

**BOARD OF TRUSTEES
MIAMI UNIVERSITY
Minutes of the Investment Subcommittee Meeting
Roudebush Hall, Room 104
Miami University, Oxford, Ohio
March 1, 2023**

The meeting of the Investment Subcommittee was called to order at 3:00 p.m. by National Trustee Mark Sullivan who was acting Chair for the meeting. The meeting was held in Roudebush Hall, Room 104 on the Oxford campus. Along with National Trustee Mark Sullivan, Subcommittee members; Trustees Steve Anderson, and Mary Schell were present. Subcommittee Chair and National Trustee Biff Bowman was absent.

In addition to the Subcommittee members, Senior Vice President David Creamer, and Secretary to the Board of Trustees Ted Pickerill, from the President's Executive Cabinet were present. Representatives from the outside CIO, Strategic Investment Group (SIG), included; Nikki Kraus, Markus Krygier, Leah Posadas, in person, and Christopher Pond via telephone. Associate Treasurer and Miami Foundation CFO Bruce Guiot, and Director of Investments Tim Viezer, were also present.

Following a motion by Trustee Schell and a second by Trustee Anderson, the minutes from the prior meeting were unanimously approved by voice vote, with all voting in favor and none opposed.

Bruce Guiot reviewed with the Sub-committee the capital stack comprised of the endowment pool, the University's non-endowment investments, and operating cash. He relayed:

- Operating cash flow so far for FY23 through December 31st is tracking to forecast, he explained that the Tier 1 decline is the normal semi-annual draw down cycle which follows the receipt of tuition payments.
- The endowment/PIF was valued at \$683 million as of December 31st.

SIG reviewed with the Sub-committee investment performance for FY23 through December 31st for both the non-endowment and endowment. They relayed:

- Returns are positive for the first half of the fiscal year and have outperformed benchmarks.
- Rising interest rates intended to moderate inflation continue to present challenges as the markets attempt to gain visibility around the impact on the economy.
- The non-endowment was up about 0.9% for the FYTD.
- Endowment/PIF was up about 1.7% FYTD (though some private capital figures are still being collected).

- Results for January were strongly positive, but some loss was experienced in February.

The Sub-committee reviewed updates to SIG's capital market assumptions and conducted an annual stress test of both endowment and non-endowment portfolios to get a sense of the potential impact of a significant market event. The results were within the expected risk tolerance. The Sub-committee also discussed the potential impact of a drawdown on the endowment's ability to make its annual distributions. It appears that a loss of up to 8% would not have a material impact on distributions.

The Sub-committee discussed the [University's debt policy](#), which has not been updated since 2011. The Sub-committee expects to bring recommendations to the May meeting of the full Finance and Audit Committee that reflect changes in both the debt markets and the University's financial condition.

Finally, the Sub-committee reviewed the non-endowment's investment policy and affirmed it with no recommended changes.

With no more business to come before the Sub-committee, Trustee Anderson moved and Trustee Schell seconded a motion to adjourn which was unanimously approved by voice vote, with all voting in favor and none opposed, and the meeting adjourned at 5:00 p.m.

Attachments:

- [March 2023 meeting Presentation](#)
- [March 2023 meeting Appendices](#)



Theodore O. Pickerill II
Secretary to the Board of Trustees

MIAMI UNIVERSITY DEBT POLICY

The primary objective of Miami University's use of debt is to optimally allocate debt as a limited capital resource in funding carefully selected projects that further the University's mission and fulfill its strategic objectives. This policy sets forth the goals and strategies the University expects to utilize to accomplish this objective.

GOALS

1. To prudently use debt as a source of capital to fund capital projects that relate to the strategic priorities of the University but have limited opportunities for financing from other sources such as state appropriations, philanthropic giving, or grants.
2. To manage the University's overall debt level to maintain a ~~minimum~~ credit rating in the ~~range of the high "A" to low "AA" categories~~ category, according to the major rating agencies.
3. To maintain a weighted average net cost of capital below ~~5.50%~~ 5.0% by carefully structuring financings to take advantage of interest rate cycles and available financing vehicles.
4. To maintain debt capacity ratios ~~in excess of the minimum acceptable composite score~~ as outlined by the State of Ohio (see addendum) and that allow the University to achieve its credit rating, cost of capital, and long-term viability objectives.
5. To assure that projects financed have a prudent plan for debt repayment.

DEBT MANAGEMENT STRATEGIES

1. Identification of capital projects

Major capital projects are prioritized through the University's long-range capital plan. The capital plan is constructed within the framework of the University's financial plan and is aligned annually with the University's budget. Sources of funding for capital projects include state capital appropriations, gifts or grants, annual capital renewal or replacement budgets, internal reserves, and bond financing.

Bond financing, because of its long-term financial implications, is to be used strategically on projects for which other funding sources are limited, and will be coordinated so that multiple projects may be accommodated in a single borrowing to create efficiencies.

The planning process undergoes extensive review and discussion with University management and the Board~~s~~ of Trustees' Finance and Audit Committee. As each individual project in the capital plan is initiated, the project and its financing plan is reviewed by the Finance and Audit Committee and approved by the Board of Trustees. Any future obligations resulting from the financing plans, such as debt service payments or outstanding gift pledges, are reviewed annually with the Finance and Audit Committee as part of the University's normal budget planning to ensure that the financing plans remain viable. If they need to be adjusted, they are adjusted within the framework of the overall financial plan for the University.

2. Debt capacity

Miami University's debt capacity can be defined as:

1. A-a level of outstanding debt at which the University can maintain its high credit ratings and a low cost of borrowing, and
2. A-a practical level of annual debt service payments that the University can comfortably cover from predictable sources of repayment.

The University intends to maintain ~~minimum~~-underlying credit ratings in the ~~high~~ "A" to low "AA" range category in order to issue debt at relatively low interest rates. The University does not intend to issue the maximum possible levels of debt, but intends to maintain a comfortable reserve of debt capacity. A prudent level of debt provides access to capital but does not unduly burden the institution's budget with annual repayment obligations. Furthermore, a moderate and consistent debt burden also serves the goal of intergenerational equity; one generation of tuition-payers is not overburdened at the expense of another generation.

Debt capacity is generally measured through ratio analysis. Ratios provide a consistent measure of the debt level carried by an institution in relation to its balance sheet, revenues and expenses. Ratio analysis provides insight into debt capacity from two perspectives: by monitoring trends over time and in comparison to benchmarks. It is the intent of the University to maintain a strong financial position that will support a favorable ratio analysis measured against national standards, peer and in-state comparisons, and credit rating agency medians. Some of the key ratios currently utilized for evaluating debt capacity are attached as Addendum A.

3. Interest rate management

The primary objective of interest rate management is to make strategic and structural decisions on each University financing in order to minimize the aggregate interest expense to the University. After reviewing historical long-term interest rate cycles and industry benchmarks, the University has established a goal of maintaining a weighted average net cost of capital below ~~5.50%~~ 5.0%. It is recognized that this goal may not be achievable in very high interest rate environments; in such situations, the goal will be to achieve the lowest cost of capital available under the circumstances. Methods of maintaining a low cost of capital include:

1. Issuing fixed vs. variable rate debt
2. Maturity length and principal amortization
3. Call provisions and the use of premium and discount coupons
4. Managing interest rate cycles
5. Selective use of interest rate swaps and other derivative products
6. Diversifying the universe of its potential investors
7. Negotiated vs. competitive sales
8. Maintaining its strong credit ratings
9. Selective use of credit enhancement or liquidity

A second objective of interest rate management is to minimize the uncertainty and variability of interest expense. Thus, although variable-rate bonds generally have lower interest costs than fixed-rate bonds, they also introduce volatility risk into the University's debt service obligations. ~~It is expected to be advantageous to include variable rate debt in the University's capital structure at high points in the economic interest rate cycle. However, it is not anticipated that variable rate exposure would exceed 40% of overall outstanding debt at any point in time.~~

Interest rate exposure may also be managed through the use of interest rate swaps and other derivative products. Such products provide an indirect, rather than direct, means of managing interest risk. If, after thorough analysis, a derivative product is clearly beneficial in reducing debt service cost and/or interest rate risk, such a product may be used with approval of the Board of Trustees. Swaps and other derivatives used as part of the debt portfolio must be tied directly to University debt instruments and may not be used for speculative purposes.

Each proposed new debt issuance will be evaluated in the context of the interest rate environment at that time, debt products available in the marketplace, the University's then-existing mix of outstanding obligations, and the time horizon of the projects to be financed. The potential upside and downside risks of various debt instruments and structures will be analyzed to determine the most advantageous structure to meet the University's long-term goals given the existing environment.

4. Repayment planning

All debt financing must be accompanied by a feasible plan for repayment of its principal and interest obligations. Sources of repayment may include project-specific revenues, auxiliary enterprise revenues, gift revenues, general University receipts, expense reductions, or other sources. If the financing involves variable rate debt, the repayment plan must take into consideration the impact of a change in interest rates. Pro forma projections will be based on conservative assumptions that provide reasonable comfort that the repayment obligations can be prudently managed.

In some situations, a prudent method of repayment planning will be to budget and fund a segregated Debt Service Reserve Fund. There may also be circumstances where a mandatory Debt Service Reserve Fund is included in the legal bond covenants. In cases where the use of such a reserve is planned and/or mandated, the University will

incorporate the appropriate funding into its budget and will make best efforts to fulfill the funding plan.

5. Refinancing opportunities

The University will monitor its debt portfolio for refunding and/or restructuring opportunities that may arise from changes in the interest rate environment. In addition, when issuing debt for new project purposes, the University should consider any potential refunding to be issued in combination with such new project financing. A number of factors will be evaluated in making refinancing decisions, including:

1. Call features of outstanding debt
2. Rate reduction potential
3. Time beyond call to maturity
4. Call premium
5. Escrow efficiency
6. Overall market conditions

In general, a refinancing opportunity will be considered advantageous if it results in a net present value savings of 3% or greater.

6. Regulatory and tax considerations

Authority for issuance of bonds is provided by Sections 3345.11 and 3345.12 of the Ohio Revised Code. The Ohio Board of Regents has further authority to approve debt for which the general receipts of the University are pledged as security. University management will be responsible to seek and obtain approval by the Ohio Board of Regents in advance of a bond issuance.

Bonds issued by Miami University are often eligible for tax-exemption, and therefore subject to IRS rules and regulations governing tax-exempt obligations. University management will use its best efforts to comply with the appropriate IRS rules and regulations. Specifically, management will remain cognizant of IRS regulations concerning arbitrage, private use, and unrelated business income.

7. Approvals

Debt in amounts of **\$2,000,000** or less must be approved by the Vice President for Finance and Business Services.

Debt in excess of **\$2,000,000** and any debt that is publicly issued must be approved by the Vice President for Finance and Business Services, the Finance and Audit Committee, and the Board of Trustees.

ADDENDUM A DEBT CAPACITY RATIOS

MIAMI UNIVERSITY DEBT POLICY

Through the 1997 enactment of Senate Bill 6, a standardized method for monitoring the financial health of Ohio's state-assisted college and universities was established. Key ratios monitored by the Ohio Board of Regents (OBOR) are:

- **Viability Ratio:** expendable net assets divided by total debt. This ratio is a measure of an institution's ability to retire its long-term debt using available current resources. A viability ratio in excess of 100% indicates that the institution has expendable fund balances in excess of its plant debt. A viability ratio above 60% is considered good, while a ratio below 30% may be a cause for concern.
- **Primary Reserve Ratio:** expendable net assets divided by total operating expenses. This ratio is a measure of an institution's ability to continue operating at current levels without future revenues. A primary reserve ratio of 10% or greater is considered good, while a ratio below 5% may be a cause for concern.
- **Net Income Ratio:** change in total assets divided by total revenues. This ratio measures an institution's financial status in terms of current year operations. A negative net income ratio results when an institution's current year expenses exceed its current year revenues. A positive ratio indicates the institution experienced a net increase in current year fund balances.
- **Composite Score:** weighted summary statistic of the above three ratios. Each ratio is assigned a score of 1-5 based on predetermined ranges and then weighted, with 30% to the viability ratio, 50% to the primary reserve ratio, and 20% to the net income ratio. The scoring process emphasizes the need for campuses to have strong expendable fund balances, manageable plant debt, and a positive operating balance. The highest possible composite score is 5.0. The minimum acceptable composite score is 1.75. A score at or below this minimum level for two consecutive years will result in being placed on fiscal watch by OBOR.

In addition to the above ratios, the major rating agencies such as Moody's and Standard & Poor's track a series of financial indicators including:

- **Annual debt service as a percent of operating expenses:** A ratio greater than 10% generally represents an excessive debt burden, while 7% is considered to be moderately high.
- **Operating Margin:** operating surplus as a percent of revenues (excluding gift revenues)
- **Debt Service Coverage:** operating surplus divided by debt service expense
- [Spendable cash & investments to debt](#)
- [Monthly days cash on hand](#)

- ~~Total debt per student~~
- Total financial resources per student

Credit Ratings of Ohio Public Universities
 Credit Ratings Current as of January 18, 2023

	September 2020						January 2023					
	Moody's Investor		Standard & Poor's		Fitch Ratings		Moody's Investor		Standard & Poor's		Fitch Ratings	
	Rating		Rating		Rating		Rating		Rating		Rating	
State of Ohio (OH)	Aa1	Stable	AA+	Stable	AA+	Stable	Aa1	Positive	AA+	Stable	AAA	Stable
Bowling Green State University (BGSU)	A1	Stable	A+	Stable	Not Rated		A1	Stable	A+	Stable	Not Rated	
Central State University (CU)	Not Rated		Not Rated		Not Rated		Not Rated		Not Rated		Not Rated	
Cleveland State University (CSU)	A1	Stable	A+	Negative	Not Rated		A2	Stable	A+	Stable	Not Rated	
Kent State University (KSU)	Aa3	Stable	A+	Stable	Not Rated		Aa3	Stable	A+	Stable	Not Rated	
Miami University (MU)	Aa3	Stable	Not Rated		AA	Stable	Aa3	Stable	Not Rated		AA	Stable
Ohio State University (OSU)	Aa1	Stable	AA	Stable	AA	Stable	Aa1	Stable	AA	Stable	AA+	Stable
Ohio University (OU)	Aa3	Stable	A+	Stable	Not Rated		Aa3	Stable	A+	Negative	Not Rated	
Shawnee State University (SSU)	Baa3	Negative	Not Rated		Not Rated		Baa3	Stable	Not Rated		Not Rated	
University of Akron (UA)	A1	Negative	Not Rated		A+	Stable	A2	Stable	Not Rated		A	Stable
University of Cincinnati (UC)	Aa3	Stable	AA-	Stable	Not Rated		Aa3	Stable	AA-	Stable	Not Rated	
University of Toledo (UT)	A1	Negative	A	Negative	Not Rated		A2	Negative	A	Stable	Not Rated	
Wright State University (WSU)	Baa2	Negative	Not Rated		Not Rated		Baa1	Stable	Not Rated		Not Rated	
Youngstown University (YU)	A2	Stable	A+	Stable	Not Rated		A2	Stable	A+	Negative	Not Rated	

Liquidity Statistics Comparison

	Miami University (Aa3)	Kent State Univ (Aa3)	Ohio University (Aa3)	Bowling Green State Univ (A1)	The Ohio State University (Aa1)
	FY 2021				
Total FTE Enrollment (#, May be Estimated)	21,626	28,021	24,107	16,020	61,737
Total Tuition Discount (%)	37.5%	32.4%	28.0%	34.9%	32.1%
Total Cash & Investments (\$, in Millions)	\$1,601	\$768	\$1,378	\$546	\$11,020
Spendable Cash & Investments (\$, in Millions)	\$1,211	\$697	\$1,101	\$424	\$9,231
Operating Revenue (\$, in Millions)	\$626	\$609	\$681	\$378	\$7,860
Operating Expenses (\$, in Millions)	\$556	\$598	\$653	\$366	\$7,466
Operating Cash Flow Margin (%)	27.4%	12.7%	16.7%	15.7%	12.6%
Annual Change in Operating Revenue (%)	-5.6%	-0.9%	-4.0%	5.9%	6.0%
Total Cash & Investments to Operating Expenses (x)	2.9	1.3	2.1	1.5	1.5
Total Debt (\$, in Millions)	\$629	\$429	\$640	\$275	\$2,942
Spendable Cash & Investments to Total Debt (x)	1.9	1.6	1.7	1.5	3.1
Debt Service to Operating Expenses (%)	10.9%	5.9%	6.1%	3.5%	2.7%
Total Financial Resources per Student (\$)	\$58,772	\$10,456	\$39,657	\$19,039	\$83,289
Monthly Days Cash on Hand (x)	685.3	253.0	330.5	252.2	268.7
Annual Debt Service Coverage (x)	2.8	2.2	2.9	4.6	5.0

Source: Moody's Investor Services MFRA Database as of January 2023.



Liquidity Statistics, Medians

	Miami University (Aa3)	Aa3 Medians	Aa2 Medians	Aa1 Medians	Aaa Medians
FY 2021					
Total FTE Enrollment (#, May be Estimated)	21,626	24,434	46,828	46,537	59,423
Total Tuition Discount (%)	37.5%	35.1%	38.2%	31.0%	35.1%
Total Cash & Investments (\$, in Millions)	\$1,601	\$1,054	\$2,716	\$5,466	\$12,421
Spendable Cash & Investments (\$, in Millions)	\$1,211	\$753	\$1,978	\$4,096	\$10,310
Operating Revenue (\$, in Millions)	\$626	\$885	\$2,133	\$3,866	\$5,321
Operating Expenses (\$, in Millions)	\$556	\$848	\$2,074	\$3,515	\$5,017
Operating Cash Flow Margin (%)	27.4%	12.1%	13.7%	12.7%	13.4%
Annual Change in Operating Revenue (%)	-5.6%	0.4%	3.0%	1.3%	6.7%
Total Cash & Investments to Operating Expenses (x)	2.9	1.2	1.2	1.6	2.0
Total Debt (\$, in Millions)	\$629	\$432	\$1,164	\$1,367	\$2,784
Spendable Cash & Investments to Total Debt (x)	1.9	1.6	1.6	3.0	3.6
Debt Service to Operating Expenses (%)	10.9%	4.1%	5.4%	2.8%	3.1%
Total Financial Resources per Student (\$)	\$58,772	\$25,702	\$30,559	\$91,541	\$165,390
Monthly Days Cash on Hand (x)	685.3	172.8	196.8	234.5	222.6
Annual Debt Service Coverage (x)	2.8	3.3	2.5	4.8	5.0

Source: Moody's Investor Services MFRA Database as of January 2023.



FY 2017 to FY 2021 Composite Score Trend
INSTITUTIONAL SCORES (EXCLUDING ASSOCIATED IMPACTS OF GASB 68/75)

Institution	2017	2018	2019	2020	2021
UNIVERSITIES					
BOWLING GREEN	3.9	3.1	3.3	3.1	4.4
CENTRAL STATE 1	2.8	2.3	2.8	2.2	2.2
CLEVELAND STATE	3.7	3.9	4.2	3.6	4.7
KENT STATE	4.4	3.6	3.6	3.6	4.7
MIAMI	4.4	4.7	4.7	4.7	4.7
NEOMED	4.7	3.9	4.3	4.1	4.7
OHIO STATE	4.7	4.7	4.7	4.7	4.7
OHIO UNIVERSITY	4.4	4.4	4.4	3.8	4.4
SHAWNEE STATE	2.6	2.1	2.1	2.3	3.4
UNIVERSITY OF AKRON	3.4	3.2	2.8	2.8	4.4
UNIVERSITY OF CINCINNATI	3.4	3.4	3.4	3.7	4.4
UNIVERSITY OF TOLEDO	3.1	3.1	3.1	3.1	4.2
WRIGHT STATE	0.8	2.2	3.2	3.2	4.2
YOUNGSTOWN STATE	3.7	3.3	3.3	3.1	4.2
COMMUNITY COLLEGES					
BELMONT TECH	4.4	5.0	4.0	4.2	5.0
CINCINNATI STATE	2.3	2.3	2.7	3.9	4.7
CLARK STATE	3.8	4.0	4.2	3.8	4.7
COLUMBUS STATE	4.2	4.2	4.8	4.6	4.4
COTC	5.0	4.8	4.2	4.6	5.0
CUYAHOGA	3.6	3.4	3.4	2.8	4.4
EASTERN GATEWAY	3.5	2.8	4.0	3.7	4.2
EDISON STATE	5.0	4.6	4.3	4.5	4.5
HOCKING	3.9	3.9	3.5	3.5	3.9
JAMES RHODES STATE	4.2	4.8	5.0	4.4	5.0
LAKELAND	2.6	2.4	2.0	2.0	2.2
LORAIN	4.4	4.0	4.2	3.8	4.7
MARION TECH	4.3	3.7	4.1	3.8	4.2
NORTH CENTRAL	4.5	4.1	5.0	5.0	5.0
NORTHWEST STATE	4.3	4.1	4.3	3.4	3.4
OWENS STATE	4.0	4.5	4.5	4.2	5.0
RIO GRANDE	4.5	4.3	4.1	3.4	3.8
SINCLAIR	5.0	4.8	5.0	5.0	5.0
SOUTHERN STATE	2.8	2.3	2.3	2.3	3.6
STARK STATE	4.1	4.5	4.5	4.3	4.3
TERRA STATE	2.4	2.1	2.6	2.7	2.6
WASHINGTON STATE	4.2	4.2	5.0	4.4	5.0
ZANE STATE	2.1	2.3	2.3	2.3	3.1

1. Central State's FY 2021 Composite Score is based on their FY 2020 financial statements. The FY 2021 statements have not yet been approved by the Auditor of State.

TABLE 1
FY 2021 FINANCIAL RATIO ANALYSIS
INSTITUTIONAL RATIOS AND SCORES (EXCLUDING ASSOCIATED IMPACTS OF GASB 68/75)

Institution	Composite	Viability		Net Income		Primary Reserve	
	Score	Ratio*	Score	Ratio	Score	Ratio	Score
UNIVERSITIES							
BOWLING GREEN	4.40	88.4%	3.0	11.3%	5.0	59.4%	5.0
CENTRAL STATE 1	2.20	30.1%	2.0	2.0%	3.0	9.2%	2.0
CLEVELAND STATE	4.70	106.7%	4.0	9.6%	5.0	63.8%	5.0
KENT STATE	4.70	102.0%	4.0	10.4%	5.0	66.5%	5.0
MIAMI	4.70	160.1%	4.0	26.3%	5.0	167.9%	5.0
NEOMED	4.70	149.6%	4.0	16.3%	5.0	82.6%	5.0
OHIO STATE	4.70	205.0%	4.0	22.6%	5.0	96.5%	5.0
OHIO UNIVERSITY	4.40	97.5%	3.0	18.2%	5.0	91.1%	5.0
SHAWNEE STATE	3.40	77.8%	3.0	7.1%	5.0	23.1%	3.0
UNIVERSITY OF AKRON	4.40	72.6%	3.0	23.4%	5.0	87.7%	5.0
UNIVERSITY OF CINCINNATI	4.40	77.9%	3.0	17.7%	5.0	68.2%	5.0
UNIVERSITY OF TOLEDO	4.20	138.3%	4.0	11.7%	5.0	42.6%	4.0
WRIGHT STATE	4.20	185.6%	4.0	12.0%	5.0	37.3%	4.0
YOUNGSTOWN STATE	4.20	127.0%	4.0	18.2%	5.0	44.3%	4.0
COMMUNITY COLLEGES							
BELMONT TECH	5.00	N/A	0.0	5.6%	5.0	69.8%	5.0
CINCINNATI STATE	4.70	145.9%	4.0	22.8%	5.0	53.0%	5.0
CLARK STATE	4.70	208.2%	4.0	13.5%	5.0	53.4%	5.0
COLUMBUS STATE	4.40	93.4%	3.0	10.0%	5.0	78.3%	5.0
COTC	5.00	26834.5%	5.0	29.7%	5.0	87.6%	5.0
CUYAHOGA	4.40	61.0%	3.0	17.4%	5.0	60.7%	5.0
EASTERN GATEWAY	4.20	222.4%	4.0	15.5%	5.0	41.3%	4.0
EDISON STATE	4.50	515.9%	5.0	7.4%	5.0	38.8%	4.0
HOCKING	3.90	94.4%	3.0	8.3%	5.0	44.9%	4.0
JAMES RHODES STATE	5.00	434.3%	5.0	36.4%	5.0	56.8%	5.0
LAKELAND	2.20	11.7%	1.0	0.8%	2.0	15.0%	3.0
LORAIN	4.70	105.1%	4.0	11.5%	5.0	69.2%	5.0
MARION TECH	4.20	N/A	0.0	5.6%	5.0	31.4%	4.0
NORTH CENTRAL	5.00	3036.2%	5.0	10.1%	5.0	84.2%	5.0
NORTHWEST STATE	3.40	N/A	0.0	-1.5%	1.0	29.7%	4.0
OWENS STATE	5.00	N/A	0.0	9.3%	5.0	55.7%	5.0
RIO GRANDE	3.80	N/A	0.0	2.7%	3.0	46.1%	4.0
SINCLAIR	5.00	N/A	0.0	13.6%	5.0	89.3%	5.0
SOUTHERN STATE	3.60	52.4%	2.0	19.5%	5.0	31.9%	4.0
STARK STATE	4.30	6002.6%	5.0	3.5%	4.0	47.7%	4.0
TERRA STATE	2.60	62.8%	3.0	-3.7%	1.0	18.8%	3.0
WASHINGTON STATE	5.00	N/A	0.0	14.2%	5.0	78.2%	5.0
ZANE STATE	3.10	50.0%	2.0	5.9%	5.0	14.7%	3.0

* The viability ratio is not calculated for campuses that do not have long-term plant debt. In such instances, the Primary Reserve Ratio score is weighted 80% of the Composite Score.

1. Central State's FY 2021 Composite Score is based on their FY 2020 financial statements. The FY 2021 statements have not yet been approved by the Auditor of State.

NOTE: Pursuant to administrative rule (126:3-1-01) established in response to Senate Bill 6 of the 122nd General Assembly, a composite score of or below 1.75 for two consecutive years results in an institution being placed on fiscal watch. For the purposes of this determination, the Chancellor will utilize composite scores excluding associated impacts of GASB's 68 and 75.

Miami University

Board of Trustees Investment Subcommittee

March 1, 2023

CONFIDENTIAL TREATMENT REQUIRED. This material contains non-public, proprietary, confidential and/or privileged information and is sent exclusively for the internal use of the recipient to whom it is addressed. By accepting this material, the intended recipient agrees to keep its contents confidential. The intended recipient is not permitted to reproduce in whole or in part the information provided in this material or to communicate the information to any third party without Strategic's prior written consent. If you are not the intended recipient, please advise the sender immediately and destroy this material. Any unauthorized use, copying, disclosure, dissemination or distribution of this material by any person or entity is strictly prohibited.

Legal Disclosures

Strategic Investment Group is a registered service mark of Strategic Investment Management, LLC.

Copyright 2023. Strategic Investment Management, LLC. No portion of this publication may be reproduced or distributed without prior permission.

