1.80
MSCI EAFE + Canada	-14.29	1.27	1.79	4.58	1.84
MSCI Emerging Markets	-20.09	-2.69	-1.40	1.44	0.64

Private Equity Index

Cambridge Global PE and VC Index ⁽¹⁾	-5.57	21.96	19.03	16.58	11.46
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(1) Cambridge Global PE and VC Index returns are presented with a three-month lag and are calculated on an IRR basis.

Source: Bloomberg and Cambridge Associates

Long-Term Capital Market Returns

	Annualized Returns for Periods Ending December 31, 2022 (%)				
	One Year	Three Years	Five Years	Ten Years	Fifteen Years
Fixed Income Indices					
Bloomberg Barclays U.S. Aggregate	-13.01	-2.71	0.02	1.05	2.68
Bloomberg Barclays U.S. Treasury	-12.46	-2.62	-0.10	0.57	2.18
Bloomberg Barclays U.S. Credit	-15.26	-2.86	0.42	1.79	3.75
Bloomberg Barclays U.S. Credit (A or better)	-14.64	-2.80	0.19	1.51	3.27
Bloomberg Barclays U.S. Credit (Baa)	-15.94	-2.88	0.70	2.14	4.50
Bloomberg Barclays U.S. High Yield	-11.19	0.05	2.31	4.03	6.09
S&P/LSTA Leveraged Loan Index	-0.60	2.54	3.31	3.67	4.33
Cliffwater BDC Index	0.60	15.21	18.14	11.75	9.99
Real Estate Indices					
NCREIF ODCE Index ⁽¹⁾	20.96	11.38	9.26	9.91	5.78
Bloomberg U.S. REIT Index	-26.44	-0.69	3.60	6.94	6.57
Real Assets Index					
Custom Cambridge Blend for Real Assets ⁽¹⁾	18.15	9.32	5.80	2.82	n/a

(1) NCREIF ODCE and Property Index returns are presented with a three-month lag

Source: Bloomberg, State St and National Council of Real Estate Investment Fiduciaries

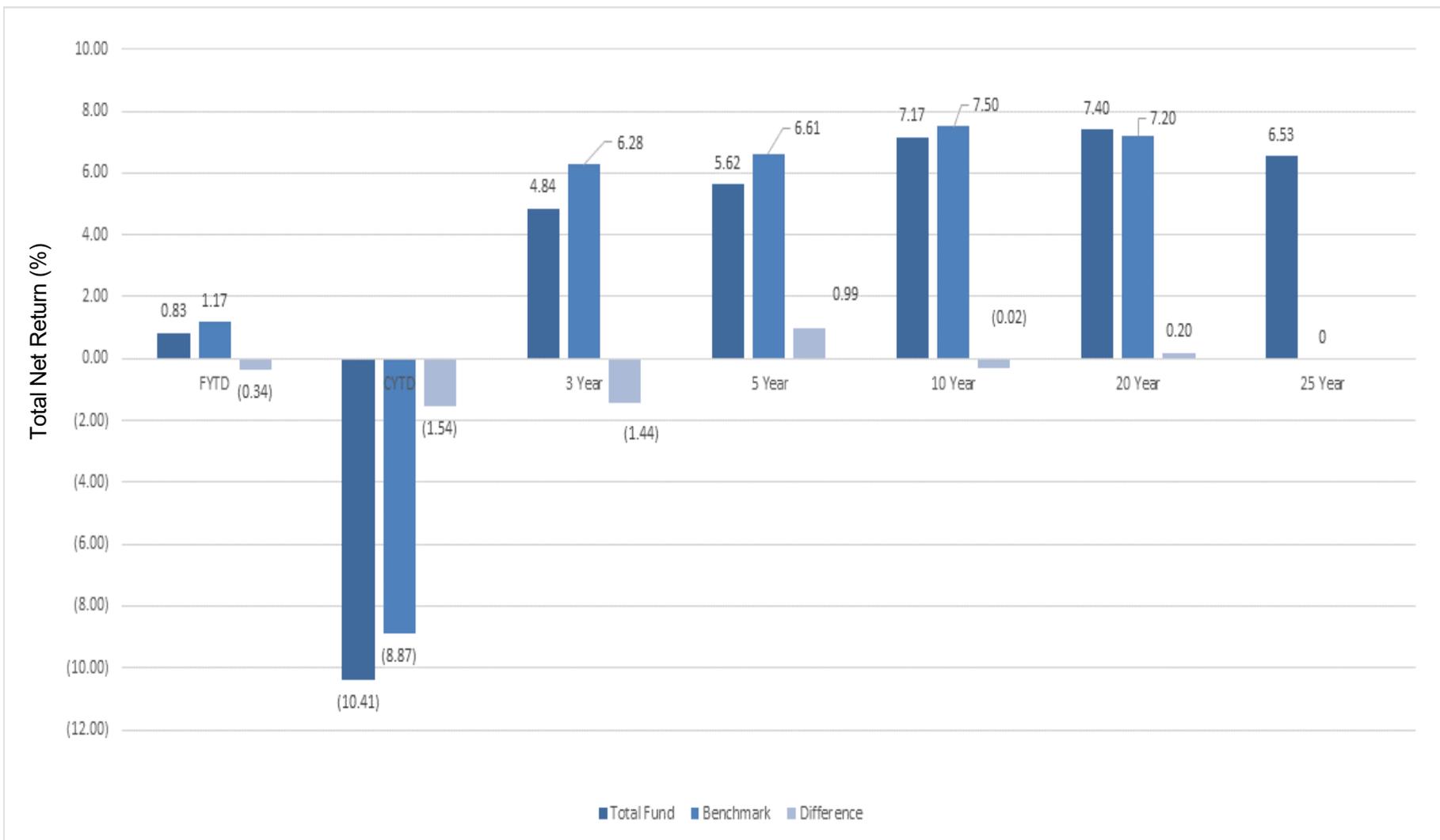
Ten Year Periodic Table of Returns⁽¹⁾

	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2013-2022</u>
Russell 3000	Private Equity	Real Estate	High Yield	Emerging Markets	Private Equity	Russell 3000	Russell 3000	Private Equity	Real Estate	Private Equity	
33.57	17.63	13.86	17.13	37.28	17.91	31.01	20.88	53.64	20.96	16.58	
EAFE & Canada	Russell 3000	Private Equity	Russell 3000	EAFE & Canada	Real Estate	EAFE & Canada	Private Equity	Commodities	Commodities	Russell 3000	
21.02	12.55	11.48	12.72	24.21	7.71	22.49	20.37	27.05	13.75	12.30	
Private Equity	Real Estate	Treasuries	Commodities	Russell 3000	Treasuries	Emerging Markets	Emerging Markets	Russell 3000	Private Equity	Real Estate	
16.70	11.36	0.84	11.40	21.12	0.86	18.42	18.31	25.66	-5.57	9.91	
Real Estate	Corporates	Russell 3000	Emerging Markets	Private Equity	High Yield	High Yield	Corporates	EAFE & Canada	High Yield	High Yield	
11.97	7.53	0.47	11.19	16.97	-2.08	14.32	9.35	12.62	-11.19	4.03	
High Yield	Treasuries	Corporates	Private Equity	High Yield	Corporates	Corporates	Treasuries	Real Estate	Treasuries	Corporates	
7.44	5.05	-0.77	9.46	7.50	-2.11	13.80	8.00	13.64	-12.46	1.93	
Corporates	High Yield	EAFE & Canada	Real Estate	Real Estate	Russell 3000	Private Equity	EAFE & Canada	High Yield	EAFE & Canada	EAFE & Canada	
-2.01	2.45	-3.04	9.08	6.70	-5.25	10.44	7.59	5.28	-14.29	4.58	
Emerging Markets	Emerging Markets	High Yield	Corporates	Corporates	Commodities	Treasuries	High Yield	Corporates	Corporates	Emerging Markets	
-2.6	-2.19	-4.47	5.63	6.18	-12.99	6.86	7.11	-1.04	-15.76	1.44	
Treasuries	EAFE & Canada	Emerging Markets	EAFE & Canada	Treasuries	EAFE & Canada	Commodities	Real Estate	Treasuries	Russell 3000	Treasuries	
-2.75	-4.32	-14.92	2.75	2.31	-14.09	5.44	0.52	-2.32	-19.22	0.57	
Commodities	Commodities	Commodities	Treasuries	Commodities	Emerging Markets	Real Estate	Commodities	Emerging Markets	Emerging Markets	Commodities	
-9.58	-17.04	-24.7	1.04	0.75	-14.57	4.64	-3.50	-2.54	-20.09	-2.07	

Over the past ten years, Private Equity, U.S. Equities, and Real Estate were the three best performing asset classes. The wide variation of returns amongst asset classes in each of the past ten years reinforces the important role of diversification in asset allocation.