This material is for educational purposes only and should not be construed as investment advice or an offer to sell, or solicitation of an offer to subscribe for or purchase any security. Opinions expressed herein are current as of the date appearing in this material and are subject to change at the sole discretion of Strategic Investment Group®. This document is not intended as a source of any specific investment recommendations and does not constitute investment advice or the promise of future performance.

What Actions Will Be Taken in the Meeting?



What Actions Will the Board of Trustees Investment Subcommittee Be Asked to Perform?

- Approve December 7, 2022 meeting minutes.
- Reaffirm comfort with current Tier III long-term strategic asset allocation, or request that Strategic provide alternatives to consider.
- Affirm no changes to the existing non-endowment IPS.

What Are the Key Takeaways?

(Pages covered in parentheses)



- FY23 cash flow through December is trending as expected, while investment earnings through December are trending less than FY23 budget. (13-15)
- Markets posted historically negative performance for calendar year 2022. The Tier III portfolio declined -9.3% for the year (net of all fees) but provided a strong margin of protection versus the benchmark's decline of -12.6% (net). (18-19)
- There were no material changes to the portfolio's tactical positioning during the fourth quarter of 2022. (22)
- Strategic has updated its Capital Market Assumptions, the inputs used to forecast long-term risk and return expectations for a given asset allocation, due to the significant increase in interest rates over the course of 2022. (29)
- The shift toward a more normal interest rate environment has increased the long-term average real return expectation for Miami's Tier III (LTC) portfolio to 4.7% from the previous 3.8%. (36)
- As an annual governance check to reassess risk budgeting and allocation decisions, the Tier III portfolio's annual stress test is included. A new scenario capturing the return of inflation has been added. (41)
- Miami is starting from a different situation relative to a year ago and PIF market value declines greater than -8% progressively become more severe upon distributions. (55-56)
- Staff is recommending a refresh to the University Debt Policy. (58-69)
- Staff is not recommending any changes to the non-endowment IPS. (71)

Presenter Biographies



Nikki Kraus, CFA

President and Chief Client Officer

- President and Chief Client Officer of Strategic and a member of its Board of Managers and Management Committee.
- 28 years of experience in the OCIO industry, having most recently served as Director of Institutional Business at Hirtle, Callaghan & Co., where she attracted and serviced a broad range of clients. Before that she held various positions at SEI Investments Company working with OCIO clients.
- Serves on the Investment Advisory Subcommittee of the John Templeton Foundation.
- Serves on the U.S. Impact Committee for 100 Women in Finance and as a mentor for Girls Who Invest.
- Co-author of *Endowment Management for Higher Education* (most recent edition published in February 2022), a publication released by the Association of Governing Boards of Universities and Colleges (AGB), and *Endowment Management for Foundations and Nonprofits*, published in October 2022, in partnership with AGB and the Council on Foundations.
- Extensive experience working with college and university endowments. Active collaboration with National Association of College and University Business Officers (NACUBO) for nearly a decade and has presented or spoken at NACUBO events multiple times (NACUBO EMF in 2020, 2019, 2018, 2017 and 2013 and on Endowment Study Webcast in 2013 for 2012 study). Speaker at many AGB events (2016, 2017, 2018 twice, 2019 and 2020). Often asked to provide insights on best practices for college and university Investment Committees.
- B.A. in English and Computer Applications from the University of Notre Dame.
- CFA charterholder and a member of the CFA Society of Washington, D.C.
- Years in Industry: 28.

Presenter Biographies



Markus Krygier, Ph.D.

Co-Chief Investment Officer

- Member of the Office of the CIO, responsible for all aspects of Strategic's investment process, portfolios, and performance. Also, a member of Strategic's Board of Managers and the Management Committee.
- Assesses, coordinates and communicates Strategic's economic, capital markets, investment strategy and management outlook. Works closely with investment, research and analytical staff in developing, integrating, and implementing investment policy for the firm's clients.
- Member of Strategic's Diversity, Equity, and Inclusion Committee.
- Previously Deputy Chief Investment Officer at Amundi Asset Management in London. Prior to Amundi, at Dresdner Kleinwort in London as a Managing Director, Chief Debt Strategist and Global Head of FX Strategy; at the International Monetary Fund as economist in the International Capital Markets division; and as Head of Global Strategy at Credit Agricole Asset Management in London and Paris.
- Ph.D. in Economics from Wayne State University, holds the Advanced Studies Certificate in International Economic Policy Research from the Kiel Institute of the World Economy, an M.A. in Economics from Wayne State University, and completed his undergraduate studies in Economics and Political Science at the University of Freiburg in Germany.
- Years in Industry: 27.



Christopher Pond, CFA

Managing Director, Client Portfolio Management

- Works closely with the investment and research teams to develop and implement investment solutions that meet clients' objectives.
- Member of Strategic's ESG Committee.
- While pursuing his M.B.A., he worked as an intern at Cambridge Associates, and prior to that he was a Financial Advisor at Legg Mason.
- M.B.A. from the Darden Graduate School of Business Administration at the University of Virginia and a B.S. in Commerce from the McIntire School at the University of Virginia.
- CFA charterholder and a member of the CFA Society of Washington, D.C.
- Years in Industry: 20.

Presenter Biographies



Leah Posadas

Director, Client Portfolio Management

- Works closely with the investment and research teams to develop and implement investment solutions that meet clients' objectives.
- Chair of Strategic's Diversity, Equity, and Inclusion Committee.
- Prior to joining Strategic in 2014, she was a Vice President and Portfolio Analyst at Lazard Asset Management, where she worked with the global tactical asset allocation and fixed income strategies. She began her career as a Junior Analyst at Mosaic Capital Advisors, a long-short hedge fund based in New York City.
- B.S. in Finance and a B.S. in Entrepreneurial Studies from the University of Minnesota.
- Years in Industry: 17.

Investment Subcommittee Agenda

March 1, 2023 / 3:00 p.m.

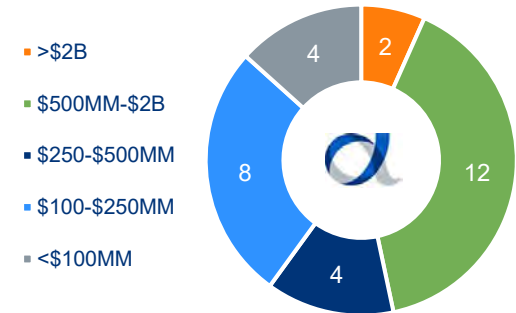
- I. Approval of Meeting Minutes – Guiot
- II. Non-Endowment Review – Guiot
 - a. Capital Stack
 - b. Tier Allocation
 - c. Cash Flow
- III. Fiscal Year-to-Date Update: Investment Performance & Asset Allocation Review – Strategic
 - a. Non-Endowment
 - b. Endowment
- IV. Asset Allocation Review – Strategic
 - a. Long-term Capital Market Assumptions Update
 - b. Non-endowment Policy Portfolio Optimization
 - c. Portfolio Stress Tests
- V. Endowment Distribution Stress Test – Guiot
- V. Debt Policy – Guiot / Creamer
- VI. IPS Review – Guiot / Viezer
- VII. Appendices (see separate attachment)
 - a. Performance Update Supplemental Slides
 - b. Capital Markets Outlook
 - c. Capital Market Assumptions Supplemental Slides
 - d. Stress Test and Inflation Supplemental Slides
 - e. FY 2023 Investment Subcommittee Calendar
 - f. December 2022 Performance Detail

Strategic Investment Group

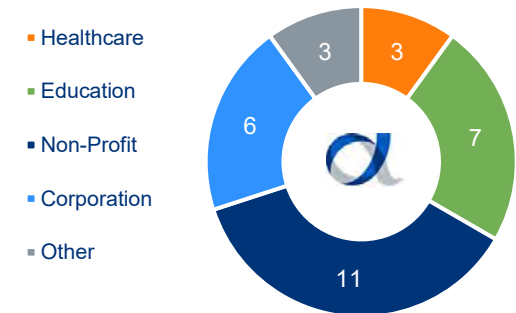
Organizational Overview

- As of December 31, 2022, Strategic oversaw 31 discretionary OCIO relationships representing \$25.5 billion in assets under management.
- Strategic added a major internet-related software company as a new client in October. \$850M taxable mandate with an endowment-like pool + short-term liquidity pool.
- Michelle McCloskey joined Strategic in September as the firm's new Executive Chairperson.
- Jackie Gifford joined Strategic in November as Co-Head of Public Equities.
- Nikki Kraus has been named President and Markus Krygier will be appointed to the Board of Managers.
- Strategic's annual Idea Lab client conference will be held on October 4-5.

CLIENTS BY ASSET SIZE



CLIENT BY PROFILE



Celebrating 35 years of providing dedicated outsourced CIO solutions to our clients.

AUM and client counts are as of December 31, 2022. Staff information is as of January 1, 2023.

Approval of Meeting Minutes

**BOARD OF TRUSTEES
MIAMI UNIVERSITY
Minutes of the Investment Subcommittee Meeting
Roudebush Hall, Room 104
Miami University, Oxford, Ohio
December 7, 2022**

The meeting of the Investment Subcommittee was called to order at 3:00 p.m. by Subcommittee Chair, National Trustee Biff Bowman. The meeting was held in Roudebush Hall, Room 104 on the Oxford campus. Along with Chair Bowman, Subcommittee members; Trustee Mary Schell, and National Trustee Mark Sullivan, were present.

In addition to the Subcommittee members, Senior Vice President David Creamer, and Secretary to the Board of Trustees Ted Pickerill, from the President's Executive Cabinet were present. Representatives from the outside CIO, Strategic Investment Group (SIG), included; Nikki Kraus, Markus Krygier, Leah Posadas, in person, and Christopher Pond via telephone. Associate Treasurer and Miami Foundation CFO Bruce Guiot, and Director of Investments Tim Viezer, were also present.

Following a motion by Trustee Schell and a second by National Trustee Mark Sullivan, the minutes from the prior meeting were unanimously approved by voice vote, with all voting in favor and none opposed.

The Subcommittee reviewed the capital stack, comprised of the endowment pool, the University's non-endowment investments, and its operating cash.

Bruce Guiot explained that the Tier 1 increase was due to the semesterly inflow of tuition. Tier 2 decreased due to a \$10M annual draw for Boldly Creative. He stated that operating cash flow so far for FY23 through October 31 is tracking to forecast, and the endowment/PIF was valued at \$658 million as of October 31.

The Subcommittee reviewed investment performance for FY23 through October 31 for both the non-endowment and endowment. After a strong July, returns again turned negative, however Miami's returns have slightly outperformed the benchmarks. The increased interest rates meant to curb sustained rising inflation have impaired most types of investments, with the non-endowment down about 2% for the FYTD. The endowment/PIF was down about 1.8% (exclusive of some private capital investment returns yet to be included). Finally, the Subcommittee was informed that preliminary performance results for November appear strongly positive, with an anticipated positive November 31 YTD return.

There were no recommendations for movement between tiers.

Strategic Investment Group reviewed investment manager fees for the previous fiscal year. They reported that fee negotiations and asset aggregations with other clients resulted in an estimated savings of about \$796,000 for the non-endowment in FY22.

Next, Bruce Guiot provided a retirement plan update. Assets in the Alternative Retirement Plan and the 403(b) supplemental plans totaled over \$483 million as of September 30, down approximately \$100M since December 30. Miami is currently maintaining 4 vendors, the minimum allowed by State law.

Dr. Creamer and Bruce Guiot provided a brief update and led a discussion on various sustainability initiatives and topics related to the physical campus. They reported there have been significant energy consumption reductions to date through the use of alternative heating and cooling (geothermal), the application of more efficient systems during renovations, and campus projects, such as the replacement of steam with hot water heating. The University is rated “Gold” through the Sustainability Tracking, Assessment, and Rating System (STARS).

SIG Reported that Moody’s is entering this area, and will be considering ESG in scoring. SIG will keep Miami informed as industry standards develop.

Finally, SIG provided a preview of modelling they are conducting regarding the impact of higher inflation and interest rates on their capital market assumptions. SIG will provide the results for discussion at the next meeting.

With no more business to come before the Subcommittee, National Trustee Sullivan moved and Trustee Schell seconded a motion to adjourn which was unanimously approved by voice vote, with all voting in favor and none opposed, and the meeting adjourned at 5:00 p.m.

Attachments:

- [December 2022 meeting Presentation](#)
- [December 2022 meeting Appendices](#)



Theodore O. Pickerill II
Secretary to the Board of Trustees

Non-Endowment Review

University Capital Stack

Capital Stack as of December 31, 2022



MU/MUF Capital Stack

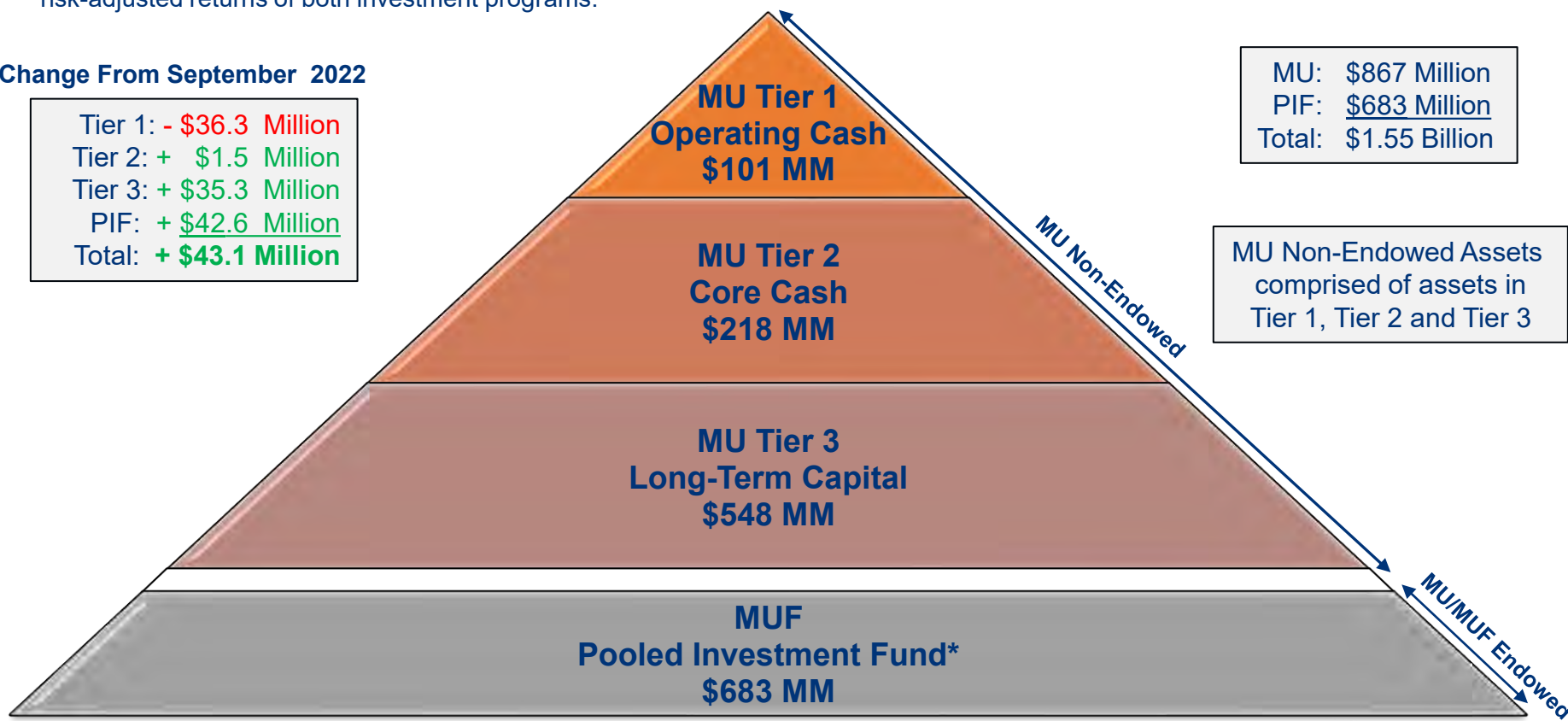
MU Non-Endowed and MUF Pooled Investment Fund Investment Policy Statements: “For investment strategy purposes, the University’s Non-Endowment and Foundation Pooled Investment Fund portfolios should be considered together. The liquidity, risk, and return characteristics of the combined pools provide the opportunity to more effectively deploy capital and improve the overall risk-adjusted returns of both investment programs.”

Change From September 2022

Tier 1:	- \$36.3 Million
Tier 2:	+ \$1.5 Million
Tier 3:	+ \$35.3 Million
PIF:	+ \$42.6 Million
Total:	+ \$43.1 Million

MU:	\$867 Million
PIF:	\$683 Million
Total:	\$1.55 Billion

MU Non-Endowed Assets comprised of assets in Tier 1, Tier 2 and Tier 3

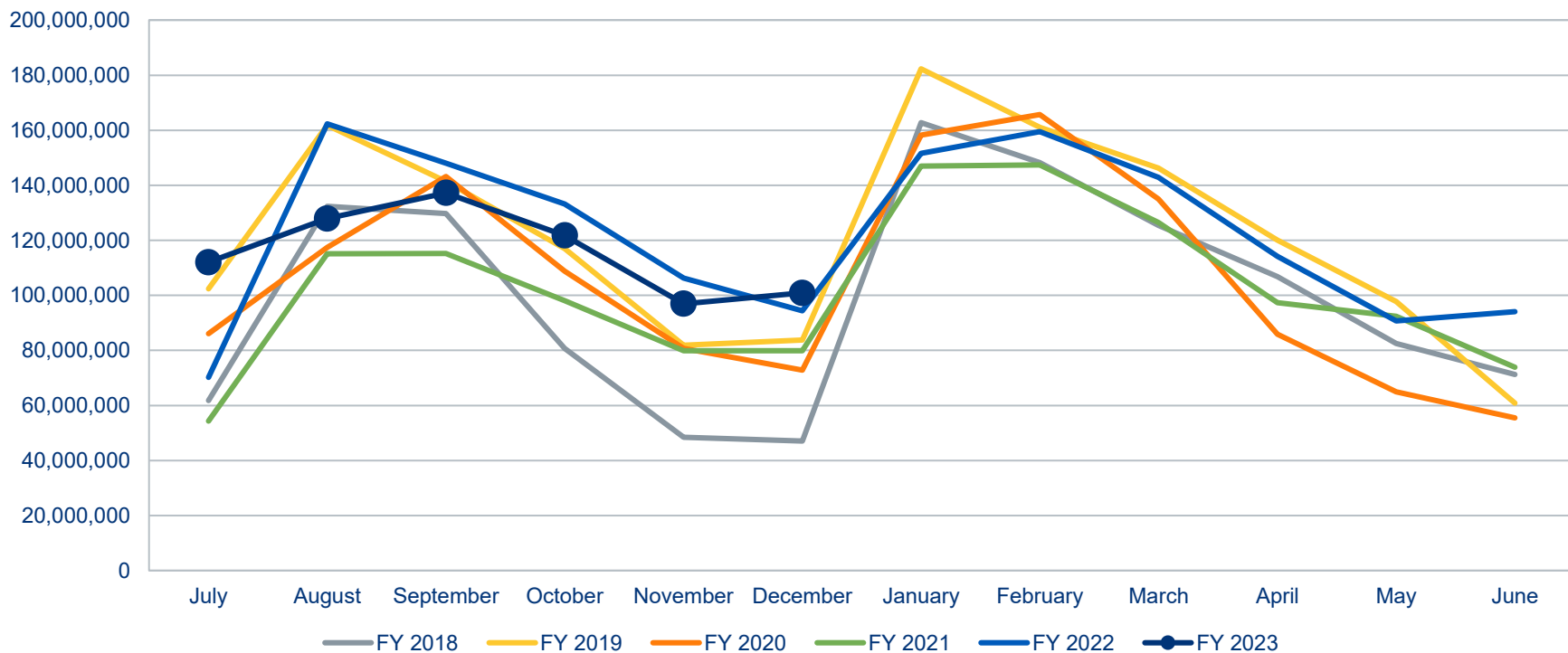


*An additional \$17.2 million in cash is in transition to the PIF endowment as of December 31, 2022.

Last Five-Year Cash Flow Cycle



Tier I Operating Cash By Month and Fiscal Year



Non-Endowment Conclusions and Observations

December 2022



TIER I:

- FY23 cash flow on target versus forecast
 - \$153.4 million balance through 1/31/2023
 - Transferred \$15 million to Tier III FYTD
- Efforts to enhance Tier I Operating Cash yield
 - Rates increasing among existing cash vehicles

TIER II:

- Tier II Baseline balance as of 12/31: \$187.6 million
- Baseline currently exceeds reserve balance

NON-ENDOWMENT:

- Reserve for Investment Fluctuations target: \$140 million
- Reserve for Investment Fluctuations balance: \$132.5 million
 - \$7.5 million below target
- Investment earnings through 12/31/2022 trending below budget:
 - Investment earnings Oxford E&G budget: \$14.9 million
 - Investment earnings through 12/31: \$ 5.1 million
 - Net realized income & realized gains
 - Unrealized gains through 12/31: \$2.0 million
 - Potential negative budget impact mitigated by the Reserve for Investment Fluctuations
- Maintain surplus Tier I cash balances at current attractive relative yield/risk

Fiscal Year-to-Date Update: Investment Performance & Asset Allocation Review

Non-Endowment Endowment

Miami University Non-Endowment Portfolios

Investment Performance Review – as of December 31, 2022

Asset Class <i>Benchmark</i>	Market Value (\$ mill)	Strategic Portfolio (%)	Rates of Return (%)										Inception Date
			1 Month	3 Month	Fiscal Year To Date	Calendar Year To Date	1 Year	3 Year	5 Year	10 Year	Since Policy Inception	Since Inception	
Miami University Long-Term Capital Tier III (Net of Sub-Mgr Fees)	548.449	100.0%	(1.6)	6.8	1.3	(9.1)	(9.1)	4.7	4.9	4.4	7.3	4.6	30-Jun-02
Miami University Long-Term Capital Tier III (Net of Sub-Mgr and Strategic Fees)	548.449	100.0%	(1.6)	6.8	1.2	(9.3)	(9.3)	4.4	-	-	7.1	-	31-Dec-18
<i>Total Portfolio Policy Benchmark</i>			(2.0)	6.5	0.8	(12.5)	(12.5)	2.8	4.0	4.0	6.4	4.4	
<i>Total Portfolio Policy Benchmark (Net of Fees)</i>			(2.0)	6.4	0.7	(12.6)	(12.6)	2.6	-	-	6.2	-	
Miami University - Baseline Tier II (Net of Sub-Mgr Fees)	187.588	100.0%	0.4	0.6	0.6	0.0	0.0	0.4	0.9	1.0	1.0	2.3	30-Jun-02
Miami University - Baseline Tier II (Net of Sub-Mgr and Strategic Fees)	187.588	100.0%	0.3	0.6	0.6	(0.1)	(0.1)	0.4	-	-	0.9	-	31-Dec-18
<i>Total Portfolio Policy Benchmark</i>			0.3	0.7	0.2	(1.1)	(1.1)	0.2	0.9	0.7	0.9	1.9	
<i>Total Portfolio Policy Benchmark (Net of Fees)</i>			0.3	0.7	0.2	(1.2)	(1.2)	0.1	-	-	0.7	-	
Miami University Special Initiatives Fund (Net of Sub-Mgr Fees)	30.026	100.0%	0.1	0.9	(0.5)	(3.5)	(3.5)	0.0	-	-	1.8	1.8	19-Sep-18
Miami University Special Initiatives Fund (Net of Sub-Mgr and Strategic Fees)	30.026	100.0%	0.1	0.9	(0.6)	(3.6)	(3.6)	0.0	-	-	1.7	1.7	19-Sep-18
<i>Total Portfolio Policy Benchmark</i>			0.1	0.9	(0.6)	(3.6)	(3.6)	0.0	-	-	1.7	1.7	
Miami University Core Cash (Net of Sub-Mgr Fees)	217.614		0.3	0.7	0.5	(0.6)	(0.6)	0.6	1.4	1.2	1.6	2.5	30-Jun-02
Miami University Core Cash (Net of Sub-Mgr and Strategic Fees)	217.614		0.3	0.7	0.4	(0.7)	(0.7)	0.5	-	-	1.5	-	31-May-18
Total Miami University Client Group (Net of Sub-Mgr and Strategic Fees)	766.063		(1.1)	5.0	0.9	(6.9)	(6.9)	2.9	3.5	3.0	3.4	3.4	30-Jun-02

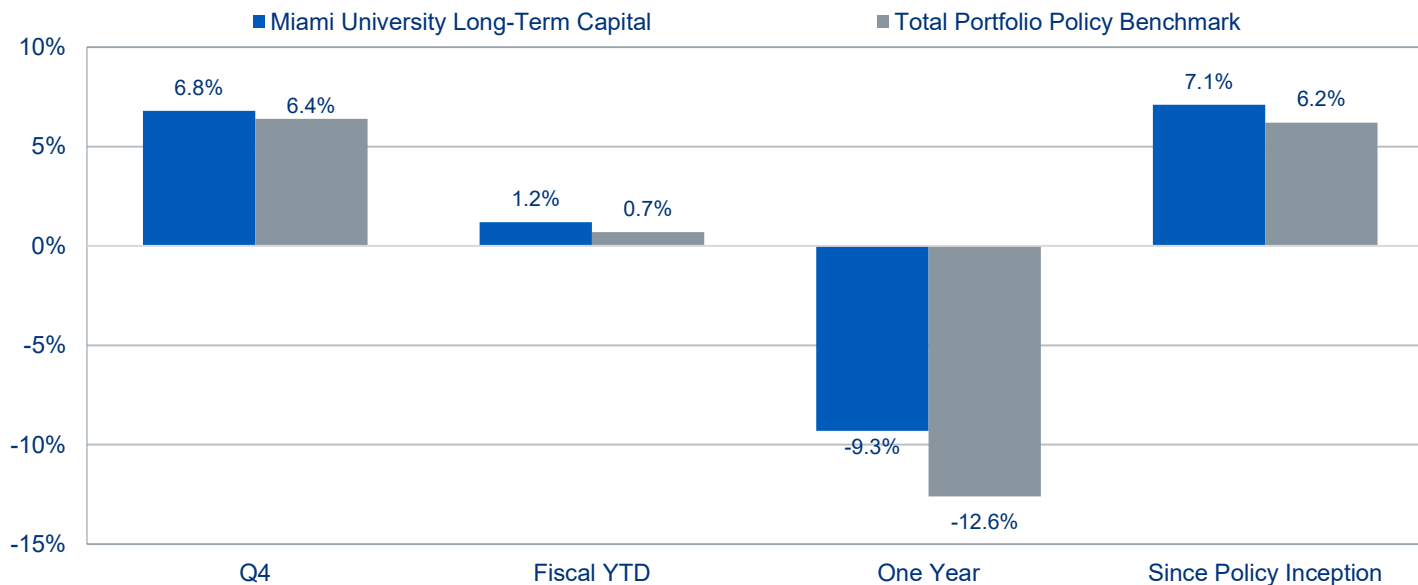
Miami University Non-Endowment (LTC)

Performance Drivers, Observations, and Conclusions

- 1. The Long-Term Capital (Tier III) portfolio returned 6.8% net of all fees in the fourth quarter, 40 bps ahead of the policy benchmark return of 6.4% over the same period.**
 - Fiscal year to date through December, the portfolio was up 1.2%, ahead of the benchmark's 0.7% gain.
- 2. For the calendar year ending December 31, 2022, the Tier III portfolio declined -9.3% versus -12.6% for its benchmark.**
 - Absolute returns were down due mainly to weak results in public equities (-15.4%) and fixed income (-10.0%).
 - On a relative basis, the portfolio has protected value due to manager selection and asset class positioning in U.S. equities (+360 bps versus benchmark), non-U.S. equities (+240 bps), hedge funds (+680 bps), and fixed income (+280 bps).
- 3. January was a strong month on an absolute basis, with the portfolio gaining 4.8% for the month but lagging slightly the 5.0% return of the policy benchmark.**
 - Preliminary month-to-date results for the Tier III portfolio through February 17 are down, with the portfolio returning -0.9%, in line with the benchmark.
- 4. We anticipate volatile market performance globally throughout 2023, but continue to see a favorable environment for active management.**
 - Amid the market volatility, Strategic has stuck to its disciplined investment approach and implementation.
 - We continue to believe that the current opportunity set for active managers to add value remains the most attractive of the past several decades.

Miami University Non-Endowment (LTC)

Investment Performance – as of December 31, 2022



**Total Portfolio
Added Value:**

+0.4%

+0.5%

+3.3%

+0.9%

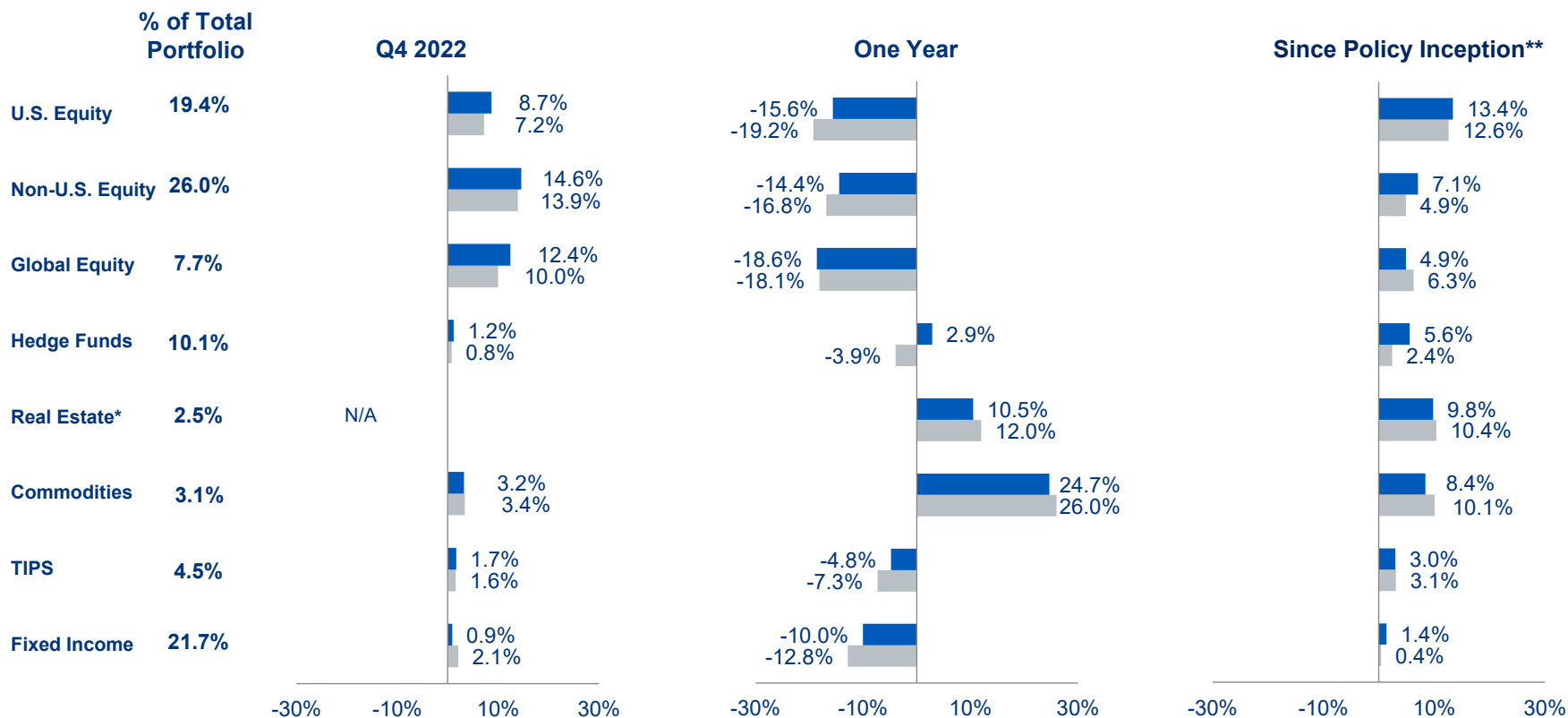
**In calendar year 2022 the portfolio returned -9.3% net of all fees,
ahead of the policy benchmark by 330 bps.**

Total portfolio added value and graphed returns may differ slightly due to rounding. Data as of December 31, 2022.

All total portfolio returns are shown net of sub-manager and Strategic fees. All policy benchmark returns are shown net of estimated passive management fees and rebalancing costs.

Miami University Non-Endowment (LTC)

Investment Performance Review – as of December 31, 2022



PORTFOLIO BENCHMARKS

U.S. Equity - Russell 3000 Total Return Index.

Non-U.S. Equity - A blend of 66.7% MSCI World Ex-U.S. IMI Total Return (Net) Index and 33.3% MSCI Emerging Markets Total Return (Net) Index.

Global Equity - MO3 Global Equity Benchmark Total Return Index.

Hedge Funds - HFRX Equal Weighted Strategies Total Return Index.

Real Estate - NCREIF Open End Diversified Core Total Return Index.

Commodities - S&P GSCI Total Return Index.

TIPS - Barclays Capital 1 to 10 Year TIPS Total Return Index.

U.S. Fixed Income - A blend of 89.6% Barclays Capital U.S. Aggregate Total Return Index and 10.4% BofA Merrill Lynch High Yield Cash Pay Total Return Index.

Data as of December 31, 2022.

*Returns displayed are internal rates of return (IRR)

**Returns since policy inception represent returns from 1/1/2019 to 12/31/2022. The following asset classes were created after policy inception and their returns are shown back to their original dates as follows:

Global Equity- 4/30/2019, Real Estate- 6/28/2019, Commodities- 1/31/2019, TIPS- 1/30/2019

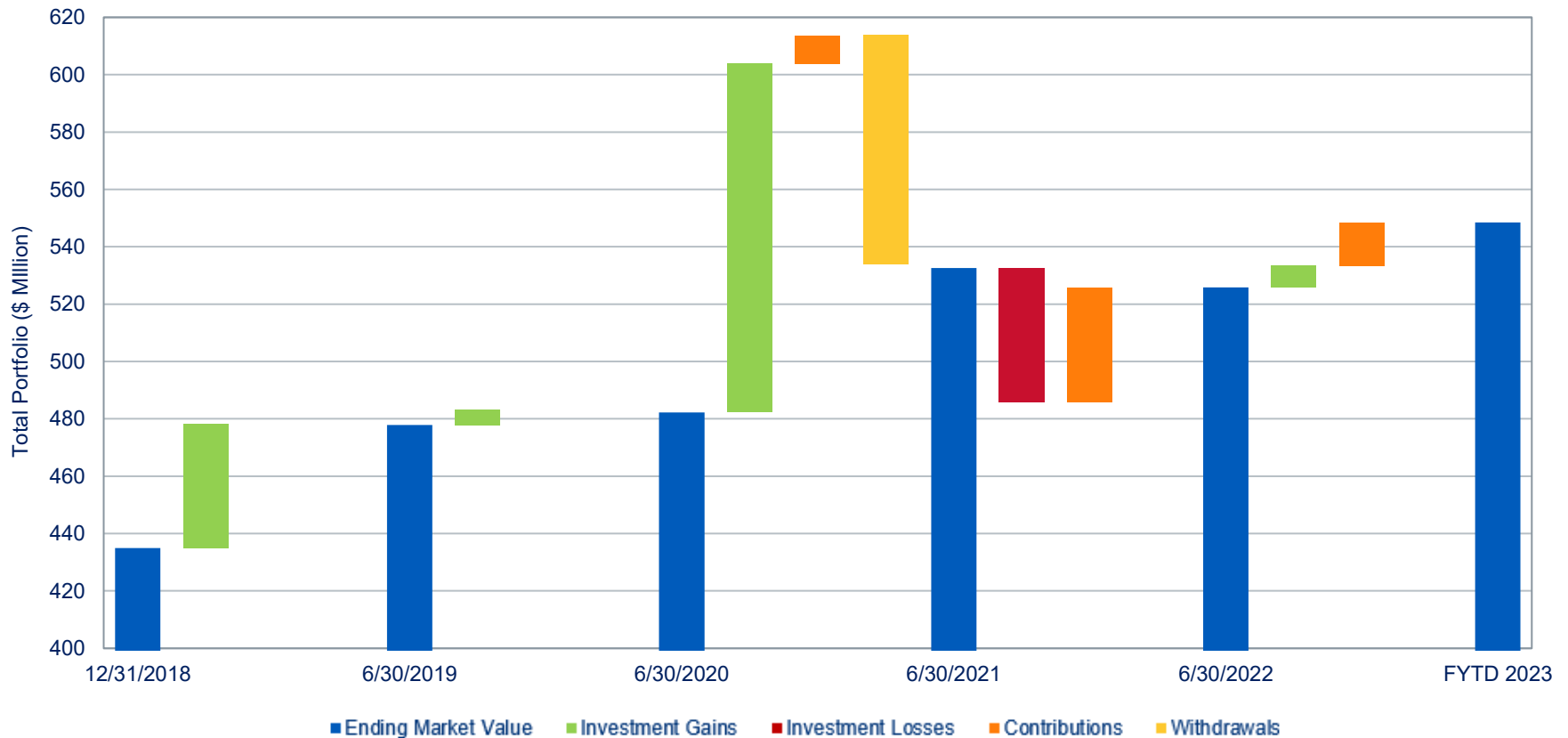
Asset class returns are shown net of sub-manager fees. Asset class policy benchmark returns are shown gross of assumed passive fees.

■ Miami University Long-Term Capital

■ Total Portfolio Policy Benchmark

Portfolio Review – Miami University Non-Endowment (LTC)

Portfolio Growth Since Inception – by Fiscal Year



Since policy inception (December 31, 2018), Investment Returns have generated over \$130 million of net gains within the Tier III portfolio.

FYTD 2023 is through December 31, 2022.

Tier III Asset Allocation

Current vs. Policy – as of December 31, 2022

	(1)	(2)	(3)	(4)	(5)
Asset Category	Range	Long-term Policy Portfolio	Policy Benchmark Weights	Current Portfolio	Active Strategy
Equity	44.0 - 64.0	54.0	54.0	53.1	(0.9)
U.S. Equity	17.0 - 37.0	27.0	27.0	23.5	(3.5)
Developed Non-U.S. Equity	8.0 - 28.0	18.0	18.0	19.1	1.1
Emerging Market Equity	0.0 - 19.0	9.0	9.0	10.5	1.5
Alternatives	0.0 - 22.0	12.0	12.0	10.1	(1.9)
Hedge Funds (Net)	0.0 - 22.0	12.0	12.0	10.1	(1.9)
Hedge Funds (Gross)	0.0 - 27.0	22.0	22.0	23.9	1.9
Asset Allocation Overlay	(20.0) - 0.0	(10.0)	(10.0)	(13.8)	(3.8)
Real Assets	3.0 - 23.0	10.0	10.0	10.1	0.1
Real Estate	0.0 - 7.5	3.0	2.5	2.5	0.0
Commodities	0.0 - 9.0	3.0	3.0	3.1	0.1
TIPS	0.5 - 10.5	4.0	4.5	4.6	0.1
Fixed Income	14.0 - 34.0	24.0	24.0	21.7	(2.3)
U.S. Investment Grade	6.5 - 31.5	21.5	21.5	15.7	(5.8)
U.S. High Yield	0.0 - 12.5	2.5	2.5	5.9	3.4
Municipal Bonds	- - -	0.0	0.0	0.0	0.0
Non-U.S. Fixed Income	0.0 - 10.0	0.0	0.0	0.0	0.0
Cash (Net Exposure)	0.0 - 20.0	0.0	0.0	5.0	5.0
Foreign Currency Exposure		27.0	27.0	29.4	2.4
TOTAL		100.0	100.0	100.0	0.0

Policy Benchmark Weights are adjusted to float the real estate weight based on the actual weight of the asset class in the portfolio.

Active Strategy is defined as the difference between Current Portfolio allocations and Policy Benchmark Weights.

Risk Analysis estimates future annualized standard deviation of returns.

Policy Benchmark Risk analyzes current policy benchmark asset mix, assuming passive security selection.

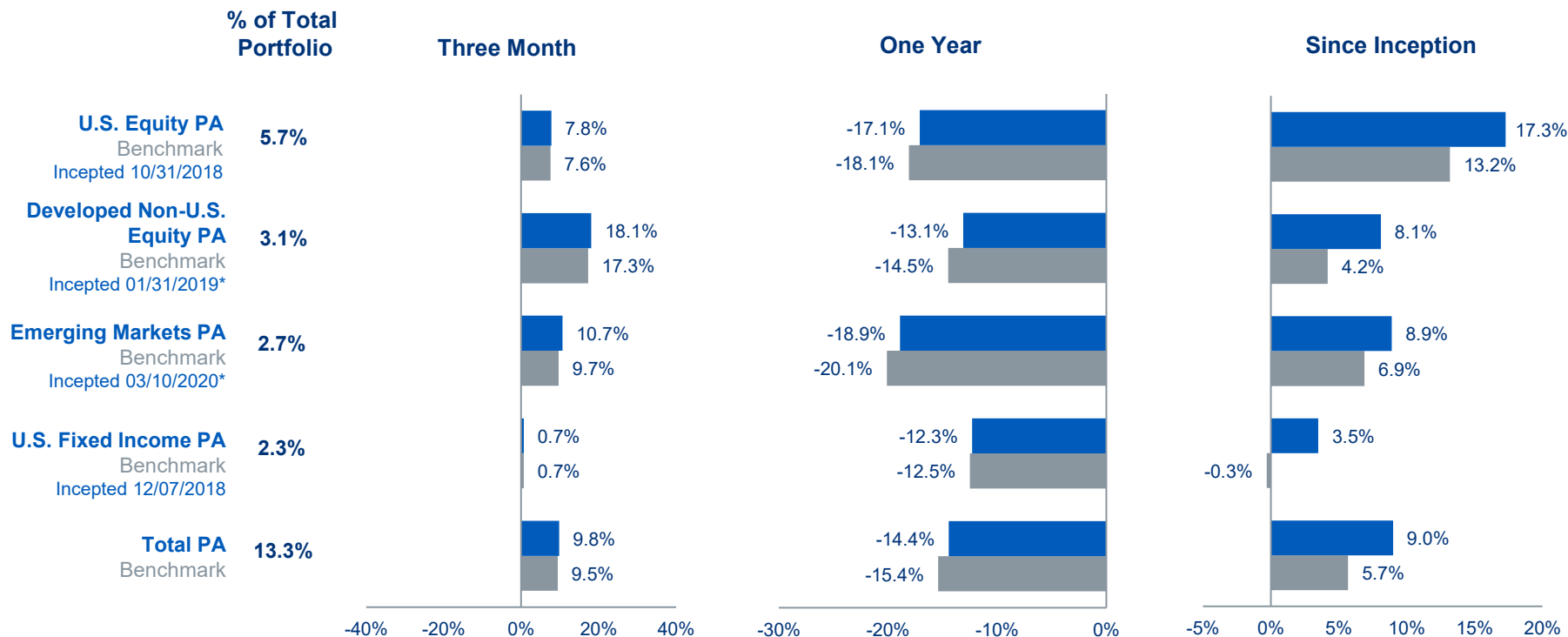
Portfolio Risk considers current asset mix and active security selection strategies.

Tracking Error refers to the standard deviation of the difference between portfolio and benchmark returns.

Foreign Currency Exposure summarizes the percentage of the total portfolio that is not denominated in U.S. dollars and the corresponding contribution to risk.

Portfolio Review – Miami University Non-Endowment (LTC)

Portable Alpha Returns – as of December 31, 2022



Portable Alpha has contributed over 44 basis points to total portfolio annualized added value since policy inception.

Data as of December 31, 2022.

*Both Developed Non-U.S. Equity and Emerging Markets Portable Alpha positions have been incepted and terminated at least once before their current inception date. Figures from previously incepted positions are not included in position returns in the bar graphs above, but are included in the value-added calculations.

The Portable Alpha strategy is created by overlaying hedge funds with future contracts. The strategy is reported at the notional value of the futures position with a return that combines the return of the hedge fund exposure with the return of the futures contracts.

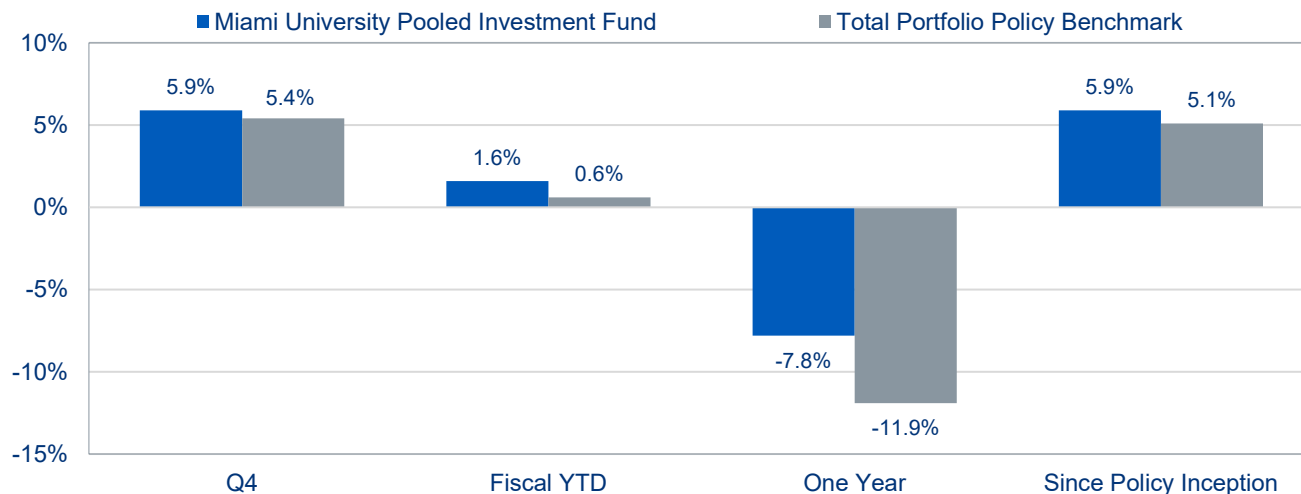
Portable Alpha Benchmarks: A custom benchmark that is the weighted average of the returns of the indices corresponding to the underlying futures contracts, where the weights are based on the notional value of said contracts and are rebalanced monthly.

Fiscal Year-to-Date Update: Investment Performance & Asset Allocation Review

Non-Endowment
Endowment

PIF Performance Review

Calendar Year Investment Performance – as of December 31, 2022



**Total Portfolio
Added Value:**

+0.5%

+1.0%

+4.1%

+0.8%

**In calendar year 2022 the portfolio returned -7.8% net of all fees,
ahead of the policy benchmark by 410 bps.**

Numbers may differ slightly due to rounding. All total portfolio returns are shown net of sub-manager and Strategic fees. All policy benchmark returns are shown net of estimated passive management fees and rebalancing costs. Legacy manager returns are net of sub-manager fees and gross of Strategic fees. Legacy benchmark returns are gross of estimated passive fees and rebalancing costs. As of 12/31/2022 legacy investments are 11.4% of the total portfolio. Since Policy inception is the period from 9/30/2018 to 12/31/2022.

PIF Performance Review ex-Illiquids

Performance as of December 31, 2022

	\$ Millions	% of Total PIF Assets	1 Month	3 Month	Fiscal YTD	Calendar YTD	1 Year	3 Year	Since Policy Inception - 10/1/2018
Miami - Pooled Investment Fund ex. Illiquids Performance									
<i>as of December 31, 2022</i>									
Miami University Pooled Investment Fund - Ex. Illiquids (Net of Sub-Mgr Fees) ^{1, 2}	\$514.1	75.2%	-1.9%	8.1%	2.1%	-10.6%	-10.6%	5.0%	5.1%
Miami University Pooled Investment Fund - Ex. Illiquids Benchmark (Gross) ³			-2.5%	7.1%	0.9%	-14.4%	-14.4%	2.7%	4.0%

	\$ Millions	% of Total PIF Assets	1 Month	3 Month	Fiscal YTD	Calendar YTD	1 Year	3 Year	Since Policy Inception - 10/1/2018
Miami - Pooled Investment Fund Performance									
<i>as of December 31, 2022</i>									
Miami University Pooled Investment Fund (Net of Sub-Mgr Fees) ²	\$683.4	100.0%	-1.5%	5.9%	1.7%	-7.6%	-7.6%	6.5%	6.1%
Miami University Pooled Investment Fund Policy Benchmark (Gross) ³			-2.0%	5.4%	0.7%	-11.7%	-11.7%	4.7%	5.4%

1 Performance excludes all Opportunistic, Private Equity, Real Estate and Timber investments since policy inception.

2 Performance is net of sub-manager fees and gross of Strategic fees.

3 Benchmark performance is weighted average of asset class policy benchmark performance.

Asset Allocation Review

Long-term Capital Market Assumptions Update

Strategic's Capital Markets Assumptions

Our Equilibrium Assumptions Are Based on Capital Markets Pricing Theory

Asset Class	Equilibrium Returns	Expected Alpha	Volatility	CORRELATION															
				US Equity	Dev. Non US Equity	EM Equity	China A	Private Equity	Direct Lending	Hedge Funds	Directional Hedge Funds	Market Neutral Hedge Funds	Private Real Estate	TIPS	Commodities	U.S. Investment Grade	U.S. Treasury	High Yield	Cash
US Equity	4.9%	0.4%	16.2%	1.0	0.9	0.8	0.7	0.9	0.7	0.8	0.8	0.4	0.5	0.0	0.3	0.1	0.0	0.6	0.0
Dev. Non US Equity	5.2%	0.6%	16.7%	0.9	1.0	0.8	0.7	0.8	0.7	0.9	0.9	0.5	0.5	-0.1	0.3	0.0	-0.1	0.5	0.0
EM Equity	5.7%	0.8%	21.5%	0.8	0.8	1.0	0.8	0.7	0.6	0.7	0.8	0.4	0.4	0.0	0.3	-0.1	-0.3	0.5	0.0
China A	6.1%	1.8%	27.5%	0.7	0.7	0.8	1.0	0.6	0.5	0.8	0.7	0.5	0.4	0.0	0.1	-0.2	-0.3	0.5	0.0
Private Equity	5.9%	2.0%	23.4%	0.9	0.8	0.7	0.6	1.0	0.7	0.7	0.7	0.4	0.5	-0.1	0.5	0.0	0.0	0.5	0.0
Direct Lending	3.3%	1.3%	12.3%	0.7	0.7	0.6	0.5	0.7	1.0	0.7	0.8	0.3	0.4	0.2	0.6	0.2	-0.1	0.6	0.0
Hedge Funds	2.5%	2.0%	6.2%	0.8	0.9	0.7	0.8	0.7	0.7	1.0	0.9	0.8	0.2	0.5	0.6	0.2	0.0	0.8	0.0
Directional Hedge Funds	3.7%	2.0%	11.0%	0.8	0.9	0.8	0.7	0.7	0.8	0.9	1.0	0.4	0.1	0.6	0.6	0.1	-0.2	0.8	0.0
Market Neutral Hedge Funds	1.7%	2.0%	5.2%	0.4	0.5	0.4	0.5	0.4	0.3	0.8	0.4	1.0	0.3	0.4	0.3	0.3	0.3	0.5	0.0
Private Real Estate	2.6%	0.3%	10.7%	0.5	0.5	0.4	0.4	0.5	0.4	0.2	0.1	0.3	1.0	0.4	0.2	0.4	0.3	0.5	0.0
TIPS	1.1%	0.0%	4.4%	0.0	-0.1	0.0	0.0	-0.1	0.2	0.5	0.6	0.4	0.4	1.0	0.4	0.7	0.6	0.2	0.0
Commodities	1.0%	0.0%	20.2%	0.3	0.3	0.3	0.1	0.5	0.6	0.6	0.6	0.3	0.2	0.4	1.0	0.0	-0.1	0.5	0.0
U.S. Investment Grade	1.2%	0.2%	4.8%	0.1	0.0	-0.1	-0.2	0.0	0.2	0.2	0.1	0.3	0.4	0.7	0.0	1.0	0.9	0.2	0.0
U.S. Treasury	1.0%	0.0%	4.5%	0.0	-0.1	-0.3	-0.3	0.0	-0.1	0.0	-0.2	0.3	0.3	0.6	-0.1	0.9	1.0	-0.1	0.0
High Yield	2.5%	0.7%	9.4%	0.6	0.5	0.5	0.5	0.5	0.6	0.8	0.8	0.5	0.5	0.2	0.5	0.2	-0.1	1.0	0.0
Cash	0.8%	0.0%	1.0%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0
Inflation	2.75%																		

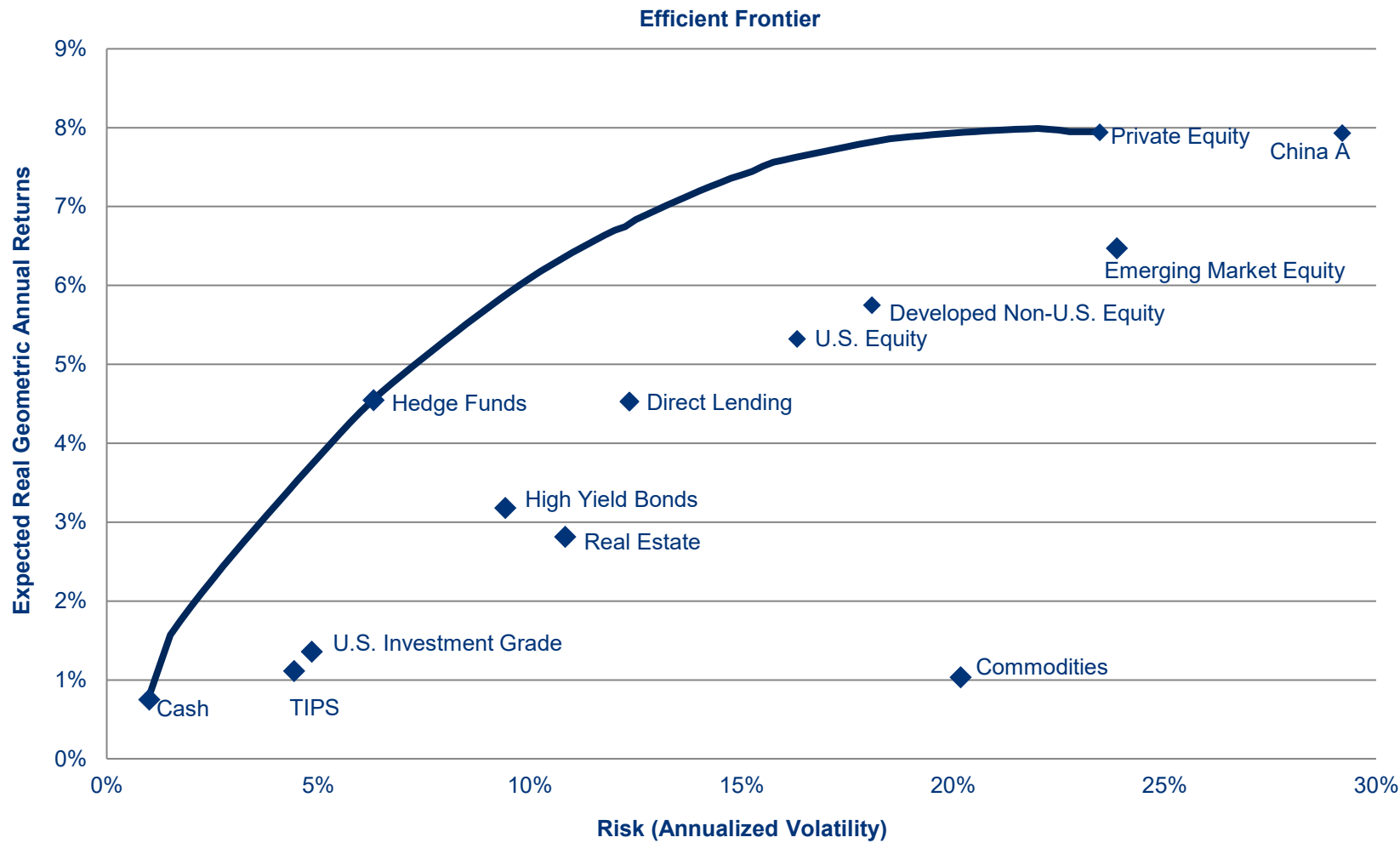
Returns represent the expected compound growth rates in excess of inflation.