(1) Private Equity and Real Estate returns are presented with a three-month lag. Private Equity returns are calculated using an IRR methodology. Source: Bloomberg/DOJ calculations, Cambridge Associates, and National Council of Real Estate Investment Fiduciaries

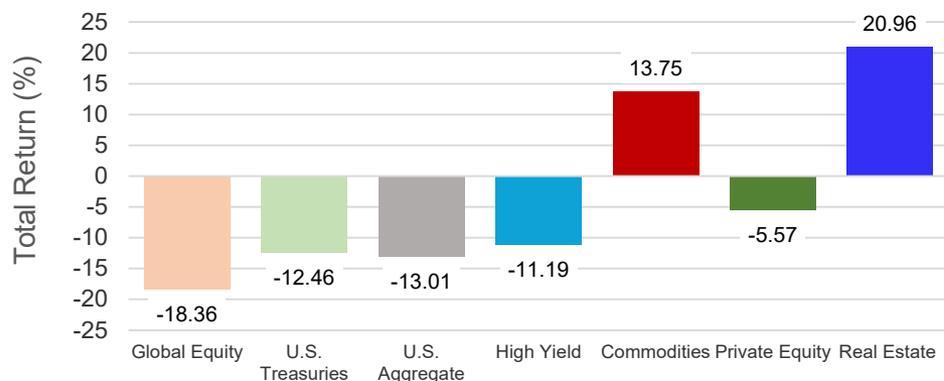
Long-Term NJ Pension Fund Returns⁽¹⁾ versus Policy Benchmark (as of December 31, 2022)



* Benchmark return not available for 25-Year period

2022 Capital Markets Review: Asset Class Returns

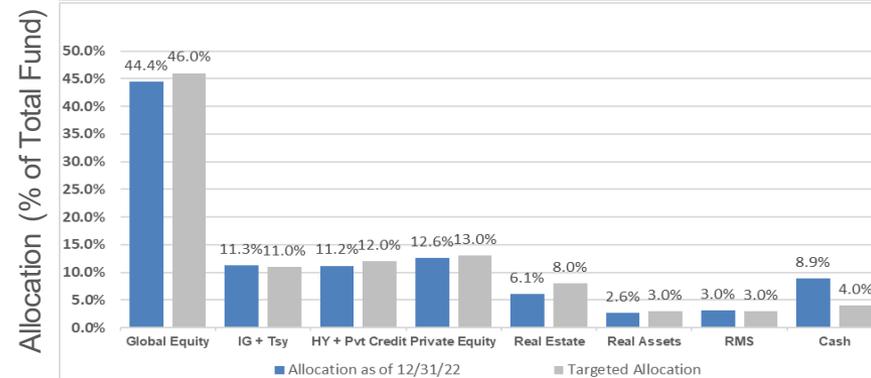
2022 Select Asset Class Returns (1)



In 2022, the surge in inflation propelled central banks to reverse their loose monetary policies and aggressively raise interest rates, the consequences of which negatively reverberated across a wide spectrum of asset classes.

The uncertainty due to the coordinated efforts to raise rates coupled with the Russia/Ukraine conflict upended the expected benefits that should result from diversifying the risks and returns of portfolio investments. Real Estate and Commodities were among the few assets that gained from the instability which characterized the year.

2022 Pension Fund Asset Allocation



In early 2022, a tactical change to the allocation of certain asset classes was implemented as the markets began to absorb the implications of rising interest rates and the threat of war on the European continent.

Equity risk was decreased by reducing the allocation levels within Global Equity, and duration risk was decreased by reducing exposure to longer-duration Investment Grade debt.

The approximately \$3 billion in funds raised went towards increasing Cash.

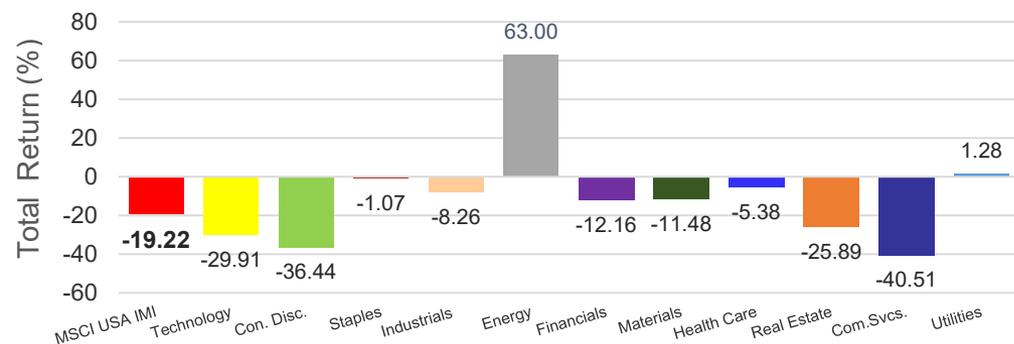
Rising inflation and tightening monetary policies in 2022 reflected an abrupt change from the prior investment regime of low interest rates and ample liquidity. A correlated risk-off investment environment ensued which diminished the expected benefits of portfolio diversification.

(1) Private Equity (PE) and Real Estate (RE) returns reflect a three-month lag.

Source: Bloomberg, Cambridge Associates, National Council of Real Estate Investment Fiduciaries, State Street

2022 Capital Markets Review: U.S. Equity Returns

2022 U.S. Equity Sector Returns



2022 U.S. Equity Asset Allocation and Returns



The U.S. market return of -19.22% for 2022 was the worst annual performance since the 2008 Great Financial Crisis. China's zero-COVID policy and the Russia/Ukraine conflict added to the uncertainty caused by the U.S. Federal Reserve's pivot from viewing inflation as transitory and aggressively moving to raise interest rates.

The intense sell-off of certain mega cap stocks ⁽¹⁾, which adversely affected returns of the Technology, Discretionary, and Communication sectors, dominated overall market performance.

The notable spikes in coal, gas and oil prices during the year explain the Energy sector's strong performance.

In early 2022, a tactical decrease in the allocation to U.S. Equity was implemented as a means to mitigate the Pension Fund's risk from the exposure to equity as market volatility began to rise.

The portfolio value was reduced by approximately \$1 billion, bringing the allocation closer to the Policy Target of 27%.

The optimization strategy informing the portfolio's passive construction performed as expected – the portfolio return was aligned with the benchmark return.

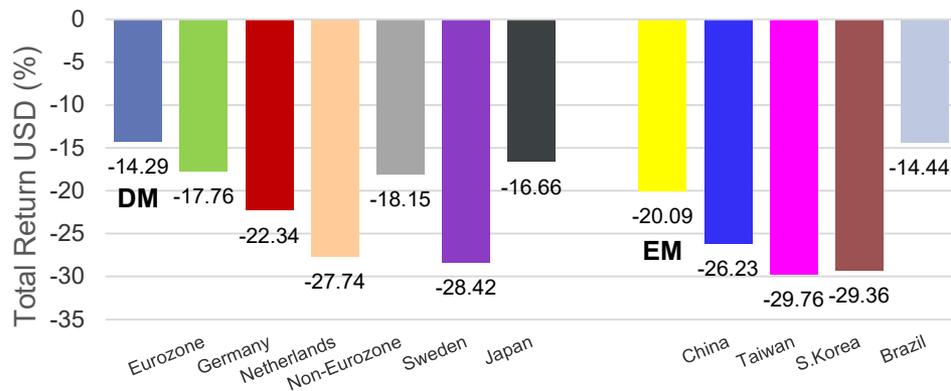
The year 2022 reflected a painful fundamental shift in market leadership, investment style, and perception of risk for U.S. securities as the era of low interest rates came to an end.

(1) Example: Apple, Amazon, Tesla, Microsoft, Meta, Alphabet, NVIDIA

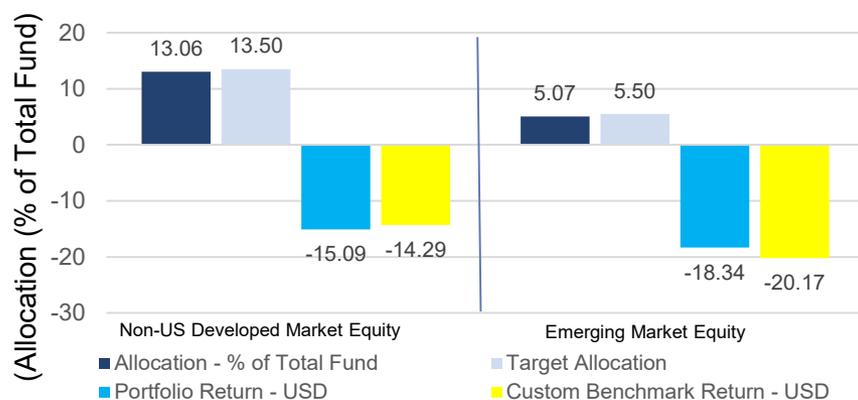
Source: Bloomberg, MSCI, Russell, and State Street

2022 Capital Markets Review: International Equity Returns

2022 Select International Equity Market Returns



2022 International Equity Asset Allocation and Returns



Adversely impacted by soaring inflation, rising interest rates, an energy crisis, and conflict in Ukraine, International Equity experienced the worst annual performance since the 2008 Great Financial Crisis.