- We base our capital market assumptions on historical data, consistent with the equilibrium economic and market conditions that we expect over the planning horizon.
- We adjust the historical data for secular trends including, for example, the increased correlations across asset classes due to the integration of international capital markets.

Assumptions as of September 30, 2022. Source: Strategic. "Alpha" represents the assumed alpha used for purposes of analyzing alternative hypothetical portfolios and should not be construed as a promise of future performance. Please see Important Disclosures at the end of the presentation for disclosures about expected return, correlations and alpha and important risk information. The matrix is provided for illustrative purposes only and is subject to change at the sole discretion of Strategic.

Strategic's Capital Markets Assumptions

Efficient Frontier



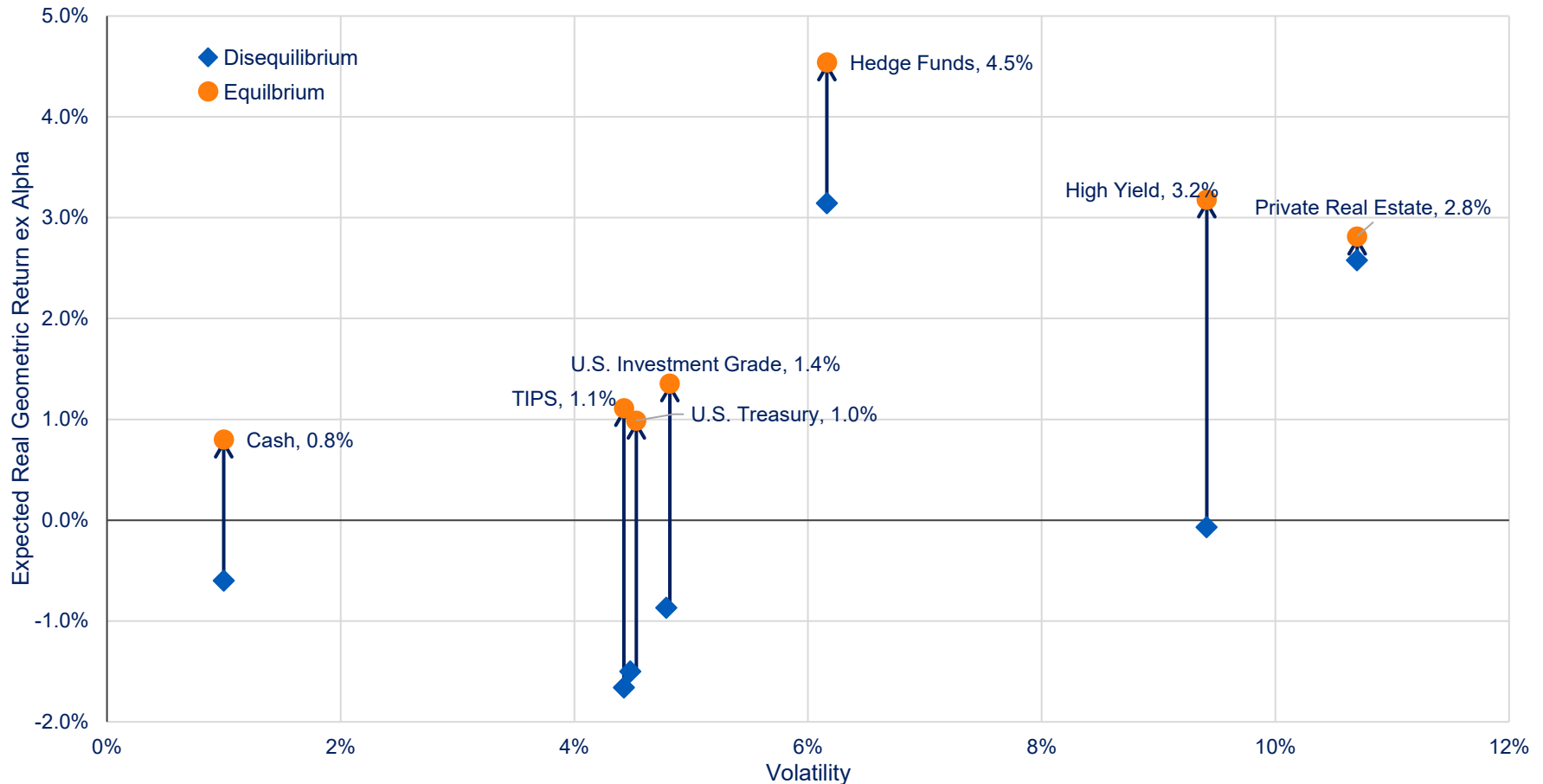
Assumptions as of September 30, 2022. Source: Strategic.

The efficient frontier is generated using the total risk and return assumptions, inclusive of the excess return and risk from active management. The graph is a theoretical illustration of the Efficient Frontier. It does not represent actual trading. Please see Important Disclosures at the end of the presentation for disclosures about expected return, correlations and alpha and important risk information.

Strategic's Capital Markets Assumptions

Comparing Disequilibrium and Equilibrium Return Assumptions

Total Return Assumptions

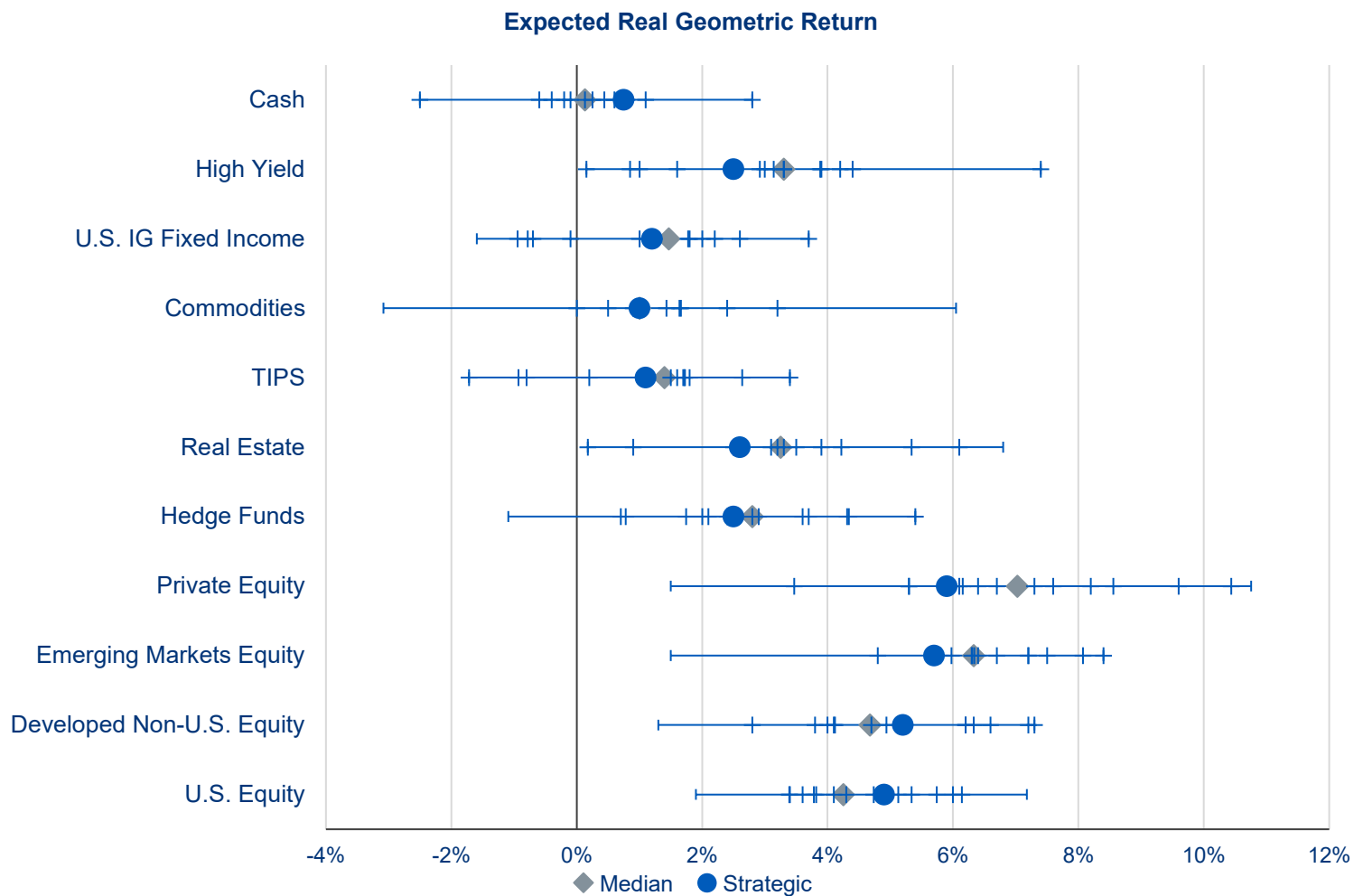


A shift to equilibrium reflects a significant increase in yields from the extremely low levels in 2021.

Assumptions as of September 30, 2022.
Source: Strategic.

Strategic's Capital Markets Assumptions Versus Peers

Returns by Asset Class



Estimates as of September 2022. Note that Strategic and Peers expected returns exclude alpha. Forecast horizon is 10 years or longer

Non-Endowment Policy Portfolio Optimization

Long-Term Asset Allocation Policy – History of Decision Points

Miami University Tier III (LTC)

- In 2018 the Committee approved a long-term asset allocation for the Tier III portfolio that Strategic anticipated would return an average of 5.1% per annum over the long term, net of fees and inflation.
- In June and September of 2021, the Committee reconsidered the long-term asset allocation policy due to the downward revisions of Strategic's capital market assumptions.
 - Strategic had reduced forward return expectations based on the persistently and historically low-yield environment.
 - After consideration, the Committee ultimately agreed to maintain the original long-term asset allocation with a lowered anticipated average return of 3.8% per year (net of fees and inflation).
- Since the Committee's last long-term asset allocation review in 2021, the historic pace and magnitude of interest rate increases have impacted Strategic's return expectations to the upside.
 - Long-term return expectations for Miami's Non-Endowment Tier III portfolio are now approaching where they originally began in 2018.

Summary of 2021 Decision to Maintain Current Asset Allocation

Miami University Tier III (LTC), September 2021

1. Beginning in FY22, the University budget included \$15 million of investment earnings from the non-endowment. This budget was up from \$6.5 million in FY21.
2. The budgeted \$15 million equated to roughly **2.8%** of the Tier III market value of \$532.3 million as of June 30, 2021.
3. In 2021, Strategic had revised down their Capital Market Assumptions, primarily due to the extremely low starting point for fixed income returns.
4. The table on the right shows the estimated Tier III return and portfolio statistics using the lower 2021 Capital Market Assumptions.
5. All told, the lower “Disequilibrium – Active” real return of **3.8%** remained comfortably above the 2.8% budget. A nominal return estimate of 6.3% results from an estimated inflation rate of 2.5%. ($6.3\% = 3.8\% + 2.5\%$)

ASSET CLASS	Current Policy
Equity	54.0%
U.S.	27.0%
Developed Non-U.S.	18.0%
Emerging Markets	9.0%
Alternatives	12.0%
Private Equities	
Hedge Funds	12.0%
Hedge Funds (Gross)	22.0%
(Portable Alpha)	10.0%
Real Assets	10.0%
Real Estate	3.0%
Natural Resources	
Commodities	3.0%
TIPS	4.0%
Fixed Income	24.0%
U.S. Fixed Income	24.0%
U.S. Investment Grade	21.5%
U.S. High Yield	2.5%
Cash	0.0%
Total	100.0%

EXPECTED REAL COMPOUND RETURNS:

Equilibrium - Passive	4.2%
Disequilibrium - Passive	3.0%
Expected Strategic Alpha	0.8%
Disequilibrium - Active	3.8%

RISK STATISTICS:

Volatility	11.2%
Quarterly Liquidity or Better	82%

Revisiting the Tier III Asset Allocation Policy Given the Impact of Updated Capital Market Assumptions

1. In 2022, Strategic revised the Capital Market Assumptions back toward equilibrium due to the historic pace and magnitude of interest rate increases.
2. The table on the right shows the estimated Tier III return and portfolio statistics using the 2022 revised assumptions.
3. The shift toward a more normal interest rate environment has increased the long-term average real return expectations for Miami's Tier III (LTC) portfolio to **4.7%** from the previous 3.8%.
4. The average long-term expected risk (volatility) remains the same at 11.2%.
5. The revised return expectations are approaching what the Investment Subcommittee originally approved in 2018.
6. The revised return assumption covers budget requirements.

ASSET CLASS	Current Policy
Equity	54.0%
U.S.	27.0%
Developed Non-U.S.	18.0%
Emerging Markets	9.0%
Alternatives	12.0%
Hedge Funds*	12.0%
Hedge Funds (Gross)	22.0%
(Alpha Overlay)	10.0%
Real Assets	10.0%
Real Estate	3.0%
Commodities	3.0%
TIPS	4.0%
Fixed Income	24.0%
U.S. Fixed Income	24.0%
U.S. Investment Grade	21.5%
U.S. High Yield	2.5%
Cash	0.0%
Total	100.0%
EXPECTED COMPOUND RETURNS:	
Expected Nominal Return	7.4%
Expected Real Return	4.7%
RISK STATISTICS:	
Volatility	11.2%
Quarterly Liquidity or Better	82%

Policy and Asset Allocation Definitions

Glossary of Terms

- **Expected Real Return:** the expected compound (geometric) growth rate in excess of inflation. Many institutions seek to preserve purchasing power by aligning the expected real compound return of their portfolio with their spending policy.
- **Disequilibrium Active Return:** using Strategic's previous 2021 Capital Market Assumptions, the expected average return over the following 10+ years.
- **Volatility:** the expected annual standard deviation of returns. A policy with a volatility of 15%, for example, could be expected to produce a return within plus or minus 15% of its average return approximately two-thirds of the time.
- **Quarterly Liquidity or Better:** our estimate of the percentage of assets that could be liquidated in one quarter without material market impact under normal market conditions.

Targets, Ranges, and Benchmarks

Current Long-Term Strategic Asset Allocation

Asset Category	Asset Allocation	Ranges		Benchmark Indices
		-	+	
Equities	54.0%	-10.0%	+10%	
U.S. Equities	27.0%	-10.0%	+10%	<i>Russell 3000 Index</i>
Non-U.S. Equities	18.0%	-10.0%	+10%	<i>MSCI World ex-US Investable Market Index (IMI) (Net)⁽¹⁾</i>
Emerging Market Equities	9.0%	-9.0%	+10%	<i>MSCI Emerging Markets Investable Market Index (IMI) (Net)⁽¹⁾</i>
Alternatives ⁽²⁾⁽³⁾	12.0%	-12.0%	+10%	
Hedge Funds (Net) ⁽³⁾	12.0%	-12.0%	+10%	<i>HFRX Equal Weighted Strategies Index</i>
<i>Hedge Funds (Gross)</i>	22.0%	-22.0%	+5%	
<i>Alpha Overlay</i>	10.0%	-10.0%	+10%	
Real Assets	10.0%	-7.0%	+13%	
Real Estate	3.0%	-3.0%	+5%	<i>NCREIF Fund Index - Open End Diversified Core Equity</i>
Commodities	3.0%	-3.0%	+6%	<i>S&P GSCI Total Return Index</i>
TIPS	4.0%	-4.0%	+6%	<i>Bloomberg 1-10 Year U.S. TIPS Index</i>
Fixed Income ⁽⁴⁾	24.0%	-10.0%	+10%	
U.S. Investment Grade Fixed Income ⁽⁵⁾	21.5%	-15.0%	+10%	<i>Bloomberg U.S. Aggregate Index</i>
U.S. High Yield Bonds	2.5%	-2.5%	+10%	<i>ICE BofA High Yield Cash Pay Index</i>
Cash	0.0%	0.0%	+20%	<i>Citigroup 3 Month Treasury Bill Index</i>
Total	100%			<i>Policy Benchmark⁽⁶⁾</i>

1. Indices are net of dividend withholding tax.

2. Range for total alternatives is based on net hedge fund allocation.

3. (Net) indicates that allocations are net of alpha overlay. The maximum gross allocation to hedge funds, including alpha overlay strategies, is 27%.

4. For purposes of assessing compliance with the minimum of the Policy Range, Fixed Income and U.S. Investment Grade Fixed Income will be deemed to include the allocation to Cash.

5. U.S. investment grade fixed income includes physical holdings of treasuries, corporates and synthetic fixed income achieved through alpha overlay strategies.

6. The Policy Benchmark will be rebalanced quarterly and will be reported both gross and net of assumed passive management fees and rebalancing costs

Stress Tests

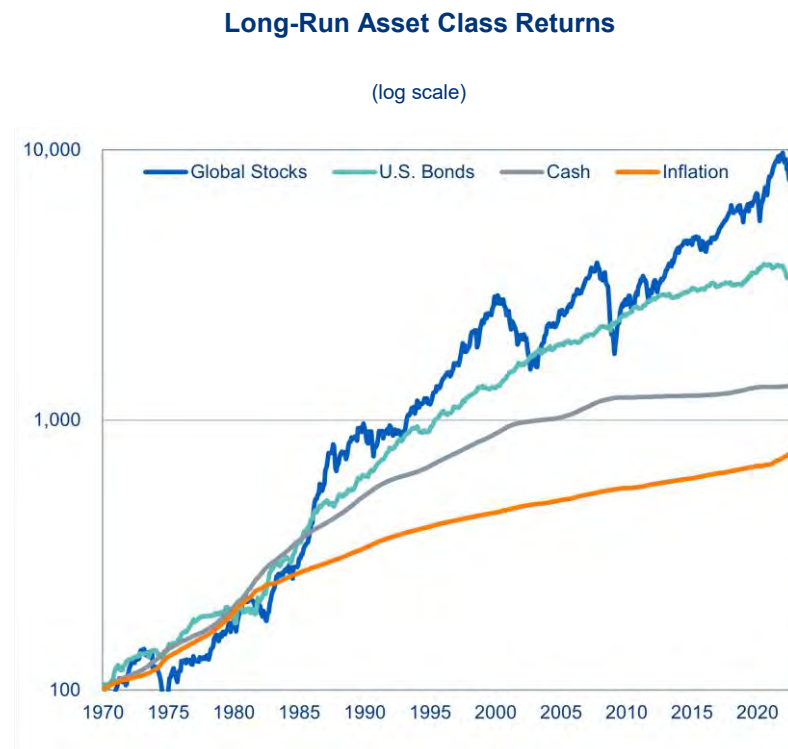
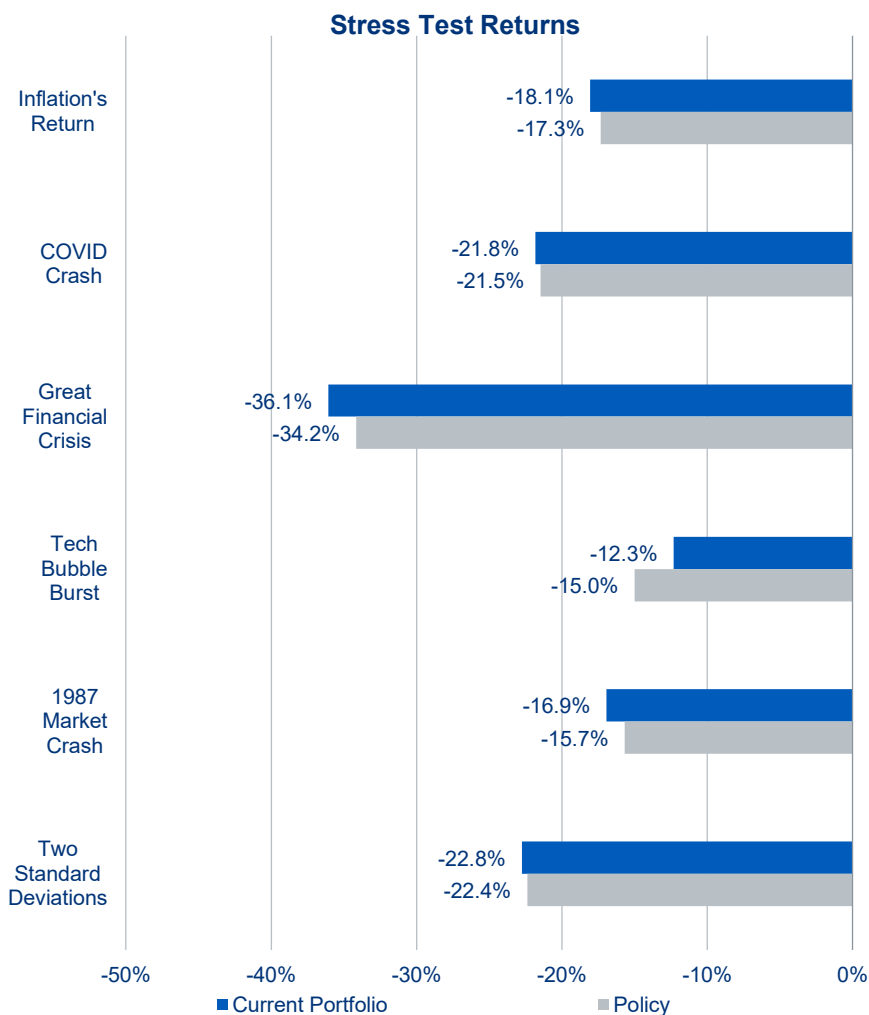
2023 Stress Test

Annual Reassessment of Portfolio Policy and Current Positioning

- The stress test assesses the impact of a number of negative scenarios on your investment policy and our current tactical positioning.
- We base the stress tests on severe episodes of market dislocation from the recent past.
- Stress tests based on historical crises reflect actual market conditions in times of particularly turbulent markets. They are not prone to the pitfalls of model-based scenario analyses and are “assumption-free”.
- The objective of the stress test is to reassess risk budgeting and allocation decisions.

**Investment policies are designed for the long run.
Reassessing policies in light of near-term conditions is essential to good governance.**

Miami University Tier III Stress Test



The stress tests indicate the Tier III portfolio would behave as expected through multiple negative scenarios.

Each year we undertake a stress test of your portfolio to consider how the strategic asset allocation and current portfolio positioning would have performed in past historical crises and in the event of a two standard deviation loss. Stress tests based on actual past crises have the advantage of being "assumption free" and highlighting how your portfolio would have performed in some of the worst market episodes of recent times. This annual stress test serves an important governance purpose as it reassesses the continued suitability of the current long-term strategic asset allocation policy.