The broad MSCI All-Country World ex US Index ended 2022 with a loss of -16%, led by the -20% return for Emerging Markets (EM), as China's pandemic policies and the fallout from geopolitical unrest, including rising commodity prices and a strong U.S. dollar, weighed on performance.

Non-US Developed Markets (DM) fell -14% as the move to isolate Russia sparked a surge in energy prices and added to the uncertainty of tightening monetary policy by a number of central banks.

There were no changes to the allocation levels of Non-US Developed Market Equity and Emerging Market Equity in 2022.

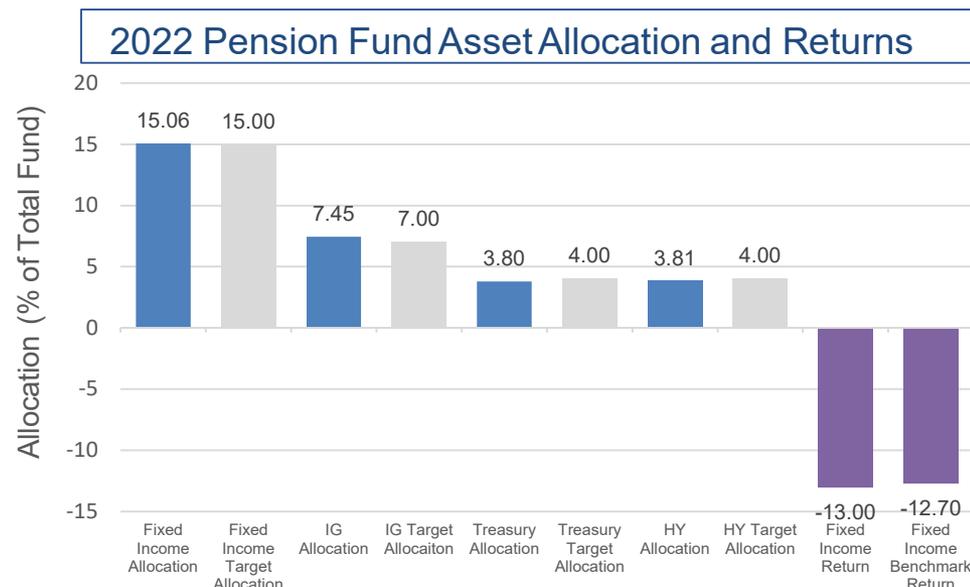
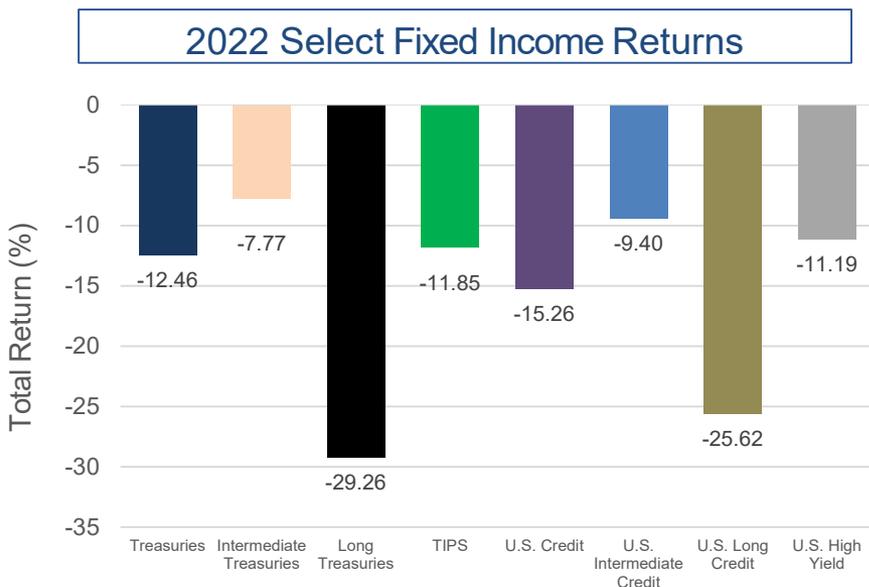
As of December 31, 2022, the allocations for both asset classes were slightly underweight the respective Policy Targets.

The Non-US Developed Market Equity portfolio performance was negatively impacted by an off-benchmark allocation to Small Cap Equity.

The Emerging Market Equity portfolio exceeded its benchmark return by nearly 2%, as value strategies excelled in performance versus both the broad market index and the value index.