Miami University Tier III

Stress Test

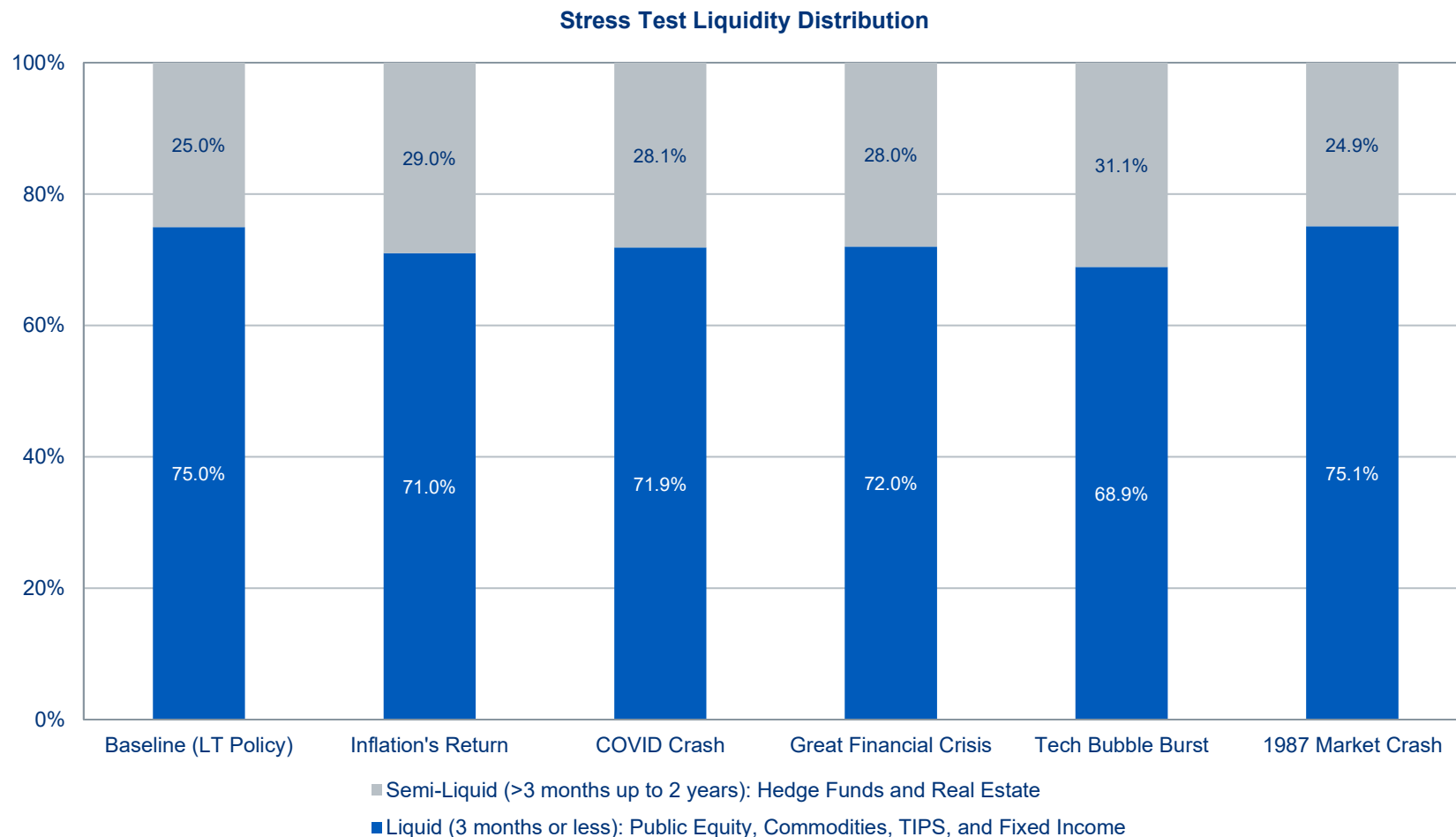
Asset Class Weights and Event Returns

	Portfolio Weight	Policy Weight	Inflation's Return	COVID Crash	Great Financial Crisis	Tech Bubble Burst	Iraq War Prelude
Stress Test Returns							
Equity							
U.S. Equity	23.5%	27.0%	-23.0%	-34.3%	-50.6%	-40.2%	-29.5%
Developed International Equity	19.1%	18.0%	-14.6%	-29.2%	-49.9%	-42.8%	-24.6%
Emerging Markets	10.5%	9.0%	-19.4%	-29.5%	-52.6%	-37.0%	-21.3%
Alternatives							
Hedge Funds	10.1%	12.0%	-4.7%	-10.9%	-25.8%	8.9%	-21.8%
Real Assets							
Real Estate	2.5%	2.5%	12.4%	0.7%	-18.2%	18.8%	1.4%
Commodities	3.1%	3.0%	24.3%	-36.0%	-50.0%	15.6%	4.7%
TIPS	4.6%	4.5%	-8.8%	-2.1%	1.0%	35.7%	2.6%
Fixed Income							
U.S. Investment Grade	15.7%	21.5%	-20.2%	7.0%	14.6%	33.1%	2.7%
U.S. High Yield	5.9%	2.5%	-12.6%	-21.4%	-26.0%	-5.1%	-3.9%
Municipal Bonds	0.0%	0.0%	-12.1%	-10.4%	2.7%	25.1%	-0.7%
Non-U.S. Fixed Income	0.0%	0.0%	-22.2%	-18.3%	-16.4%	6.3%	-21.5%
Cash							
Cash	5.0%	0.0%	1.4%	0.1%	3.8%	10.1%	1.9%
Portfolio Returns							
Current Portfolio	100.0%	100.0%	-18.1%	-21.8%	-36.1%	-12.3%	-16.9%
Policy	100.0%	100.0%	-17.3%	-21.5%	-34.2%	-15.0%	-15.7%

Each year we undertake a stress test of your portfolio to consider how the strategic asset allocation and current portfolio positioning would have performed in past historical crises and in the event of a two standard deviation loss. Stress tests based on actual past crises have the advantage of being "assumption free" and highlighting how your portfolio would have performed in some of the worst market episodes of recent times. This annual stress test serves an important governance purpose as it reassesses the continued suitability of the current long-term strategic asset allocation policy.

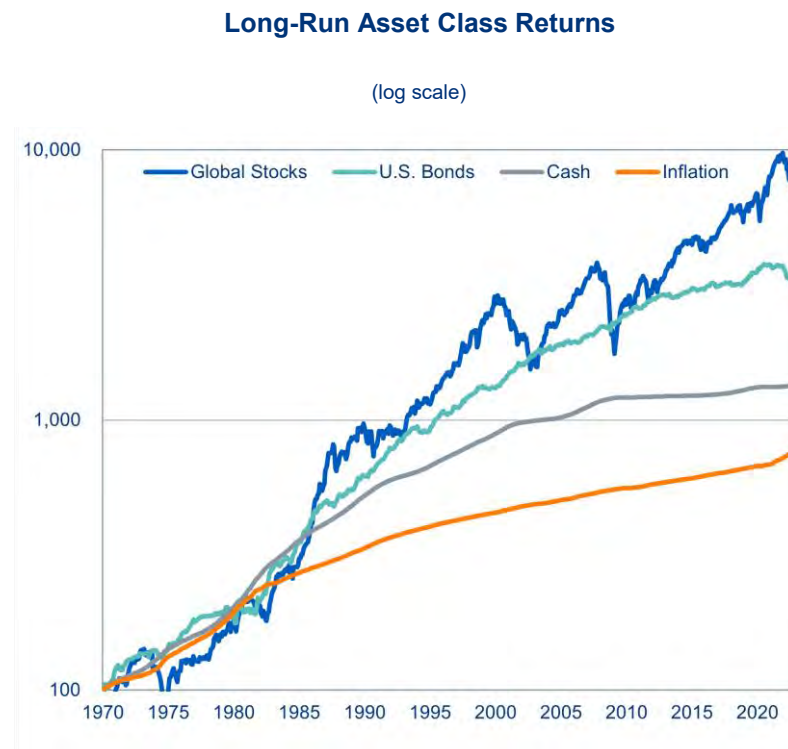
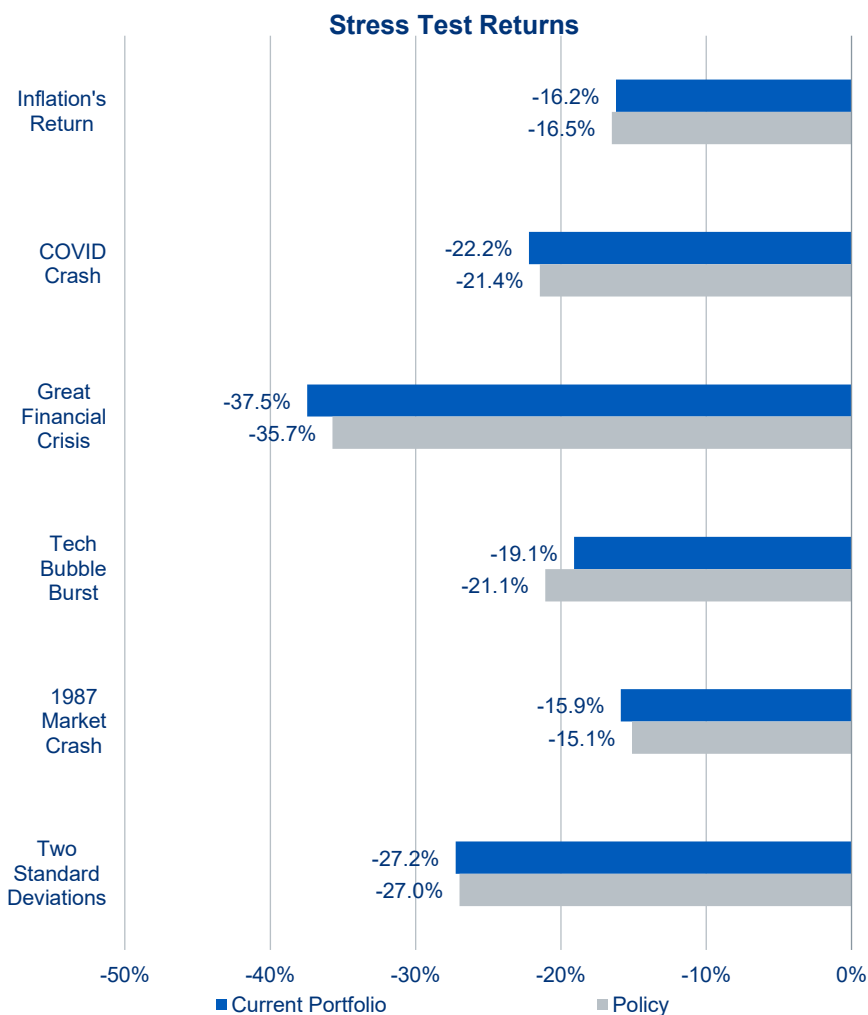
Miami University Tier III

Stress Test – Liquidity Distribution



Each year we undertake a stress test of your portfolio to consider how the strategic asset allocation and current portfolio positioning would have performed in past historical crises and in the event of a two standard deviation loss. Stress tests based on actual past crises have the advantage of being "assumption free" and highlighting how your portfolio would have performed in some of the worst market episodes of recent times. This annual stress test serves an important governance purpose as it reassesses the continued suitability of the current long-term strategic asset allocation policy.

Miami University Foundation Stress Test



The stress tests indicate the Endowment would behave as expected through multiple negative scenarios.

Each year we undertake a stress test of your portfolio to consider how the strategic asset allocation and current portfolio positioning would have performed in past historical crises and in the event of a two standard deviation loss. Stress tests based on actual past crises have the advantage of being "assumption free" and highlighting how your portfolio would have performed in some of the worst market episodes of recent times. This annual stress test serves an important governance purpose as it reassesses the continued suitability of the current long-term strategic asset allocation policy.

Miami University Foundation

Stress Test

Asset Class Weights and Event Returns

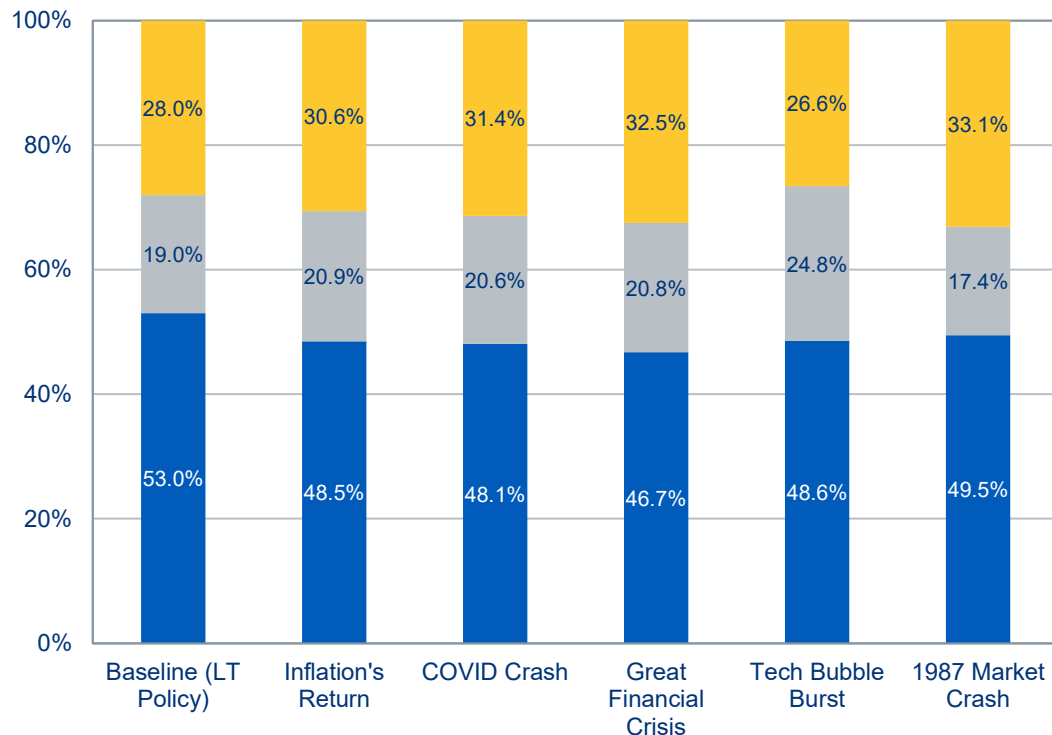
	Portfolio Weight	Policy Weight	Inflation's Return	COVID Crash	Great Financial Crisis	Tech Bubble Burst	1987 Market Crash
Stress Test Returns							
Equity							
U.S. Equity	24.1%	27.5%	-23.0%	-34.3%	-50.6%	-39.7%	-29.5%
Developed International Equity	13.0%	12.0%	-14.6%	-29.2%	-49.5%	-42.1%	-24.6%
Emerging Markets	13.5%	12.0%	-19.4%	-29.5%	-52.7%	-36.9%	-21.3%
Alternatives							
Private Equity	16.4%	16.5%	-7.4%	-8.7%	-21.7%	-25.7%	1.1%
Hedge Funds	11.4%	12.0%	-4.7%	-10.8%	-25.6%	8.7%	-21.6%
Real Assets							
Real Estate	3.1%	3.0%	10.5%	0.7%	-16.5%	19.2%	1.6%
Timber	0.3%	0.5%	7.6%	-1.2%	19.8%	-1.5%	11.9%
Commodities	1.4%	1.5%	24.3%	-36.0%	-50.0%	15.6%	4.7%
TIPS	3.0%	3.0%	-8.8%	-2.1%	1.0%	35.7%	2.6%
Fixed Income							
U.S. Investment Grade	4.8%	10.0%	-22.3%	8.3%	15.7%	31.7%	3.0%
U.S. High Yield	0.8%	0.0%	-12.0%	-21.4%	-25.9%	-4.4%	-3.8%
Municipal Bonds	0.0%	0.0%	-11.6%	-11.6%	2.9%	26.1%	0.0%
Non-U.S. Fixed Income	0.0%	0.0%	-23.0%	-18.8%	-16.7%	6.3%	-20.9%
Opportunistic							
Opportunistic	5.0%	2.0%	-4.9%	-20.1%	-22.9%	7.2%	-2.9%
Cash							
Cash	3.3%	0.0%	1.4%	0.1%	3.8%	10.1%	1.9%
Portfolio Returns							
Current Portfolio	100.0%	100.0%	-16.2%	-22.1%	-37.3%	-19.0%	-15.9%
Policy	100.0%	100.0%	-16.5%	-21.4%	-35.7%	-21.1%	-15.1%

Each year we undertake a stress test of your portfolio to consider how the strategic asset allocation and current portfolio positioning would have performed in past historical crises and in the event of a two standard deviation loss. Stress tests based on actual past crises have the advantage of being "assumption free" and highlighting how your portfolio would have performed in some of the worst market episodes of recent times. This annual stress test serves an important governance purpose as it reassesses the continued suitability of the current long-term strategic asset allocation policy.

Miami University Foundation

Stress Test – Liquidity Distribution

Stress Test Liquidity Distribution



- Illiquid (> 2 years): Private Equity and Real Estate
- Semi-Liquid (>3 months up to 2 years): Hedge Funds
- Liquid (3 months or less): Public Equity, Commodities, TIPS, and Fixed Income

IPS Liquidity Limits

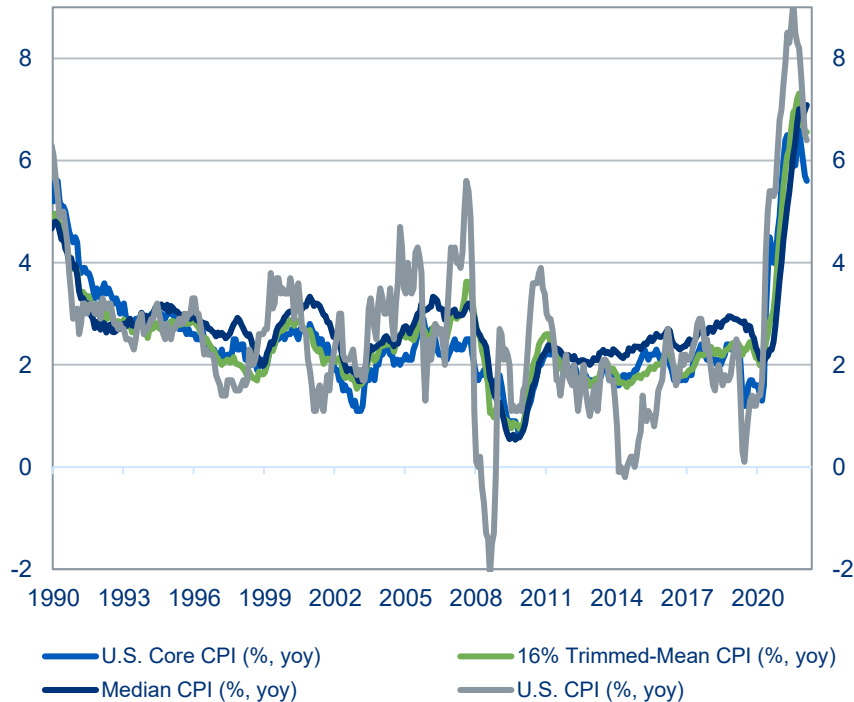
1. **Minimum 40% of the value of the PIF**
Liquid: ability to convert an investment to cash with limited to no price impact in three months or less;
2. **Maximum 40% of the value of the PIF**
Semi-Liquid: ability to convert an investment to cash between more than three months, and up to and including two years;
3. **Maximum of 35% of the value of the PIF**
Illiquid: Unable to convert an investment to cash for more than two years.
4. Even when stressed, the PIF stays within its liquidity limits.

Each year we undertake a stress test of your portfolio to consider how the strategic asset allocation and current portfolio positioning would have performed in past historical crises and in the event of a two standard deviation loss. Stress tests based on actual past crises have the advantage of being "assumption free" and highlighting how your portfolio would have performed in some of the worst market episodes of recent times. This annual stress test serves an important governance purpose as it reassesses the continued suitability of the current long-term strategic asset allocation policy.

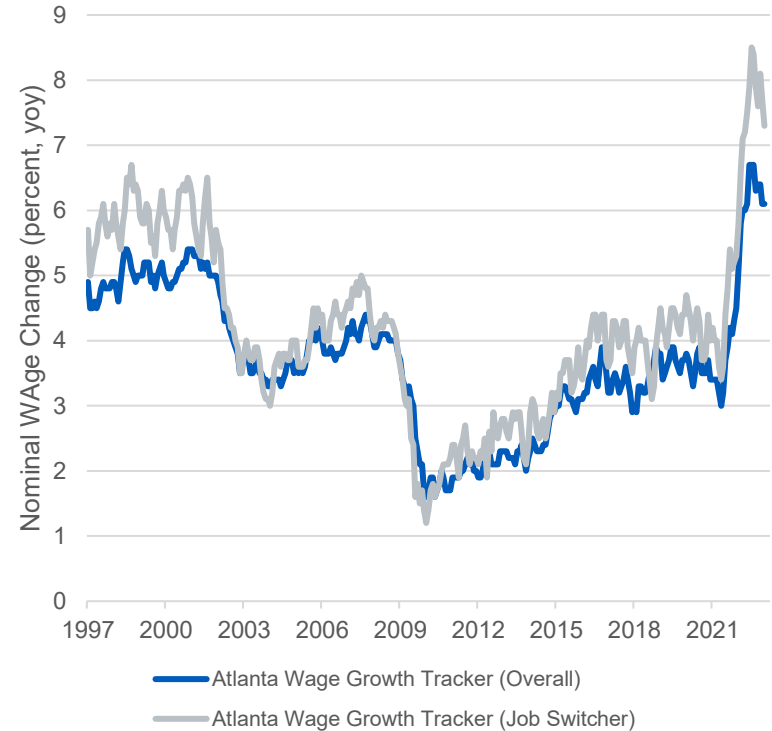
A Time-Series View of Inflation and Wage Growth

The Simultaneous Surge Had Raised Concerns of a Wage-Price Spiral

U.S. Headline and Core CPI Inflation Measures



U.S. Wage Inflation (nominal, %, yoy)



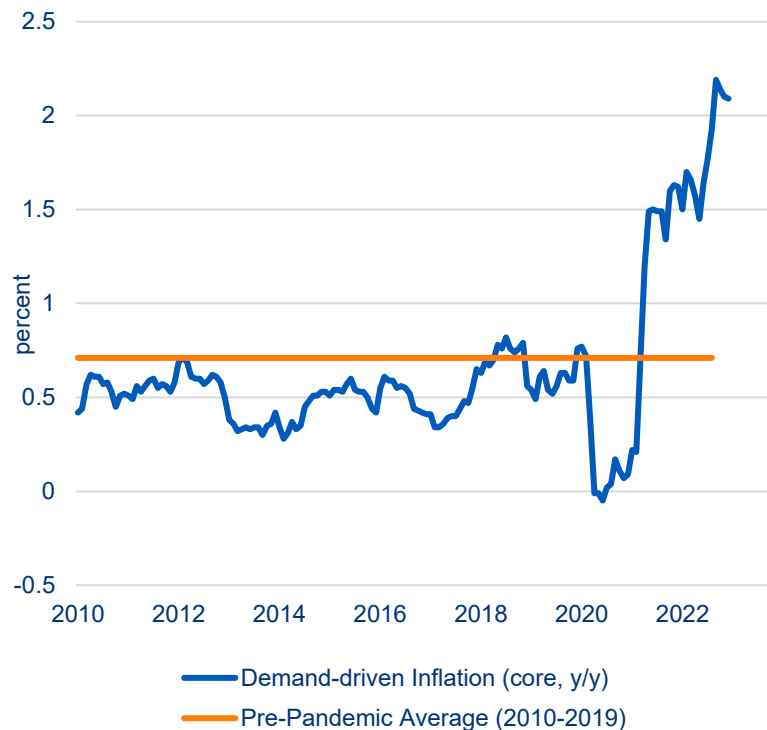
The surge in wage and price growth has given way to a pause and possibly a reversal.

Sources: Bloomberg, Cleveland Fed. Data as of January 2023.

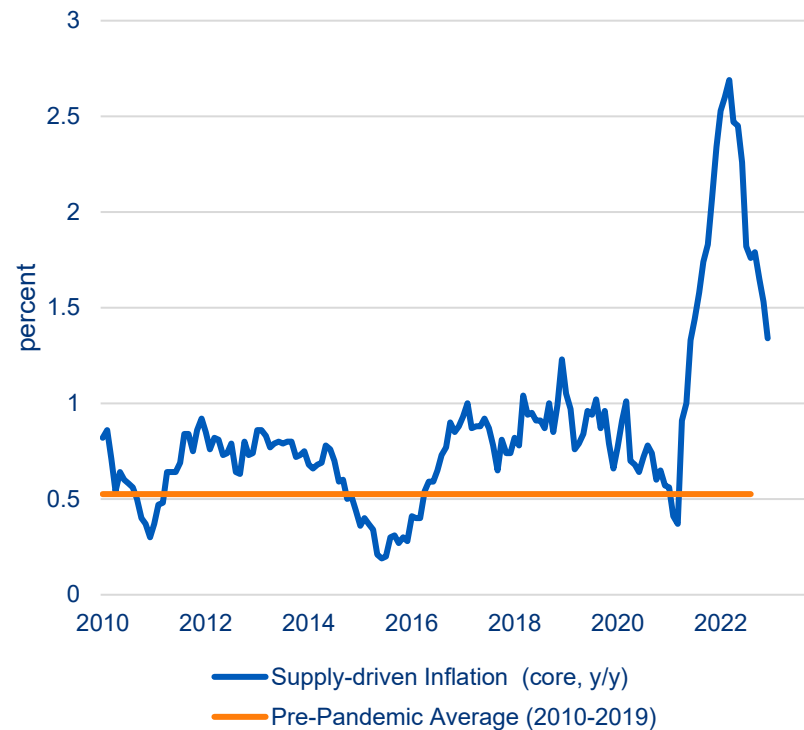
U.S. Inflation – The Product of Demand and Supply Shocks

Supply Shocks Are Fading Quickly While Demand Factors Have Only Eased Slightly

Contribution of Demand-Driven Factors to Core PCE Inflation



Contribution of Supply-Driven Factors to Core PCE Inflation

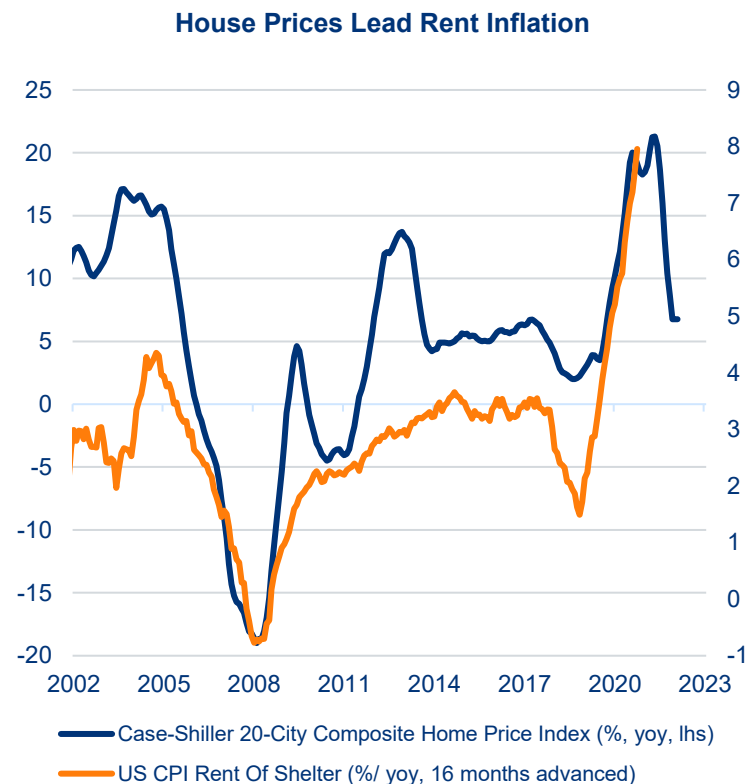


According to the SF Fed, supply factors remain key inflation drivers in the U.S. while demand factors are running a distant second. Both inflation drivers have rolled over.

Sources: Federal Reserve Bank of SF, How Much Do Supply and Demand Drive Inflation, July 15, 2022. Demand and supply driven data series end in December 2022.

U.S. Inflation Drivers

Inflation Expectations and Housing Inflation Likely To Be Disinflationary in 2023



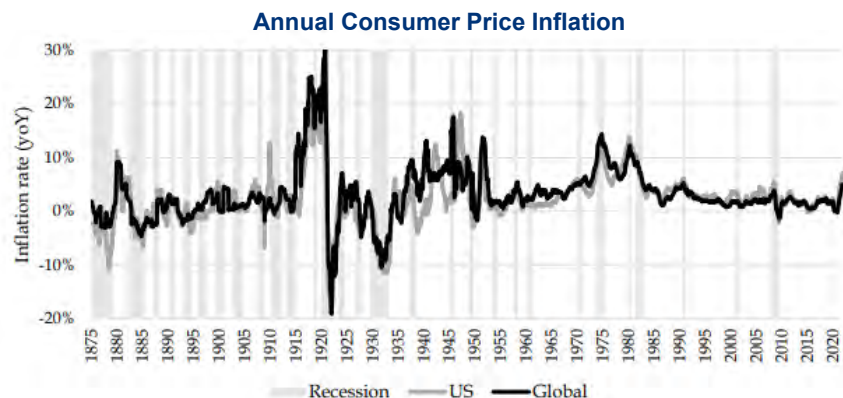
Inflation expectations are normalizing which is crucial to avoid a self-reinforcing inflation spiral. Housing inflation is likely to roll over in the near-term creating a powerful disinflationary force.