A confluence of extraordinary events in 2022, including military conflict, triggered heavy losses for international markets as a re-assessment of risk and return perceptions took hold.

2022 Capital Markets Review: Fixed Income Returns



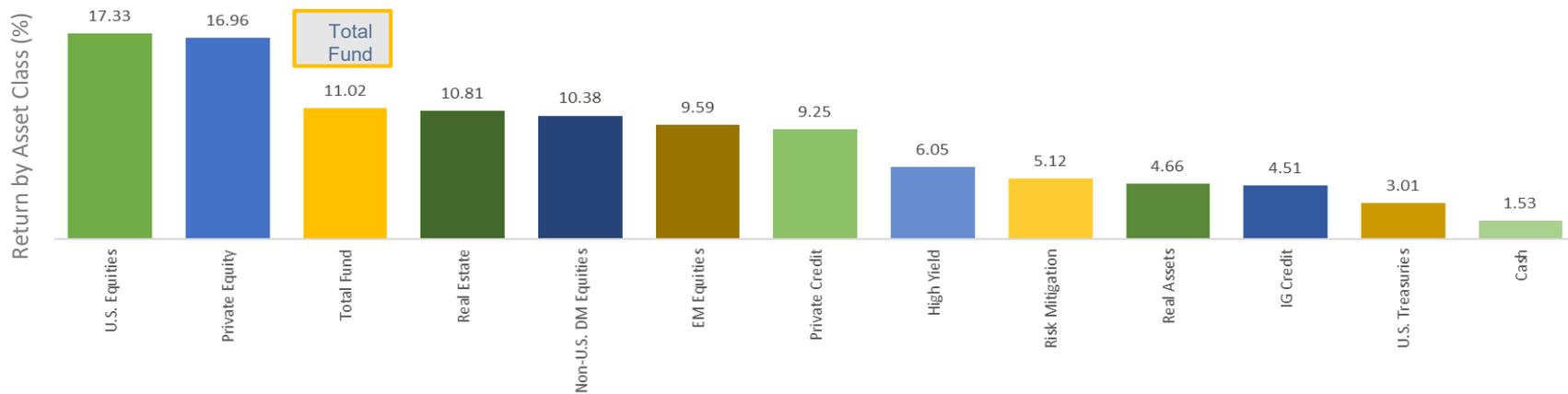
Fixed Income realized negative returns as the Federal Reserve raised interest rates aggressively during 2022. High Yield (HY) was the relative outperformer while Investment Grade (IG) suffered from tight spreads and longer duration and TIPS were hurt by the surge in real yields.

Fixed Income slightly underperformed the benchmark during a difficult 2022. The composite lagged slightly due to an under-allocation to High Yield during a strong period of HY performance when the Policy allocation was increased from 2% to 4% beginning July 1, 2022 as well as slight underperformance in IG due to duration.

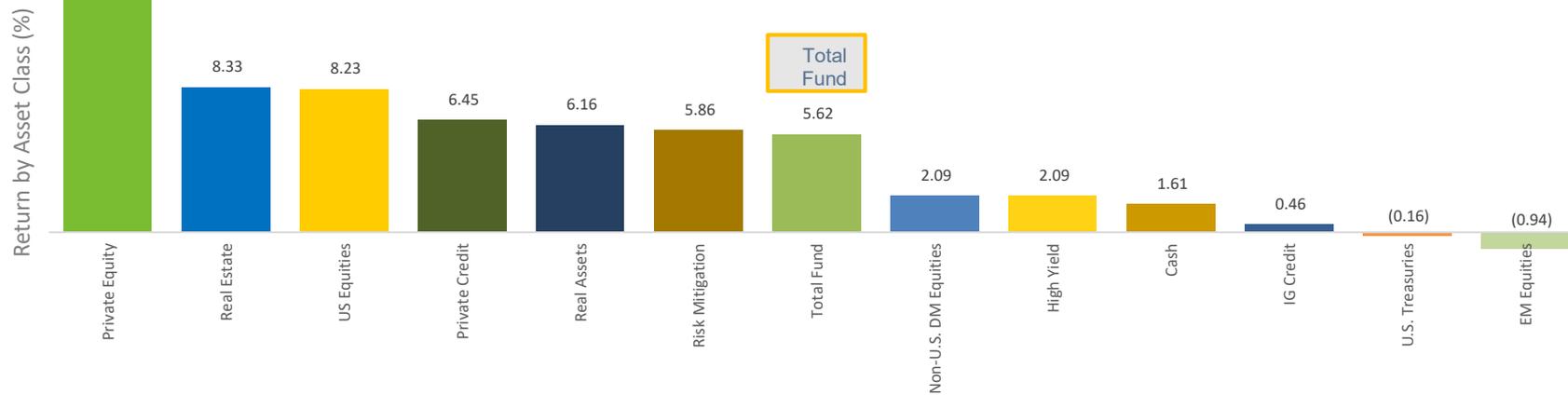
During 2022, the Fixed Income market struggled to reprice as inflation peaked near 9% and the Federal Reserve hiked the Federal Funds rate to 4.5%. Duration was the main factor contributing to the poor performance, the longer the duration the worst the performance.