Source: Bloomberg. Data as of January 31, 2023.

Asset Class Performance Across Inflation Regimes

Data and Methodology

- Data spans 1875 – 2021
- Inflation Data: Year-on-year CPI inflation equally weighted across U.S., UK, Germany, France and Japan (hyperinflationary periods are excluded)
- Recession Data: NBER dated recessions



Global Inflation Frequency (# of observations falling in each YoY bucket)

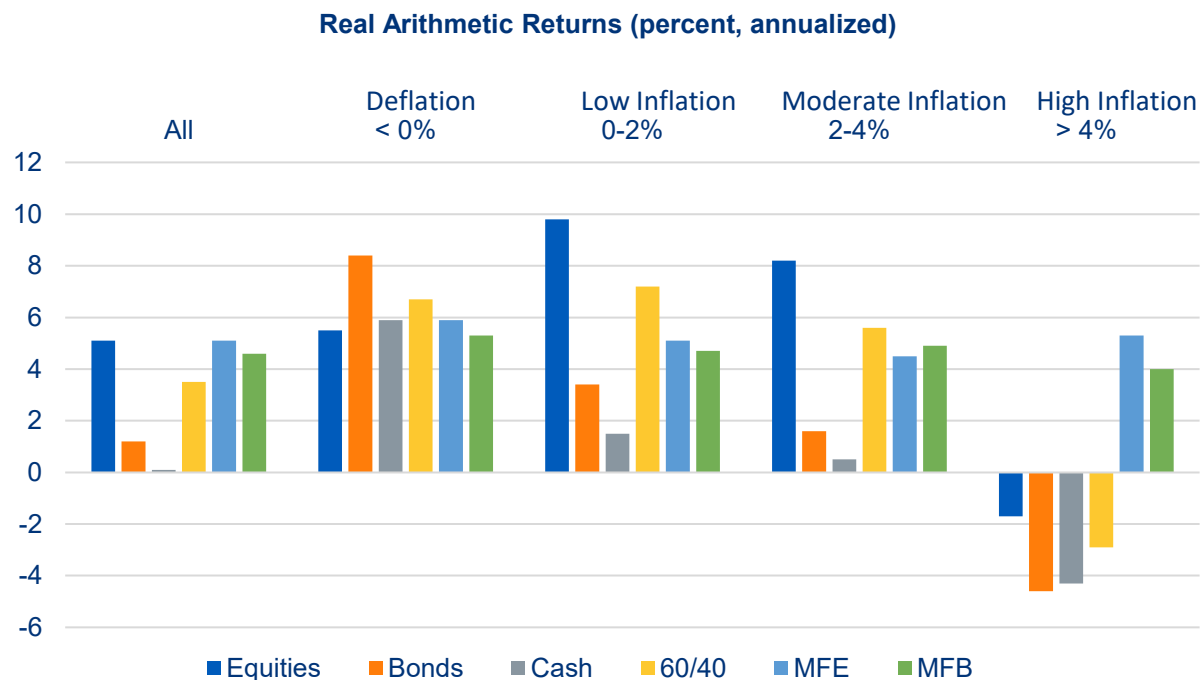
Inflation bucket	1992-2021	1950-2021	1926-2021	1875-2021
<0%	0.9	1.6	7.7	23.1
0-2%	20.3	25.5	27.6	42.9
2-4%	8.6	22.7	25.9	34.9
>4%	0.3	22.3	34.8	46.1
All	30.0	72.0	96.0	147.0

- **Return Data:**
 - Equities: Global MSCI returns in USD and before existence global value-weighted equity market returns from GFD (ticker TRWLDM) and in case not available, weighted market returns across key developed markets
 - Bonds: Bloomberg Barclays Global Treasury index returns, before inception spliced with GDP-weighted bond returns across U.S., U.K., German, France, and Japanese bond markets. All bond returns are hedged to USD.
 - Cash: Short-dated U.S. Treasury Bill Returns
 - Equity Factors: Value, momentum, low risk, and quality factors for the U.S. market
 - Bond Factors: Value, momentum, low risk and carry for global bond markets

Source: Investing in Deflation, Inflation, and Stagflation Regimes, by Guido Baltussen, Laurens Swinbckels, Bart van Vliet, Pim van Vliet, November 10, 2022.

Asset Class Performance Across Inflation Regimes

From Deflation to Inflation to Stagflation



Observations:

- Deflation and moderate inflation scenarios provided attractive real returns over time.**
- High inflation is damaging for real returns, producing negative returns for equities, bonds, and cash.**
- Market neutral factor premiums are powerful diversifiers and provide positive real returns across all inflation scenarios.**
- Factor portfolios generated attractive returns across all inflation regimes.**

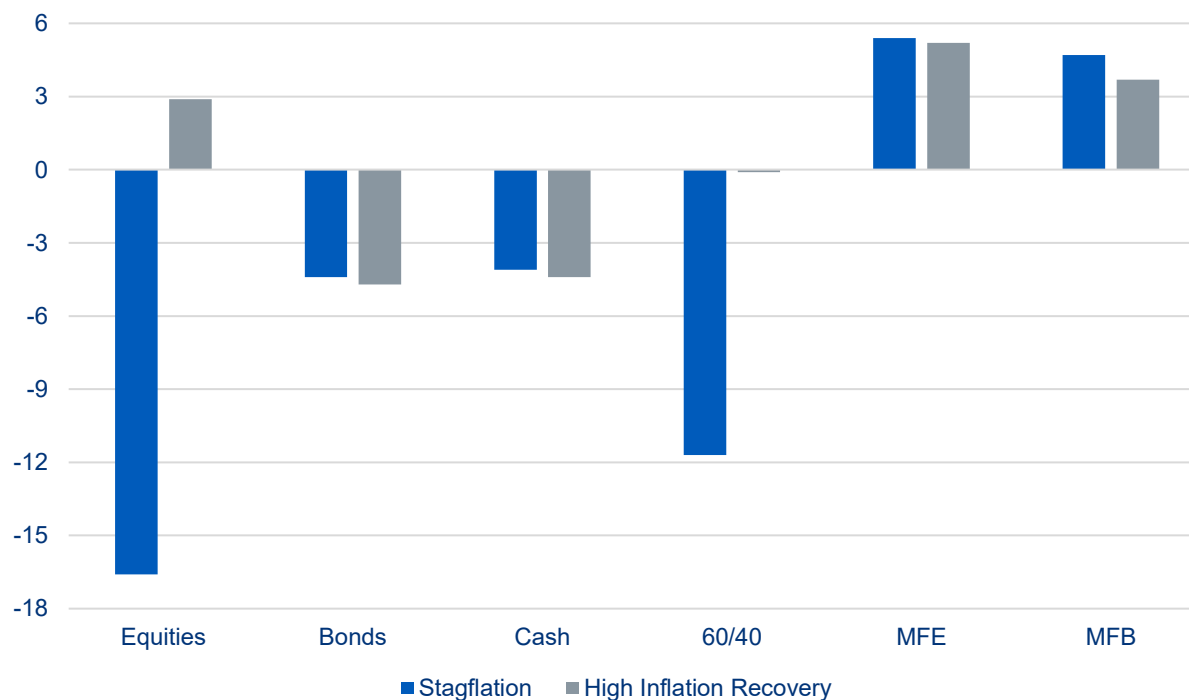
Inflation regimes have historically been an important return differentiator across traditional asset classes but not across factor portfolios.

Source: Investing in Deflation, Inflation, and Stagflation Regimes, by Guido Baltussen, Laurens Swinbkels, Bart van Vliet, Pim van Vliet, November 10, 2022; MFE=Multi-Factor Equity Portfolio; MFB=Multi-Factor Bond Portfolio.

Asset Class Performance Across Inflation Regimes

From Deflation to Inflation to Stagflation

Real Arithmetic Returns: Stagflation and High Inflation Recovery (percent, annualized)



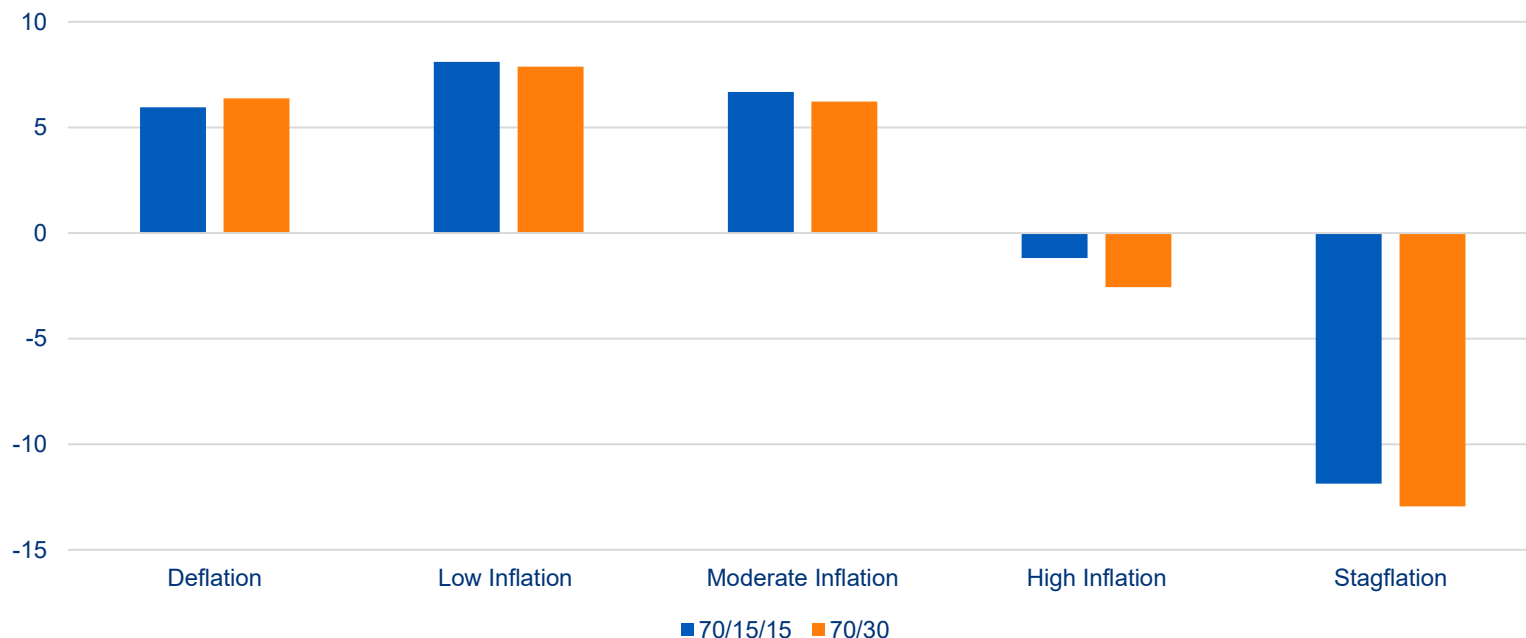
Stagflation = inflation > 4% and economy in recession; High-inflation recovery = inflation > 4% and economy in recovery

Stagflation has historically been highly destructive to traditional (60/40) portfolios. Factor portfolios have held up well providing valuable diversification traditional portfolios.

Source: Investing in Deflation, Inflation, and Stagflation Regimes, by Guido Baltussen, Laurens Swinkbels, Bart van Vliet, Pim van Vliet, November 10, 2022.

Asset Class Performance Across Inflation Regimes

Performance of a 70-15-15 Portfolio vs. a 70/30 Portfolio



70/30 = 70% Global Equity and 30% Global Bonds; 70/15/15 = 70% Global Equity, 15% Global Bonds, 15% Alternatives*

Market-neutral exposures to traditional equity and bond factors can provide an improvement to the return profile of a portfolio. This analysis is preliminary, since it does not include an analysis of the risk profiles of alternative allocations.

Source: Investing in Deflation, Inflation, and Stagflation Regimes, by Guido Baltussen, Laurens Swinbkels, Bart van Vliet, Pim van Vliet, November 10, 2022., Strategic; - * Alternatives are proxied by an equal allocation to equity factors (MFE) and bond factors (MFB) described on page 60.

Endowment Distribution Stress Test

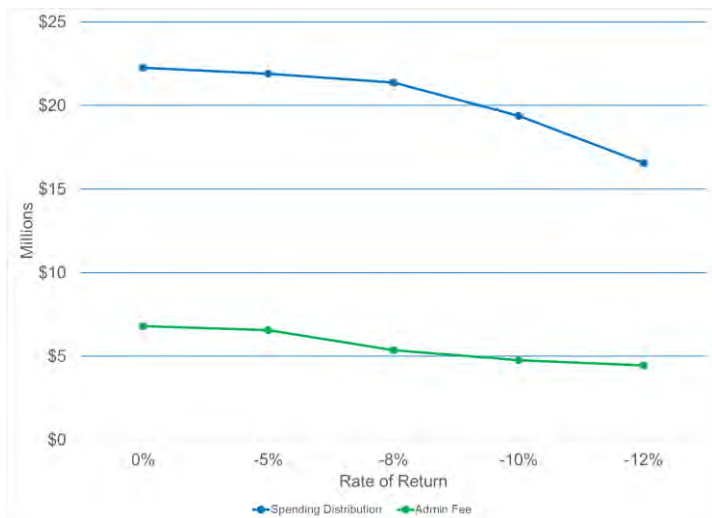
Enterprise Risk Management

Stress Testing the Impact of Investment Losses on Endowment Distributions



- Annual endowment distributions are made from accumulated earnings.
- Stress tested the impact of declines in market value from investment losses upon the accumulated earnings of over 2,700 endowments in PIF, to determine which endowments would realize impaired distributions.
- We investigated the potential impact of various negative investment return scenarios for FY23.
- Baseline estimated FY23 distributions: \$22.3 million endowment spending distribution, \$6.8 million admin fee.

RETURN	UNDERWATER	PARTIAL	TOTAL	SPENDING DISTRIBUTION	REDUCTION	ADMIN FEE	REDUCTION
0%	62	19	81	22.26		6.81	
-5%	89	79	168	21.90	-2%	6.58	-3%
-8%	145	173	318	21.38	-4%	5.37	-21%
-10%	189	663	852	19.39	-13%	4.77	-30%
-12%	441	631	1,072	16.56	-26%	4.46	-34%



- MUF is starting from a reduced position relative to a year ago.
- Investment losses of 5% or less, not expected to significantly impact distributions.
- Market value declines greater than -8% become progressively more severe upon distributions.

Debt Policy

~~April 2011~~ March 2023 DRAFT

MIAMI UNIVERSITY DEBT POLICY

The primary objective of Miami University's use of debt is to optimally allocate debt as a limited capital resource in funding carefully selected projects that further the University's mission and fulfill its strategic objectives. This policy sets forth the goals and strategies the University expects to utilize to accomplish this objective.

GOALS

1. To prudently use debt as a source of capital to fund capital projects that relate to the strategic priorities of the University but have limited opportunities for financing from other sources such as state appropriations, philanthropic giving, or grants.
2. To manage the University's overall debt level to maintain a ~~minimum~~ credit rating in the ~~range of the high "A" to low "AA" categories~~ category, according to the major rating agencies.
3. To maintain a weighted average net cost of capital below ~~5.50% - 5.0%~~ by carefully structuring financings to take advantage of interest rate cycles and available financing vehicles.
4. To maintain debt capacity ratios ~~in excess of the minimum acceptable composite score~~ as outlined by the State of Ohio (see addendum) and that allow the University to achieve its credit rating, cost of capital, and long-term viability objectives.
5. To assure that projects financed have a prudent plan for debt repayment.

DEBT MANAGEMENT STRATEGIES

1. Identification of capital projects

Major capital projects are prioritized through the University's long-range capital plan. The capital plan is constructed within the framework of the University's financial plan and is aligned annually with the University's budget. Sources of funding for capital projects include state capital appropriations, gifts or grants, annual capital renewal or replacement budgets, internal reserves, and bond financing.

Bond financing, because of its long-term financial implications, is to be used strategically on projects for which other funding sources are limited, and will be coordinated so that multiple projects may be accommodated in a single borrowing to create efficiencies.

The planning process undergoes extensive review and discussion with University management and the Board~~s~~ of Trustees' Finance and Audit Committee. As each individual project in the capital plan is initiated, the project and its financing plan is reviewed by the Finance and Audit Committee and approved by the Board of Trustees. Any future obligations resulting from the financing plans, such as debt service payments or outstanding gift pledges, are reviewed annually with the Finance and Audit Committee as part of the University's normal budget planning to ensure that the financing plans remain viable. If they need to be adjusted, they are adjusted within the framework of the overall financial plan for the University.

2. Debt capacity

Miami University's debt capacity can be defined as:

1. A-a level of outstanding debt at which the University can maintain its high credit ratings and a low cost of borrowing, and
2. A-a practical level of annual debt service payments that the University can comfortably cover from predictable sources of repayment.

The University intends to maintain ~~minimum~~-underlying credit ratings in the ~~high~~ "A" to low "AA" range category in order to issue debt at relatively low interest rates. The University does not intend to issue the maximum possible levels of debt, but intends to maintain a comfortable reserve of debt capacity. A prudent level of debt provides access to capital but does not unduly burden the institution's budget with annual repayment obligations. Furthermore, a moderate and consistent debt burden also serves the goal of intergenerational equity; one generation of tuition-payers is not overburdened at the expense of another generation.

Debt capacity is generally measured through ratio analysis. Ratios provide a consistent measure of the debt level carried by an institution in relation to its balance sheet, revenues and expenses. Ratio analysis provides insight into debt capacity from two perspectives: by monitoring trends over time and in comparison to benchmarks. It is the intent of the University to maintain a strong financial position that will support a favorable ratio analysis measured against national standards, peer and in-state comparisons, and credit rating agency medians. Some of the key ratios currently utilized for evaluating debt capacity are attached as Addendum A.

3. Interest rate management

The primary objective of interest rate management is to make strategic and structural decisions on each University financing in order to minimize the aggregate interest expense to the University. After reviewing historical long-term interest rate cycles and industry benchmarks, the University has established a goal of maintaining a weighted average net cost of capital below ~~5.50%~~ 5.0%. It is recognized that this goal may not be achievable in very high interest rate environments; in such situations, the goal will be to achieve the lowest cost of capital available under the circumstances. Methods of maintaining a low cost of capital include:

1. Issuing fixed vs. variable rate debt
2. Maturity length and principal amortization
3. Call provisions and the use of premium and discount coupons
4. Managing interest rate cycles
5. Selective use of interest rate swaps and other derivative products
6. Diversifying the universe of its potential investors
7. Negotiated vs. competitive sales
8. Maintaining its strong credit ratings
9. Selective use of credit enhancement or liquidity

A second objective of interest rate management is to minimize the uncertainty and variability of interest expense. Thus, although variable-rate bonds generally have lower interest costs than fixed-rate bonds, they also introduce volatility risk into the University's debt service obligations. ~~It is expected to be advantageous to include variable rate debt in the University's capital structure at high points in the economic interest rate cycle. However, it is not anticipated that variable rate exposure would exceed 40% of overall outstanding debt at any point in time.~~

Interest rate exposure may also be managed through the use of interest rate swaps and other derivative products. Such products provide an indirect, rather than direct, means of managing interest risk. If, after thorough analysis, a derivative product is clearly beneficial in reducing debt service cost and/or interest rate risk, such a product may be used with approval of the Board of Trustees. Swaps and other derivatives used as part of the debt portfolio must be tied directly to University debt instruments and may not be used for speculative purposes.

Each proposed new debt issuance will be evaluated in the context of the interest rate environment at that time, debt products available in the marketplace, the University's then-existing mix of outstanding obligations, and the time horizon of the projects to be financed. The potential upside and downside risks of various debt instruments and structures will be analyzed to determine the most advantageous structure to meet the University's long-term goals given the existing environment.

4. Repayment planning

All debt financing must be accompanied by a feasible plan for repayment of its principal and interest obligations. Sources of repayment may include project-specific revenues, auxiliary enterprise revenues, gift revenues, general University receipts, expense reductions, or other sources. If the financing involves variable rate debt, the repayment plan must take into consideration the impact of a change in interest rates. Pro forma projections will be based on conservative assumptions that provide reasonable comfort that the repayment obligations can be prudently managed.

In some situations, a prudent method of repayment planning will be to budget and fund a segregated Debt Service Reserve Fund. There may also be circumstances where a mandatory Debt Service Reserve Fund is included in the legal bond covenants. In cases where the use of such a reserve is planned and/or mandated, the University will

incorporate the appropriate funding into its budget and will make best efforts to fulfill the funding plan.

5. Refinancing opportunities

The University will monitor its debt portfolio for refunding and/or restructuring opportunities that may arise from changes in the interest rate environment. In addition, when issuing debt for new project purposes, the University should consider any potential refunding to be issued in combination with such new project financing. A number of factors will be evaluated in making refinancing decisions, including:

1. Call features of outstanding debt
2. Rate reduction potential
3. Time beyond call to maturity
4. Call premium
5. Escrow efficiency
6. Overall market conditions

In general, a refinancing opportunity will be considered advantageous if it results in a net present value savings of 3% or greater.

6. Regulatory and tax considerations

Authority for issuance of bonds is provided by Sections 3345.11 and 3345.12 of the Ohio Revised Code. The Ohio Board of Regents has further authority to approve debt for which the general receipts of the University are pledged as security. University management will be responsible to seek and obtain approval by the Ohio Board of Regents in advance of a bond issuance.

Bonds issued by Miami University are often eligible for tax-exemption, and therefore subject to IRS rules and regulations governing tax-exempt obligations. University management will use its best efforts to comply with the appropriate IRS rules and regulations. Specifically, management will remain cognizant of IRS regulations concerning arbitrage, private use, and unrelated business income.

7. Approvals

Debt in amounts of **\$2,000,000** or less must be approved by the Vice President for Finance and Business Services.

Debt in excess of **\$2,000,000** and any debt that is publicly issued must be approved by the Vice President for Finance and Business Services, the Finance and Audit Committee, and the Board of Trustees.

ADDENDUM A DEBT CAPACITY RATIOS

MIAMI UNIVERSITY DEBT POLICY

Through the 1997 enactment of Senate Bill 6, a standardized method for monitoring the financial health of Ohio's state-assisted college and universities was established. Key ratios monitored by the Ohio Board of Regents (OBOR) are:

- **Viability Ratio:** expendable net assets divided by total debt. This ratio is a measure of an institution's ability to retire its long-term debt using available current resources. A viability ratio in excess of 100% indicates that the institution has expendable fund balances in excess of its plant debt. A viability ratio above 60% is considered good, while a ratio below 30% may be a cause for concern.
- **Primary Reserve Ratio:** expendable net assets divided by total operating expenses. This ratio is a measure of an institution's ability to continue operating at current levels without future revenues. A primary reserve ratio of 10% or greater is considered good, while a ratio below 5% may be a cause for concern.
- **Net Income Ratio:** change in total assets divided by total revenues. This ratio measures an institution's financial status in terms of current year operations. A negative net income ratio results when an institution's current year expenses exceed its current year revenues. A positive ratio indicates the institution experienced a net increase in current year fund balances.
- **Composite Score:** weighted summary statistic of the above three ratios. Each ratio is assigned a score of 1-5 based on predetermined ranges and then weighted, with 30% to the viability ratio, 50% to the primary reserve ratio, and 20% to the net income ratio. The scoring process emphasizes the need for campuses to have strong expendable fund balances, manageable plant debt, and a positive operating balance. The highest possible composite score is 5.0. The minimum acceptable composite score is 1.75. A score at or below this minimum level for two consecutive years will result in being placed on fiscal watch by OBOR.

In addition to the above ratios, the major rating agencies such as Moody's and Standard & Poor's track a series of financial indicators including:

- **Annual debt service as a percent of operating expenses:** A ratio greater than 10% generally represents an excessive debt burden, while 7% is considered to be moderately high.
- **Operating Margin:** operating surplus as a percent of revenues (excluding gift revenues)
- **Debt Service Coverage:** operating surplus divided by debt service expense
- [Spendable cash & investments to debt](#)
- [Monthly days cash on hand](#)

- ~~Total debt per student~~
- Total financial resources per student

Summary of Credit Ratings of Ohio Public Universities

As of January 18, 2023



September 2020

January 2023

	Moody's Investor		Standard & Poor's		Fitch Ratings		Moody's Investor		Standard & Poor's		Fitch Ratings	
	Rating		Rating		Rating		Rating		Rating		Rating	
State of Ohio (OH)	Aa1	Stable	AA+	Stable	AA+	Stable	Aa1	Positive	AA+	Stable	AAA	Stable
Bowling Green State University (BGSU)	A1	Stable	A+	Stable	Not Rated		A1	Stable	A+	Stable	Not Rated	
Central State University (CU)	Not Rated		Not Rated		Not Rated		Not Rated		Not Rated		Not Rated	
Cleveland State University (CSU)	A1	Stable	A+	Negative	Not Rated		A2	Stable	A+	Stable	Not Rated	
Kent State University (KSU)	Aa3	Stable	A+	Stable	Not Rated		Aa3	Stable	A+	Stable	Not Rated	
Miami University (MU)	Aa3	Stable	Not Rated		AA	Stable	Aa3	Stable	Not Rated		AA	Stable
Ohio State University (OSU)	Aa1	Stable	AA	Stable	AA	Stable	Aa1	Stable	AA	Stable	AA+	Stable
Ohio University (OU)	Aa3	Stable	A+	Stable	Not Rated		Aa3	Stable	A+	Negative	Not Rated	
Shawnee State University (SSU)	Baa3	Negative	Not Rated		Not Rated		Baa3	Stable	Not Rated		Not Rated	
University of Akron (UA)	A1	Negative	Not Rated		A+	Stable	A2	Stable	Not Rated		A	Stable
University of Cincinnati (UC)	Aa3	Stable	AA-	Stable	Not Rated		Aa3	Stable	AA-	Stable	Not Rated	
University of Toledo (UT)	A1	Negative	A	Negative	Not Rated		A2	Negative	A	Stable	Not Rated	
Wright State University (WSU)	Baa2	Negative	Not Rated		Not Rated		Baa1	Stable	Not Rated		Not Rated	
Youngstown University (YU)	A2	Stable	A+	Stable	Not Rated		A2	Stable	A+	Negative	Not Rated	

Liquidity Statistics Comparison

As of January 2023



	Miami University (Aa3)	Kent State Univ (Aa3)	Ohio University (Aa3)	Bowling Green State Univ (A1)	The Ohio State University (Aa1)
	FY 2021				
Total FTE Enrollment (#, May be Estimated)	21,626	28,021	24,107	16,020	61,737
Total Tuition Discount (%)	37.5%	32.4%	28.0%	34.9%	32.1%
Total Cash & Investments (\$, in Millions)	\$1,601	\$768	\$1,378	\$546	\$11,020
Spendable Cash & Investments (\$, in Millions)	\$1,211	\$697	\$1,101	\$424	\$9,231
Operating Revenue (\$, in Millions)	\$626	\$609	\$681	\$378	\$7,860
Operating Expenses (\$, in Millions)	\$556	\$598	\$653	\$366	\$7,466
Operating Cash Flow Margin (%)	27.4%	12.7%	16.7%	15.7%	12.6%
Annual Change in Operating Revenue (%)	-5.6%	-0.9%	-4.0%	5.9%	6.0%
Total Cash & Investments to Operating Expenses (x)	2.9	1.3	2.1	1.5	1.5
Total Debt (\$, in Millions)	\$629	\$429	\$640	\$275	\$2,942
Spendable Cash & Investments to Total Debt (x)	1.9	1.6	1.7	1.5	3.1
Debt Service to Operating Expenses (%)	10.9%	5.9%	6.1%	3.5%	2.7%
Total Financial Resources per Student (\$)	\$58,772	\$10,456	\$39,657	\$19,039	\$83,289
Monthly Days Cash on Hand (x)	685.3	253.0	330.5	252.2	268.7
Annual Debt Service Coverage (x)	2.8	2.2	2.9	4.6	5.0

Source: Moody's Investor Services MFRA Database as of January 2023.

Liquidity Statistics, Medians

As of January 2023



	Miami University (Aa3)	Aa3 Medians	Aa2 Medians	Aa1 Medians	Aaa Medians
FY 2021					
Total FTE Enrollment (#, May be Estimated)	21,626	24,434	46,828	46,537	59,423
Total Tuition Discount (%)	37.5%	35.1%	38.2%	31.0%	35.1%
Total Cash & Investments (\$, in Millions)	\$1,601	\$1,054	\$2,716	\$5,466	\$12,421
Spendable Cash & Investments (\$, in Millions)	\$1,211	\$753	\$1,978	\$4,096	\$10,310
Operating Revenue (\$, in Millions)	\$626	\$885	\$2,133	\$3,866	\$5,321
Operating Expenses (\$, in Millions)	\$556	\$848	\$2,074	\$3,515	\$5,017
Operating Cash Flow Margin (%)	27.4%	12.1%	13.7%	12.7%	13.4%
Annual Change in Operating Revenue (%)	-5.6%	0.4%	3.0%	1.3%	6.7%
Total Cash & Investments to Operating Expenses (x)	2.9	1.2	1.2	1.6	2.0
Total Debt (\$, in Millions)	\$629	\$432	\$1,164	\$1,367	\$2,784
Spendable Cash & Investments to Total Debt (x)	1.9	1.6	1.6	3.0	3.6
Debt Service to Operating Expenses (%)	10.9%	4.1%	5.4%	2.8%	3.1%
Total Financial Resources per Student (\$)	\$58,772	\$25,702	\$30,559	\$91,541	\$165,390
Monthly Days Cash on Hand (x)	685.3	172.8	196.8	234.5	222.6
Annual Debt Service Coverage (x)	2.8	3.3	2.5	4.8	5.0

Source: Moody's Investor Services MFRA Database as of January 2023.

FY 2017 to FY 2021 Composite Score Trend
INSTITUTIONAL SCORES (EXCLUDING ASSOCIATED IMPACTS OF GASB 68/75)

Institution	2017	2018	2019	2020	2021
UNIVERSITIES					
BOWLING GREEN	3.9	3.1	3.3	3.1	4.4
CENTRAL STATE 1	2.8	2.3	2.8	2.2	2.2
CLEVELAND STATE	3.7	3.9	4.2	3.6	4.7
KENT STATE	4.4	3.6	3.6	3.6	4.7
MIAMI	4.4	4.7	4.7	4.7	4.7
NEOMED	4.7	3.9	4.3	4.1	4.7
OHIO STATE	4.7	4.7	4.7	4.7	4.7
OHIO UNIVERSITY	4.4	4.4	4.4	3.8	4.4
SHAWNEE STATE	2.6	2.1	2.1	2.3	3.4
UNIVERSITY OF AKRON	3.4	3.2	2.8	2.8	4.4
UNIVERSITY OF CINCINNATI	3.4	3.4	3.4	3.7	4.4
UNIVERSITY OF TOLEDO	3.1	3.1	3.1	3.1	4.2
WRIGHT STATE	0.8	2.2	3.2	3.2	4.2
YOUNGSTOWN STATE	3.7	3.3	3.3	3.1	4.2
COMMUNITY COLLEGES					
BELMONT TECH	4.4	5.0	4.0	4.2	5.0
CINCINNATI STATE	2.3	2.3	2.7	3.9	4.7
CLARK STATE	3.8	4.0	4.2	3.8	4.7
COLUMBUS STATE	4.2	4.2	4.8	4.6	4.4
COTC	5.0	4.8	4.2	4.6	5.0
CUYAHOGA	3.6	3.4	3.4	2.8	4.4
EASTERN GATEWAY	3.5	2.8	4.0	3.7	4.2
EDISON STATE	5.0	4.6	4.3	4.5	4.5
HOCKING	3.9	3.9	3.5	3.5	3.9
JAMES RHODES STATE	4.2	4.8	5.0	4.4	5.0
LAKELAND	2.6	2.4	2.0	2.0	2.2
LORAIN	4.4	4.0	4.2	3.8	4.7
MARION TECH	4.3	3.7	4.1	3.8	4.2
NORTH CENTRAL	4.5	4.1	5.0	5.0	5.0
NORTHWEST STATE	4.3	4.1	4.3	3.4	3.4
OWENS STATE	4.0	4.5	4.5	4.2	5.0
RIO GRANDE	4.5	4.3	4.1	3.4	3.8
SINCLAIR	5.0	4.8	5.0	5.0	5.0
SOUTHERN STATE	2.8	2.3	2.3	2.3	3.6
STARK STATE	4.1	4.5	4.5	4.3	4.3
TERRA STATE	2.4	2.1	2.6	2.7	2.6
WASHINGTON STATE	4.2	4.2	5.0	4.4	5.0
ZANE STATE	2.1	2.3	2.3	2.3	3.1

1. Central State's FY 2021 Composite Score is based on their FY 2020 financial statements. The FY 2021 statements have not yet been approved by the Auditor of State.

TABLE 1
FY 2021 FINANCIAL RATIO ANALYSIS
INSTITUTIONAL RATIOS AND SCORES (EXCLUDING ASSOCIATED IMPACTS OF GASB 68/75)

Institution	Composite	Viability		Net Income		Primary Reserve	
	Score	Ratio*	Score	Ratio	Score	Ratio	Score
UNIVERSITIES							
BOWLING GREEN	4.40	88.4%	3.0	11.3%	5.0	59.4%	5.0
CENTRAL STATE 1	2.20	30.1%	2.0	2.0%	3.0	9.2%	2.0
CLEVELAND STATE	4.70	106.7%	4.0	9.6%	5.0	63.8%	5.0
KENT STATE	4.70	102.0%	4.0	10.4%	5.0	66.5%	5.0
MIAMI	4.70	160.1%	4.0	26.3%	5.0	167.9%	5.0
NEOMED	4.70	149.6%	4.0	16.3%	5.0	82.6%	5.0
OHIO STATE	4.70	205.0%	4.0	22.6%	5.0	96.5%	5.0
OHIO UNIVERSITY	4.40	97.5%	3.0	18.2%	5.0	91.1%	5.0
SHAWNEE STATE	3.40	77.8%	3.0	7.1%	5.0	23.1%	3.0
UNIVERSITY OF AKRON	4.40	72.6%	3.0	23.4%	5.0	87.7%	5.0
UNIVERSITY OF CINCINNATI	4.40	77.9%	3.0	17.7%	5.0	68.2%	5.0
UNIVERSITY OF TOLEDO	4.20	138.3%	4.0	11.7%	5.0	42.6%	4.0
WRIGHT STATE	4.20	185.6%	4.0	12.0%	5.0	37.3%	4.0
YOUNGSTOWN STATE	4.20	127.0%	4.0	18.2%	5.0	44.3%	4.0
COMMUNITY COLLEGES							
BELMONT TECH	5.00	N/A	0.0	5.6%	5.0	69.8%	5.0
CINCINNATI STATE	4.70	145.9%	4.0	22.8%	5.0	53.0%	5.0
CLARK STATE	4.70	208.2%	4.0	13.5%	5.0	53.4%	5.0
COLUMBUS STATE	4.40	93.4%	3.0	10.0%	5.0	78.3%	5.0
COTC	5.00	26834.5%	5.0	29.7%	5.0	87.6%	5.0
CUYAHOGA	4.40	61.0%	3.0	17.4%	5.0	60.7%	5.0
EASTERN GATEWAY	4.20	222.4%	4.0	15.5%	5.0	41.3%	4.0
EDISON STATE	4.50	515.9%	5.0	7.4%	5.0	38.8%	4.0
HOCKING	3.90	94.4%	3.0	8.3%	5.0	44.9%	4.0
JAMES RHODES STATE	5.00	434.3%	5.0	36.4%	5.0	56.8%	5.0
LAKELAND	2.20	11.7%	1.0	0.8%	2.0	15.0%	3.0
LORAIN	4.70	105.1%	4.0	11.5%	5.0	69.2%	5.0
MARION TECH	4.20	N/A	0.0	5.6%	5.0	31.4%	4.0
NORTH CENTRAL	5.00	3036.2%	5.0	10.1%	5.0	84.2%	5.0
NORTHWEST STATE	3.40	N/A	0.0	-1.5%	1.0	29.7%	4.0
OWENS STATE	5.00	N/A	0.0	9.3%	5.0	55.7%	5.0
RIO GRANDE	3.80	N/A	0.0	2.7%	3.0	46.1%	4.0
SINCLAIR	5.00	N/A	0.0	13.6%	5.0	89.3%	5.0
SOUTHERN STATE	3.60	52.4%	2.0	19.5%	5.0	31.9%	4.0
STARK STATE	4.30	6002.6%	5.0	3.5%	4.0	47.7%	4.0
TERRA STATE	2.60	62.8%	3.0	-3.7%	1.0	18.8%	3.0
WASHINGTON STATE	5.00	N/A	0.0	14.2%	5.0	78.2%	5.0
ZANE STATE	3.10	50.0%	2.0	5.9%	5.0	14.7%	3.0

* The viability ratio is not calculated for campuses that do not have long-term plant debt. In such instances, the Primary Reserve Ratio score is weighted 80% of the Composite Score.

1. Central State's FY 2021 Composite Score is based on their FY 2020 financial statements. The FY 2021 statements have not yet been approved by the Auditor of State.

NOTE: Pursuant to administrative rule (126:3-1-01) established in response to Senate Bill 6 of the 122nd General Assembly, a composite score of or below 1.75 for two consecutive years results in an institution being placed on fiscal watch. For the purposes of this determination, the Chancellor will utilize composite scores excluding associated impacts of GASB's 68 and 75.

IPS Review

MIAMI UNIVERSITY
Investment Policy Statement – Non-Endowment

June 2020

I. Purpose

This Investment Policy Statement (“IPS”) shall serve as the governing framework for the management of the Non-Endowment assets of Miami University (the “University”) and will guide the activities and decisions of the Board of Trustees of the University (the “BoT”), as well as the Finance and Audit Committee of the BoT (the “FAC”), the Investment Subcommittee of the FAC (the “Investment Subcommittee”), the University staff, and the Outsourced Chief Investment Officer (“OCIO”) in managing the University’s Non-Endowment assets.

All University funds derived from the sources enumerated in Ohio Revised Code 3345.05 (A) (hereafter the “Non-Endowment”), shall for investment purposes be designated into one of three pools:

- (Tier I) the University’s Operating Cash;
- (Tier II) the University’s Core Cash Sub-Account; and
- (Tier III) the University’s Long-Term Capital Sub-Account.

In addition, the BoT may designate some of these funds as quasi-endowments, which for investment purposes shall be invested with the University’s endowment pool according to the Pooled Investment Agreement between the University and the Miami University Foundation and the endowment investment policy (Appendix A).

II. Fiduciary Duties

In fulfilling its responsibilities described herein, each of the BoT, the FAC and its Investment Subcommittee, the Office of Investments and Treasury Services, and the OCIO is a fiduciary to the Non-Endowment and shall act in accordance with the Uniform Prudent Management of Institutional Funds Act (“UPMIFA”). Among other things, UPMIFA requires each person managing an institutional portfolio to do so in good faith and with the care an ordinarily prudent person in a like position would exercise under similar circumstances.

III. Roles and Responsibilities

Board of Trustees. The BoT shall approve this IPS, its guidelines, and amendments. The BoT shall also approve recommendations to hire or fire third party service providers (e.g., auditors, custodian, OCIO, and consultants).

The IPS will guide the activities and decisions of the BoT, as well as, the FAC, the Investment Subcommittee, the Office of Investments and Treasury Services, and the OCIO in managing the assets of the Non-Endowment.

Finance and Audit Committee. The BoT has delegated implementation oversight of the IPS to the FAC, which, in turn, may entrust an Investment Subcommittee to carry out these responsibilities and which serves as the Investment Committee required by Ohio Revised Code 3345.05. Specific responsibilities of the FAC include:

- upon recommendation of its Investment Subcommittee, submitting for BoT approval an IPS, setting forth, among other things, the fiduciary roles and responsibilities, investment guidelines and objectives for the investment of the assets, including asset allocation target exposures, permissible ranges (i.e., minimum and maximum allocations to each asset class), and the benchmarks against which the performance of each asset class, and the portfolio as a whole, will be evaluated;
- upon recommendation of its Investment Subcommittee, submitting for BoT approval Investment Subcommittee recommendations to hire or fire third party service providers (e.g., auditors, custodian, OCIO, and consultants); and
- reporting at least semi-annually to the BoT.

Investment Subcommittee. The Investment Subcommittee as a governing fiduciary shall oversee the investment and administration of the Non-Endowment. It serves as the “investment committee” required by Ohio Revised Code 3345.05. The Investment Subcommittee, in conjunction with the OCIO, develops policies and guidelines for recommendation to the BoT and the FAC designed to position the Non-Endowment to achieve its objectives with a prudent level of risk. Revisions to the IPS may be recommended by the Investment Subcommittee and approved by the BoT as necessary.

The Investment Subcommittee delegates its authority to make investment decisions to the OCIO in accordance with the Investment Management Agreement dated May 16, 2018 and as may be amended (the “Investment Management Agreement”), which is incorporated herein by reference. Specific responsibilities of the Investment Subcommittee include:

- submitting for FAC concurrence and BoT approval an IPS, setting forth, among other things, the fiduciary roles and responsibilities, investment guidelines and objectives for the investment of the Non-Endowment assets, including asset allocation target exposures, permissible ranges (i.e., minimum and maximum allocations to each asset class), and the benchmarks against which the performance of each asset class, and the portfolio as a whole, will be evaluated;
- proposing for FAC concurrence and BoT for approval such updates to the IPS as it, in consultation with the Office of Investments and Treasury Services, the OCIO, and any other advisor, deems appropriate;

- communicating to the Office of Investments and Treasury Services and the OCIO any changes in the risk profile and characteristics of Miami University that may impact the investment objectives and guidelines of the Non-Endowment;
- delegating specific administrative, operational, and managerial responsibilities relating to the investment and reinvestment of the Non-Endowment assets;
- monitoring compliance with the IPS;
- reviewing the Office of Investments and Treasury Services' oversight and evaluation of third party vendors on its behalf and making recommendations to the FAC and the BoT with respect thereto;
- reviewing periodically the following:
 - investment performance, including comparisons to objectives and benchmarks
 - asset allocation for the Non-Endowment
 - fees paid in support of the management of the Non-Endowment
- reporting at least semi-annually to the BoT.

Staff. The Secretary to the BoT will maintain the official minutes and records of the FAC and Investment Subcommittee. The Office of Investments and Treasury Services is responsible for managing the operations of the Non-Endowment investment program. Specific responsibilities of the Office of Investments and Treasury Services include:

- budgeting, investing, forecasting, and monitoring funds associated with the Tier 1 Operating Cash portfolio;
- managing the transfer of funds among the Non-Endowment investment Tiers;
- facilitating division carry forward balances, donor gifts, and other unrestricted funds that can be quasi-endowed;
- providing administration, reporting, accounting, audit, and tax support for the Non-Endowment operations;
- ensuring compliance with Ohio Revised Code Section 3345.05 (C)(1);
- serving as the day-to-day contact with the OCIO including communicating planned contributions and withdrawals, transfers of funds, and liquidity needs, communicating with the OCIO and any other advisor(s) any changes in the risk profile and characteristics of Miami University that may impact the investment objectives and guidelines of the Non-Endowment;
- monitoring and evaluating third party service providers (e.g., auditors, custodian, OCIO, and consultants), specifically
 - overseeing the OCIO or other advisor(s) who shall have the responsibility, and may have discretion, for implementing investment strategies in accordance with the guidelines set forth in the IPS;
 - overseeing other service providers to the Non-Endowment, including the custodian of Non-Endowment assets;
- recommending to the Investment Subcommittee the hiring and termination of third party service providers (e.g., auditors, custodian, OCIO, and consultants);

- managing constituent relationships;
- providing support to the FAC and its Investment Subcommittee;
- reporting to the FAC and its Investment Subcommittee at their respective meetings.

Outsourced Chief Investment Officer. To assist with managing the Non-Endowment investment program, the BoT has retained the services of an OCIO in conformity the requirements of Ohio Revised Code Section 3345.05(D)(1). The Investment Subcommittee delegated authority to make investment decisions to the OCIO in accordance with the Investment Management Agreement, which is incorporated herein by reference.

The OCIO will have day-to-day responsibility and discretion for investing a designated portion of the Non-Endowment assets (specifically Tiers II and III). The OCIO will report to the Investment Subcommittee on a regular basis in accordance with the Investment Management Agreement that governs the relationship. Specific responsibilities include:

- advising the Investment Subcommittee on the development of the IPS;
- periodically reviewing and recommending to the Investment Subcommittee any changes, modifications, and/or amendments to the IPS, including the investment guidelines and objectives;
- implementing the investment program with respect to Tiers II and III on a discretionary basis, including the selection and monitoring of commingled investment vehicles, the appointment of sub-advisers, and the direct management of assets not allocated to investment vehicles or sub-advisers, in accordance with the guidelines and asset allocation ranges as set forth in this IPS and the Investment Management Agreement;
- taking all necessary actions with respect to the hiring and termination of sub-advisers, and the subscription to and withdrawal from, commingled investment vehicles, including reviewing and executing investment management agreements and subscription documents;
- setting investment guidelines for sub-advisers in conformity to this IPS and the Investment Management Agreement and monitoring their compliance therewith;
- meeting with sub-advisers and evaluating their investment performance;
- interacting with the custodian and other relevant service providers to the Non-Endowment, as necessary to perform its investment management services;
- assisting the Office of Investments and Treasury Services in meeting its reporting and administrative requirements;
- providing reporting and performance monitoring as necessary for the Investment Subcommittee to perform its oversight responsibilities; and
- meeting with the Investment Subcommittee at least quarterly or at other intervals as reasonably agreed with the Investment Subcommittee.

IV. Objectives: Non-Endowment Investment Program

The primary objective of the Non-Endowment investment program is to ensure adequate operating liquidity for the University. Liquidity needs are actively managed in a three-pool structure that allows for differentiation among investment risks and returns.

For investment strategy purposes, the University's Non-Endowment and Foundation Endowment portfolios should be considered together. The liquidity, risk, and return characteristics of the combined pools provide the opportunity to more effectively deploy capital and improve the overall risk-adjusted returns of both investment programs.

The investment of Non-Endowment assets will be guided by the objective of earning rates of return in excess of savings accounts or 91-day Treasury Bills while accepting a low level of market risk and maintaining a high degree of liquidity. The three Tiers of the Non-Endowment investment program are constructed to adequately meet the University's projected budgetary needs and Ohio Revised Code requirements (listed below in Section XI Investment Guidelines) with low risk and liquid investments in Tier I, and with progressively higher expected returns at higher risk profiles in Tiers II and III. The portfolio's asset allocation will be statistically modeled using historical and projected risk and return characteristics of the portfolio's asset classes.

The Investment Subcommittee has adopted asset allocation targets and permissible ranges, set forth in Exhibits 1 and 2, that are designed to meet this objective provided that markets deliver equilibrium returns consistent with normal market conditions. A benchmark index has been assigned to each asset class, as set forth in Exhibits 1 and 2. The combination of the benchmark index assigned to each asset class, weighted in accordance with the target allocation to that asset class, forms the "Policy Benchmark" against which the portfolio's overall performance will be measured. Each Tier seeks to achieve performance (net of management fees) that exceeds the performance of the applicable Policy Benchmark (net of assumed passive management fees and rebalancing costs) over rolling five- and ten-year periods.

V. Investment Objectives: Non-Endowment Tiers

TIER I - University Operating Cash

- Objective: To meet the day-to-day cash obligations of the University, provide a liquid and low investment risk source of funds when needed, and meet Ohio Revised Code requirements for public funds.
- Investments: Includes bank deposits, other cash vehicles, and eligible investments under ORC 3345.05 (C) (1).
- Tier Size: The targeted minimum cash balance held in Tier 1 is budgeted each fiscal year by the Office of Investments and Treasury Services and is confirmed

every six months. The minimum balance will be two times the average monthly negative cash flow of the preceding fiscal year.

TIER II - University Core Cash Sub-Account

- Objective: The Baseline Tier II provides a liquid source of funds in the event the Tier I pool is insufficient to meet the University's operating cash needs, while providing an opportunity for incremental returns with modest volatility. The University may periodically create a Special Projects fund within Tier II but housed apart from the Baseline Tier II for funds earmarked for specific future disposition by the University that are likely to require target date maturity matching.
- Investments: Include U.S. Treasury and government agency securities generally with an average weighted maturity of between zero and two years for the baseline allocation. May include eligible investments under ORC 3345.05(C)(1).
- Tier Size: The targeted Baseline balance within this Sub-Account is calculated using the method outlined in Section VIII Annual Expenditure Policy, confirmed during each fiscal year budgeting cycle, and verified every six months. The target Baseline balance is based upon the reserve for investment fluctuations. The minimum balance shall not fall below two times the average negative monthly cash flow of the preceding fiscal year. The Special Projects allocation has no size restrictions.

TIER III - University Long-Term Capital Sub-Account

- Objective: To provide "endowment-like" long-term risk-adjusted returns on assets that would be expended by the University only in the unlikely event of severe financial exigency.
- Investments: Include public equity, absolute return and hedged strategies, open-ended real estate funds, futures-based commodity strategies, and diversified global fixed income securities. May include eligible investments under ORC 3345.05(C)(1). While these funds are expected to have less liquid fund structures, private capital investments will be excluded from consideration unless approved by the Investment Subcommittee.
- Tier Size: This Sub-Account has no size restrictions and generally receives deposits of residual operating cash not deployed in Tiers I and II.

VI. Asset Allocation

To achieve the investment objectives of this IPS, an asset allocation study was conducted and shared with the Investment Subcommittee. It was used to establish percentage targets and ranges for each asset class eligible for investments within Tiers II and III. The asset allocation study analyzed the expected return, risk, and correlation of several asset classes as well as, the expected return and risk of various hypothetical portfolios comprising these asset classes. The expected return and risk characteristics of various portfolios were

evaluated in terms of the future expected efficiency of achieving the investment objectives of the Non-Endowment.

Based upon this analysis, asset allocation policies, including ranges for each asset class, were defined. The asset allocation policies are contained in the investment guidelines set forth in Exhibits 1 and 2.

VII. Risk Management

The Tier II Sub-Account will emphasize liquidity and low volatility in keeping with the portfolio's objective of serving as a cash buffer for the University's short-term operating cash needs. The appropriate duration target and range will be agreed to by the Investment Subcommittee and OCIO and specified in Exhibit 1.

Investments in the Tier III Sub-Account will be broadly diversified across and within asset classes in order to seek to minimize the impact of adverse asset class and security-specific shocks, and to avoid excessive portfolio volatility. An appropriate target range for the annual standard deviation of the Tier III policy portfolio will be agreed on by the Investment Subcommittee and OCIO as specified in Exhibit 2. Meeting the "endowment-like" long-term return objectives of the Non-Endowment program shall require the OCIO to regularly monitor and manage market risks associated with the overall portfolio as well as individual asset classes. Specific investments will also be reviewed and aggregated, as available from each manager, on a regular basis to ensure that the portfolio does not maintain unwarranted concentration risks with respect to any single factor or security at the manager level, asset class level and portfolio level.

Leverage shall also be monitored to ensure that the intended exposure is in line with parameters determined by the OCIO to be appropriate for a specific strategy and/or asset class. In addition, the portfolio will seek to maintain sufficient liquidity, at all times, to meet the ongoing distribution needs of the Non-Endowment, to rebalance the portfolio, and to capture tactical opportunities. The source of monies for such liquidity needs will be based on rebalancing and cost considerations.

VIII. Annual Expenditure Policy

A reserve for investment fluctuations will be maintained in order to buffer the portfolio from short-term investment fluctuations. The target balance of the reserve for future investment fluctuations is determined as 20% of the previous fiscal year-end Non-Endowment pool Tier III Long Term Capital balance, plus two years of budgeted Non-Endowment investment earnings.

Each year, the University budget office shall budget investment earnings based on a reasonable assessment of the interest rate and capital markets environment and any funding to be added to the reserve for investment fluctuations.

Any earnings in excess of this budgeted level shall be allocated 100% to the reserve for investment fluctuations, unless otherwise determined by the BoT. In the event the earnings are short of the budgeted amount, the difference shall be drawn from the reserve for investment fluctuations.

The target amount of the reserve for investment fluctuations shall be reviewed at least annually to determine its sufficiency and to establish a future target.

IX. Performance Monitoring and Evaluation

The performance of the Non-Endowment, component asset classes, sub-advisers and investment vehicles shall be monitored by the OCIO on an ongoing basis and shall be reviewed with the Investment Subcommittee at least quarterly. Investment returns are to be measured net of all fees, including investment manager and the OCIO fee. The OCIO shall provide a summary of returns versus stated benchmarks for short-term and long-term periods. The OCIO will meet with the Investment Subcommittee regularly to provide a review of performance and risk, a discussion of market conditions and a summary of the current positioning of the portfolio.

X. Conflicts of Interest

The Investment Subcommittee shall take reasonable measures to assess the independence of the OCIO, and any other service providers to the Non-Endowment. Any actual or potential conflicts of interest relating to any of the foregoing, or to any member of the BoT, FAC, Investment Subcommittee or Office of Investment and Treasury Services, shall be disclosed and addressed in accordance with UPMIFA, Ohio's Ethics laws as applicable, and any conflict of interest policy adopted by the University.

XI. Investment Guidelines

Sub-advisers who are appointed to manage accounts for the Non-Endowment shall be provided investment guidelines as determined by the OCIO. In general, the guidelines will stipulate the types of securities in which the account may invest, general characteristics for the portfolio and/or the performance benchmark and objectives. The specific guidelines may vary depending upon the asset class or sub-asset class. Commingled investment vehicles will be governed by their offering memorandum and other constituent documents.