Pension Fund Five Year Net Returns By Asset Class

Annualized Net Total Returns (%) for Five Years Ended December 31, 2021

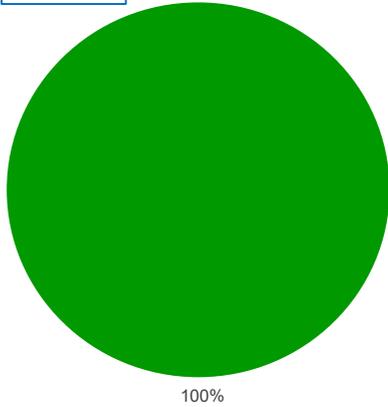


Annualized Net Total Returns (%) for Five Years Ended December 31, 2022

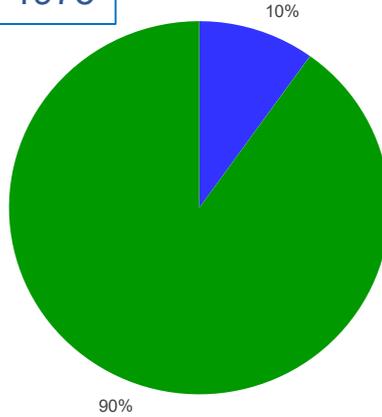


Pension Fund Asset Allocation: A Long-Term Perspective

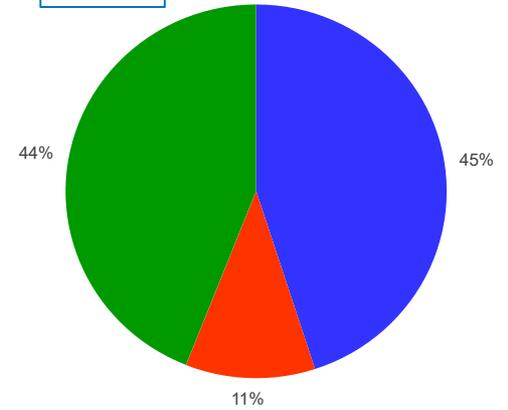
1951



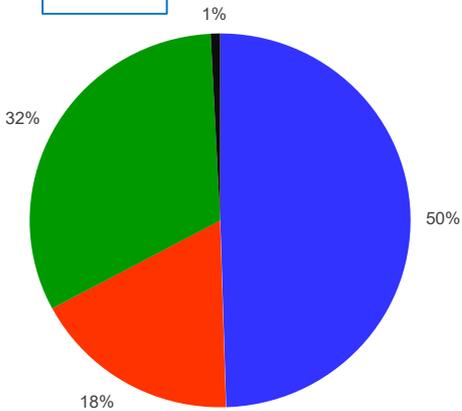
1975



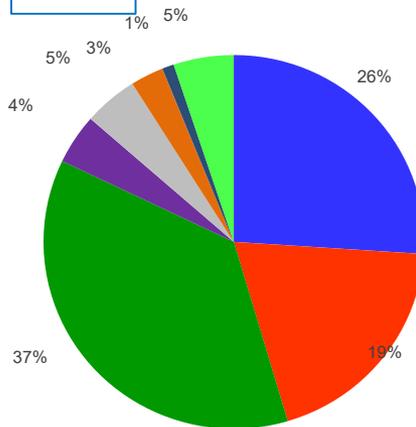
2001



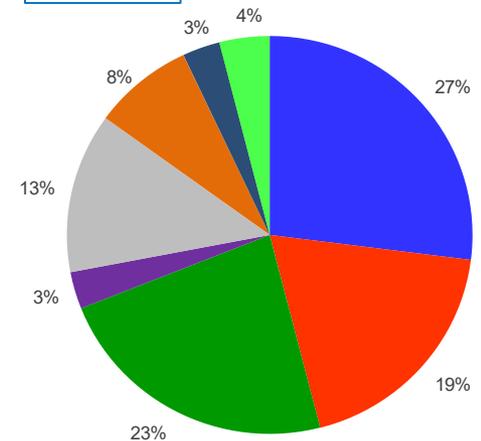
2006



2009



2022⁽¹⁾



■ U.S. Equity ■ Int'l Equity ■ Fixed Income ■ Risk Mitigation ■ Private Equity ■ Real Estate ■ Real Assets ■ Cash ■ Alternatives

The well-diversified NJ Pension Fund asset allocation has evolved over a period of decades from a portfolio comprised solely of fixed income securities.

(1) 2022 reflects the Council's current targeted asset allocation that took effect on July 1, 2022

Note: Totals may not equal 100% due to rounding

Recent Trends in the Pension Fund's Targeted Asset Allocation⁽¹⁾

Asset Class	FY 2016 Target ⁽²⁾	FY 2017 Target	FY 2018 Target	FY 2019 Target	FY 2020 Target	FY 2021-22 Target	FY 2023 Target
GLOBAL GROWTH	54.75%	58.25%	58.25%	58.25%	59.00%	59.00%	59.00%
U.S. Equity	26.00%	30.00%	30.00%	30.00%	28.00%	27.00%	27.00%
Non-US DM Equity	13.25%	11.50%	11.50%	11.50%	12.50%	13.50%	13.50%
Emerging Market Equity	6.50%	6.50%	6.50%	6.50%	6.50%	5.50%	5.50%
Private Equity	9.00%	10.25%	10.25%	10.25%	12.00%	13.00%	13.00%
INCOME	18.75%	18.50%	18.50%	18.50%	18.00%	18.00%	19.00%
Investment Grade Credit	8.00%	10.00%	10.00%	10.00%	10.00%	8.00%	7.00%
High Yield	2.00%	2.50%	2.50%	2.50%	2.00%	2.00%	4.00%
Private Credit	8.75%	6.00%	6.00%	6.00%	6.00%	8.00%	8.00%
REAL RETURN	8.55%	9.75%	9.75%	9.75%	10.00%	11.00%	11.00%
Real Estate	6.05%	7.25%	7.25%	7.25%	7.50%	8.00%	8.00%
Real Assets	2.50%	2.50%	2.50%	2.50%	2.50%	3.00%	3.00%
DEFENSIVE	13.00%	13.50%	13.50%	13.50%	13.00%	12.00%	11.00%
Cash Equivalents	5.00%	5.50%	5.50%	5.50%	5.00%	4.00%	4.00%
U.S. Treasuries	3.00%	3.00%	3.00%	3.00%	5.00%	5.00%	4.00%
Risk Mitigation Strategies	5.00%	5.00%	5.00%	5.00%	3.00%	3.00%	3.00%

(1) Prior year targeted allocations have been restated to be consistent with the current asset allocation plan categories approved by the Council. Global Diversified Credit and Credit-Oriented Hedge Funds were combined into Private Credit. Buyouts/Venture Cap and Debt-Related Private Equity were combined into Private Equity. Equity-Related Real Estate and Debt-Related Real Estate were combined into Real Estate. A new target asset allocation was approved effective July 1, 2022.

(2) FY 2016 target excludes a 3.75% allocation to Equity-Oriented Hedge Funds and a 1.2% allocation to the PFRS mortgage program.

Division of Investment Update: 2023 Key Goals and Initiatives

The Division will continue to work towards enhancing and strengthening the organization

- An organizational review was recently conducted in order to identify key areas of risk and potential staffing gaps.
- The Division will continue its effort towards building improved processes, better infrastructure, and a stronger team.
- Continue reviewing and evaluating systems with the objective of upgrading and enhancing.
- Creating greater efficiency and better integration across the Division will be a key goal during the year.

Expand Emerging Managers Platform to include additional private market sleeves

- Conduct an Emerging Managers conference during 2023 to bring together interested parties with similar goals.
- Add additional asset class sleeves to the Emerging Managers program.
- Recruit and onboard a Diversity & Inclusion Investment Officer.

Continue to navigate global economic challenges while seeking to opportunistically deploy excess liquidity

- We expect economic and market challenges to continue into 2023.
- The Division will seek to manage the Pension Fund's liquidity profile in order to navigate continued headwinds.
- Look to increase allocations to private market asset classes, especially those impacted by recent market difficulty and those which are underweight.
- Continue to maintain appropriate vintage diversification.
- Opportunistically and selectively deploy dry powder when prudent to do so.

Enhance risk management processes and complete RPFs/procurements

- Review, evaluate and enhance risk management processes as needed.
- Refocus on review of portfolio and investment manager concentration risk.
- Complete pending RFPs and initiate new RFPs as needed.