The investment of the Non-Endowment is subject to and shall be made in accordance with ORC 3345.05 (C) (1), with at least twenty-five percent of the average amount of the investment portfolio over the course of the previous fiscal year invested in securities of the United States government or of its agencies or instrumentalities, the treasurer of state's pooled investment program, obligations of Ohio or any political subdivision of Ohio, certificates of deposit of any national bank located in Ohio, written repurchase agreements

with any eligible Ohio financial institution that is a member of the federal reserve system or federal home loan bank, money market funds, or bankers acceptances maturing in two hundred seventy days or less which are eligible for purchase by the federal reserve system, as a reserve. The Non-Endowment assets in excess of the twenty-five percent may be pooled with other University funds and invested in accordance with Ohio Revised Code Section 1715.52 (UPMIFA).

XII. Mission-Aligned and Other Considerations

ESG Considerations. The University and the Foundation (collectively “Miami”), and the OCIO strive to maintain a high standard of stewardship excellence in managing their investment assets and in supporting the mission of the University.

Miami believes that the consideration of environmental, social, and governance factors is an integral part of a thorough portfolio management process. Miami’s investment approach delegates investment decisions to the OCIO and the choice of OCIO was based upon the OCIO’s philosophy, process, resources, ability to underwrite risk comprehensively, and alignment of interests with Miami. In turn, the OCIO uses these principles to carefully select sub-advisers to implement the investment strategies for Miami. These external partners make decisions about specific securities.

Miami recognizes the important role of responsible investment. As such, Miami has selected an OCIO that is a signatory to the United Nations Principles for Responsible Investment (UNPRI). Signatories to the UNPRI publicly commit to adopt and implement the UN’s global standards for responsible investing, which include an obligation to incorporate environmental, social, and corporate governance issues into investment analysis and decision-making processes.

Exhibit 1**MIAMI UNIVERSITY – NON-ENDOWMENT (TIER 2)****Policy Allocation Targets, Ranges and Benchmarks***JUNE 2018*

<i>Asset Category</i>	<i>Policy Allocation</i>	<i>Policy Ranges</i>		<i>Benchmark Indices ⁽¹⁾</i>
		<i>-</i>	<i>+</i>	
Fixed Income	100.0%	-10.0%	0.0%	
U.S. Treasury & Gov't Agency Securities	100.0%	-10.0%	0.0%	<i>ICE BAML 0-2 Year Treasury Index</i>
Cash	0.0%	0.0%	10.0%	<i>Citigroup 3 Month Treasury Bill Index</i>
Total	100%			

Footnotes:

(1) The Policy Benchmark will be reported both gross and net of assumed passive management fees and rebalancing costs.

(2) Targeted Duration for the Baseline Allocation: a range of +/- 0.5 years will be targeted around the duration of the benchmark. For example, should the ICE BAML 0-2 Year Treasury Index carry a duration of 1 year, a target range of 0.5 and 1.5 years will be targeted.

(3) Should this sub-account house funds earmarked for special university projects requiring target date matching, the Office of Investments and Treasury Services will establish an estimated draw schedule and the OCIO will invest in U.S. Treasury and government/agency securities accordingly.

Exhibit 2
MIAMI UNIVERSITY – NON-ENDOWMENT (TIER 3)
Policy Allocation Targets, Ranges and Benchmarks
JUNE 2018

Asset Category	Policy Allocation	Policy Ranges		Benchmark Indices ⁽¹⁾
		-	+	
Equities	54.0%	-10.0%	+10%	
U.S. Equities	27.0%	-10.0%	+10%	<i>Russell 3000 Index</i>
Non-U.S. Equities	18.0%	-10.0%	+10%	<i>MSCI World ex-US Investable Market Index (IMI) (Net) ⁽²⁾</i>
Emerging Market Equities	9.0%	-9.0%	+10%	<i>MSCI Emerging Markets Index (Net) ⁽²⁾</i>
Alternatives (Net) ⁽³⁾⁽⁴⁾	12.0%	-12.0%	+10%	
Hedge Funds (Net) ⁽⁴⁾	12.0%	-12.0%	+10%	<i>HFRX Equal Weighted Strategies Index</i>
<i>Hedge Funds (Gross)</i>	22.0%	-22.0%	+5%	
<i>Portable Alpha Overlay</i>	10.0%	-10.0%	+10%	
Real Assets	10.0%	-7.0%	+13%	
Real Estate	3.0%	-3.0%	+5%	<i>NCREIF Fund Index - Open End Diversified Core Equity Index</i>
Commodities	3.0%	-3.0%	+6%	<i>S&P GSCI Total Return Index</i>
TIPS	4.0%	-4.0%	+6%	<i>Bloomberg Barclays 1-10 Year U.S. TIPS Index</i>
Fixed Income ⁽⁴⁾	24.0%	-10.0%	+10%	
U.S. Investment Grade Fixed Income ⁽⁵⁾	21.5%	-15.0%	+10%	<i>Bloomberg Barclays U. S. Aggregate Index</i>
U.S. High Yield Bonds	2.5%	-2.5%	+10%	<i>BofA Merrill Lynch High Yield Cash Pay Index</i>
Non-U.S. Fixed Income	0.0%	0.0%	+10%	<i>Citigroup Non-USD World Government Bond Index Hedged</i>
Cash	0.0%	0.0%	+20%	<i>Citigroup 3 Month Treasury Bill Index</i>
Total	100%			

Footnotes:

- (1) The Policy Benchmark will be reported both gross and net of assumed passive management fees and rebalancing costs.
- (2) Indices are net of dividend withholding tax.
- (3) (Net) indicates that allocations are net of portable alpha strategies. The maximum gross allocation to hedge funds, including those overlaid in portable alpha strategies, is 27%.
- (4) U.S. Fixed Income includes physical holdings of Treasuries, corporates and synthetic fixed income achieved through portable alpha strategies.
- (5) For purposes of assessing compliance with the minimum of the policy range, fixed income will be deemed to include the allocation to cash.
- (6) The targeted annual standard deviation range is 10-12%.

Appendix A
MIAMI UNIVERSITY FOUNDATION INVESTMENT POLICY STATEMENT
Most recent version as adopted by the Foundation Board of Directors

[\[AVAILABLE UPON REQUEST\]](#)



STRATEGIC THINKING ■ INSPIRED INVESTING

Empowering investors through experience, innovation, and excellence.

1001 Nineteenth Street North
17th Floor
Arlington, VA 22209 USA

+1 703.243.4433 TEL
+1 703.243.2266 FAX

strategicgroup.com

Miami University

Board of Trustees Investment Subcommittee Appendices

March 1, 2023

CONFIDENTIAL TREATMENT REQUIRED. This material contains non-public, proprietary, confidential and/or privileged information and is sent exclusively for the internal use of the recipient to whom it is addressed. By accepting this material, the intended recipient agrees to keep its contents confidential. The intended recipient is not permitted to reproduce in whole or in part the information provided in this material or to communicate the information to any third party without Strategic's prior written consent. If you are not the intended recipient, please advise the sender immediately and destroy this material. Any unauthorized use, copying, disclosure, dissemination or distribution of this material by any person or entity is strictly prohibited.

Legal Disclosures

Strategic Investment Group is a registered service mark of Strategic Investment Management, LLC.

Copyright 2023. Strategic Investment Management, LLC. No portion of this publication may be reproduced or distributed without prior permission.

This material is for educational purposes only and should not be construed as investment advice or an offer to sell, or solicitation of an offer to subscribe for or purchase any security. Opinions expressed herein are current as of the date appearing in this material and are subject to change at the sole discretion of Strategic Investment Group®. This document is not intended as a source of any specific investment recommendations and does not constitute investment advice or the promise of future performance.

Appendices

Performance Update Supplemental Slides

Capital Markets Outlook

Capital Market Assumptions Supplemental Slides

Stress Test and Inflation Supplemental Slides

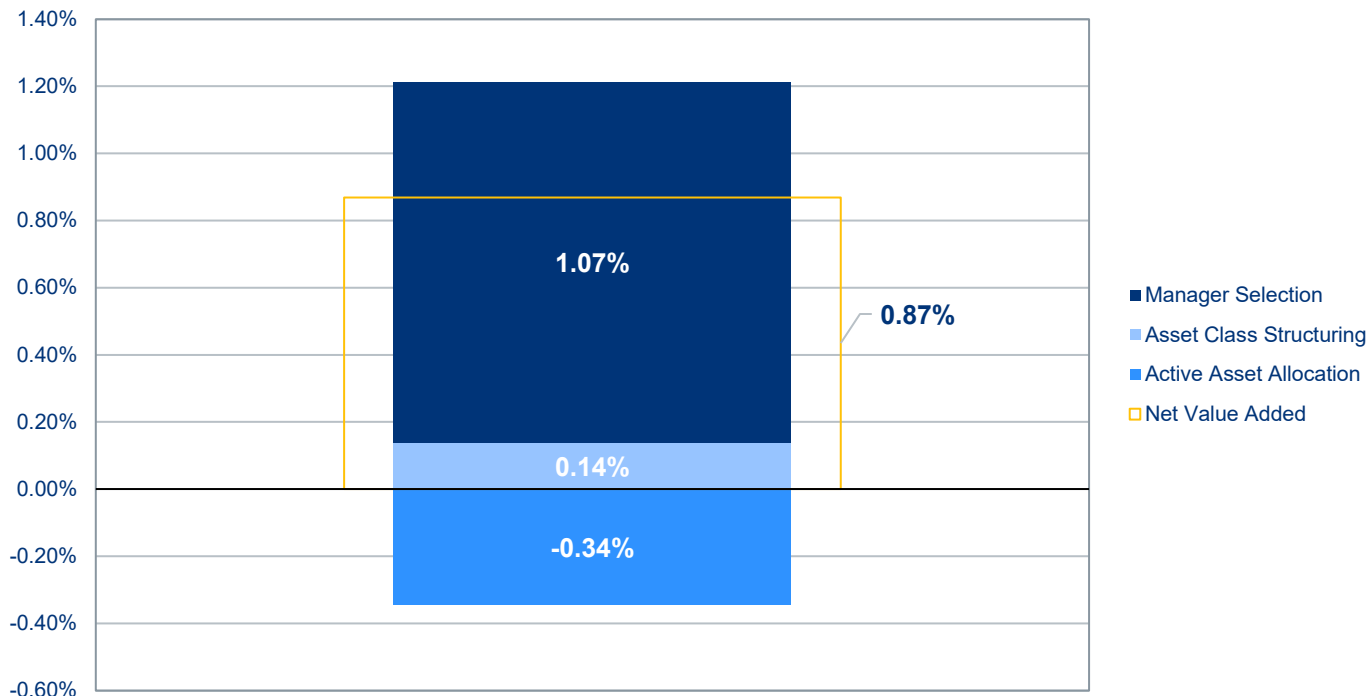
2023 FY IsC Calendar

December 2022 Performance Detail

LTC Review – Value Added Attribution

Miami University Non-Endowment (LTC) – Since Policy Inception*

Value-Added Attribution: Total Portfolio



Portfolio Attribution vs Policy Benchmark

Largest Contributors:

Manager Selection - Non-U.S. Equity: +0.51%

Manager Selection - Hedge Funds: +0.43%

Portable Alpha (HF Selection)**: +0.33%

Largest Detractors:

Manager Selection – U.S. Equity: -0.13%

Asset Allocation – EAFE/EM over U.S.: -0.12%

Asset Allocation – EM over U.S.: -0.10%

The impact of net fees is allocated across the Active Asset Allocation, Asset Class Structuring, and Manager Selection categories in the following proportions: 10% Active Asset Allocation, 20% Asset Class Structuring, 70% Manager Selection.

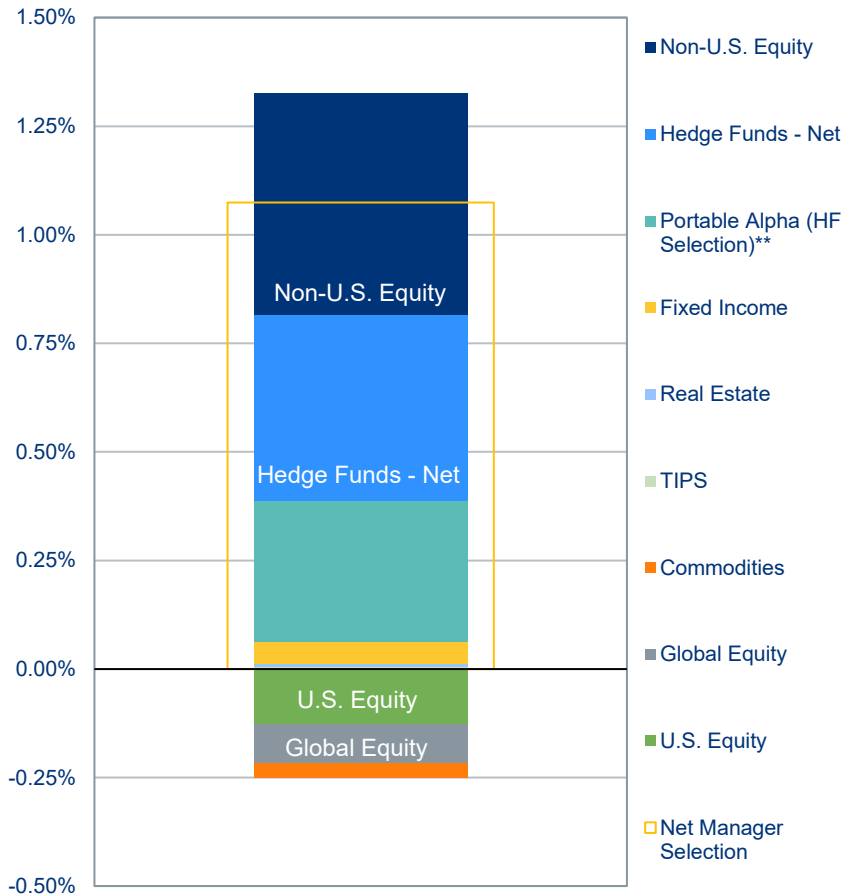
*December 31, 2018 to December 31, 2022.

**The decision to implement portable alpha is tracked and evaluated in two parts: 1. A structuring decision to invest in HF style weights as opposed to cash and 2. the actual performance of HF managers invested in as part of the portable alpha strategy relative to their style benchmarks.

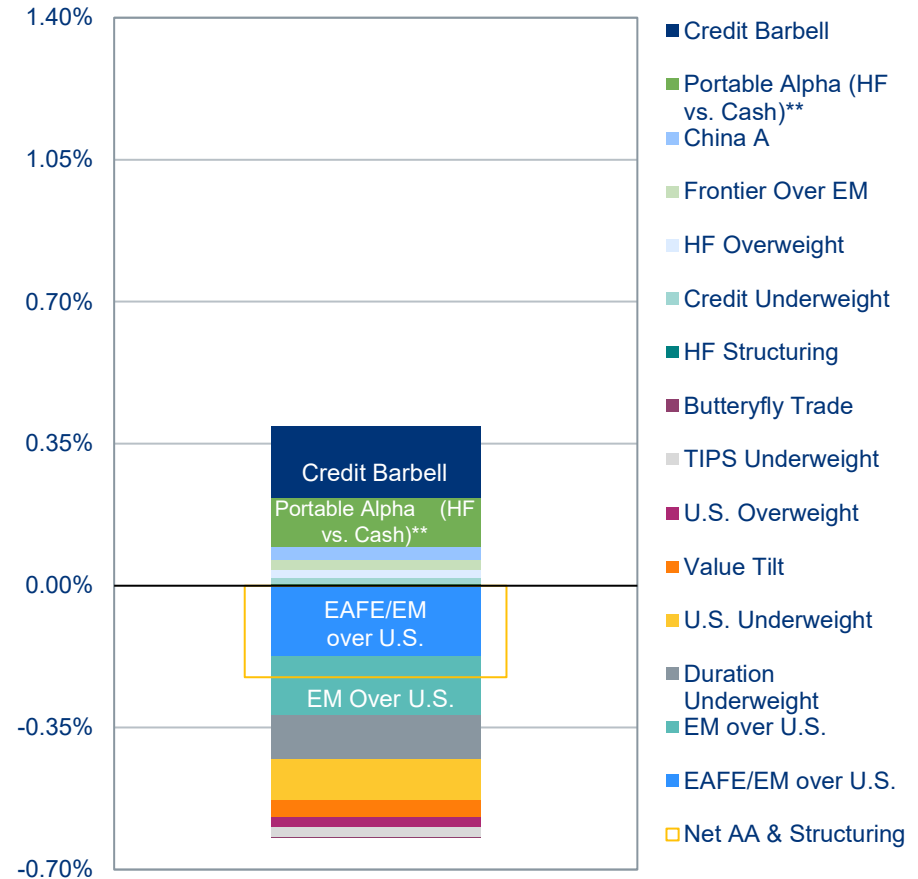
LTC Review – Value Added Attribution

Miami University Non-Endowment (LTC) – Since Policy Inception*

Value-Added Attribution: Manager Selection



Value-Added Attribution: Active Asset Allocation & Structuring



The impact of net fees is allocated across the Active Asset Allocation, Asset Class Structuring, and Manager Selection categories in the following proportions: 10% Active Asset Allocation, 20% Asset Class Structuring, 70% Manager Selection.

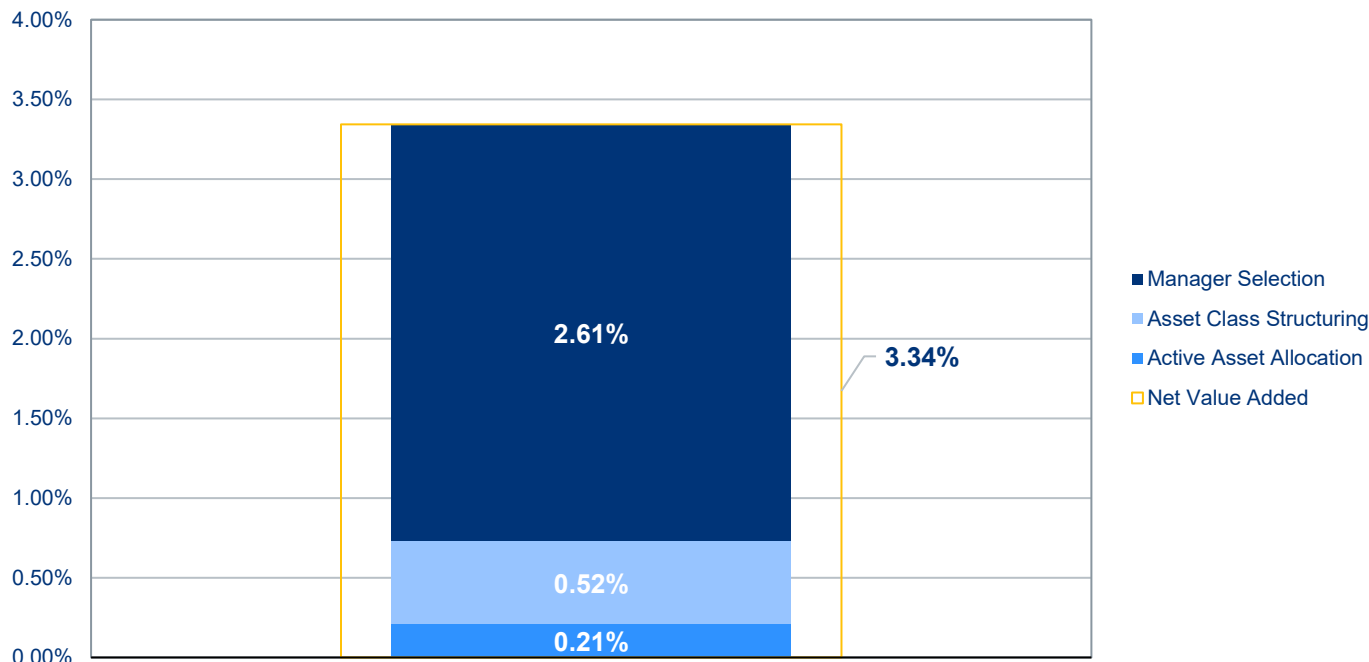
*December 31, 2018 to December 31, 2022.

**The decision to implement portable alpha is tracked and evaluated in two parts: 1. A structuring decision to invest in HF style weights as opposed to cash and 2. the actual performance of HF managers invested in as part of the portable alpha strategy relative to their style benchmarks.

LTC Review – Value Added Attribution

Miami University Non-Endowment (LTC) – One Year ending December 31, 2022

Value-Added Attribution: Total Portfolio



Portfolio Attribution vs Policy Benchmark

Largest Contributors:

Manager Selection - Hedge Funds: +0.74%
Portable Alpha (HF Selection)**: +0.69%
Manager Selection - Non-U.S. Equity: +0.55%

Largest Detractors:

Portable Alpha (HF vs. Cash)**: -0.39% (Structuring)
HF Overweight.: -0.06% (Asset Allocation)

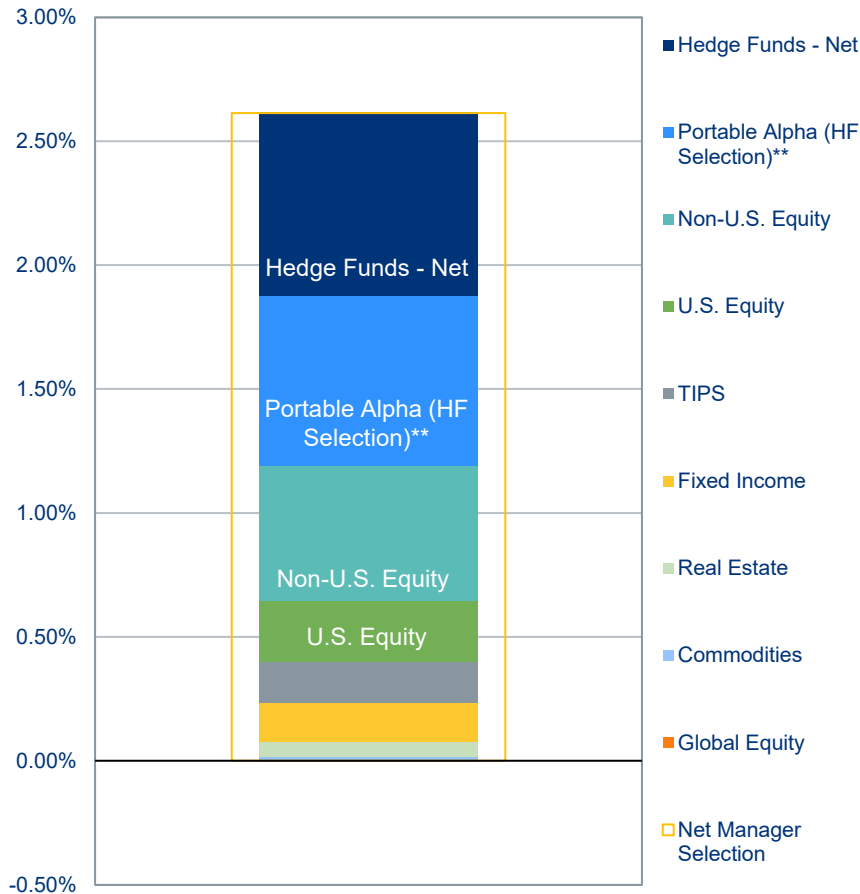
The impact of net fees is allocated across the Active Asset Allocation, Asset Class Structuring, and Manager Selection categories in the following proportions: 10% Active Asset Allocation, 20% Asset Class Structuring, 70% Manager Selection.

**The decision to implement portable alpha is tracked and evaluated in two parts: 1. A structuring decision to invest in HF style weights as opposed to cash and 2. the actual performance of HF managers invested in as part of the portable alpha strategy relative to their style benchmarks.

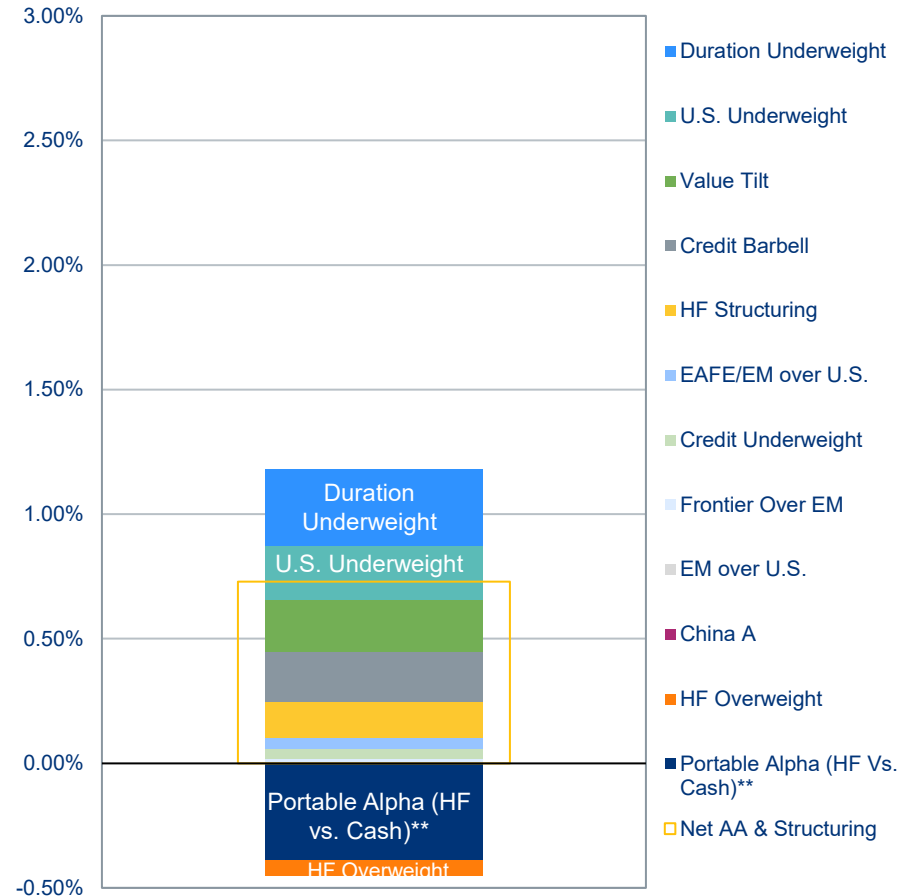
LTC Review – Value Added Attribution

Miami University Non-Endowment (LTC) – One Year ending December 31, 2022

Value-Added Attribution: Manager Selection



Value-Added Attribution: Active Asset Allocation & Structuring



The impact of net fees is allocated across the Active Asset Allocation, Asset Class Structuring, and Manager Selection categories in the following proportions: 10% Active Asset Allocation, 20% Asset Class Structuring, 70% Manager Selection.

**The decision to implement portable alpha is tracked and evaluated in two parts: 1. A structuring decision to invest in HF style weights as opposed to cash and 2. the actual performance of HF managers invested in as part of the portable alpha strategy relative to their style benchmarks.

Portfolio Review – Miami University Non-Endowment (LTC)

Portfolio and Manager Structure – as of December 31, 2022

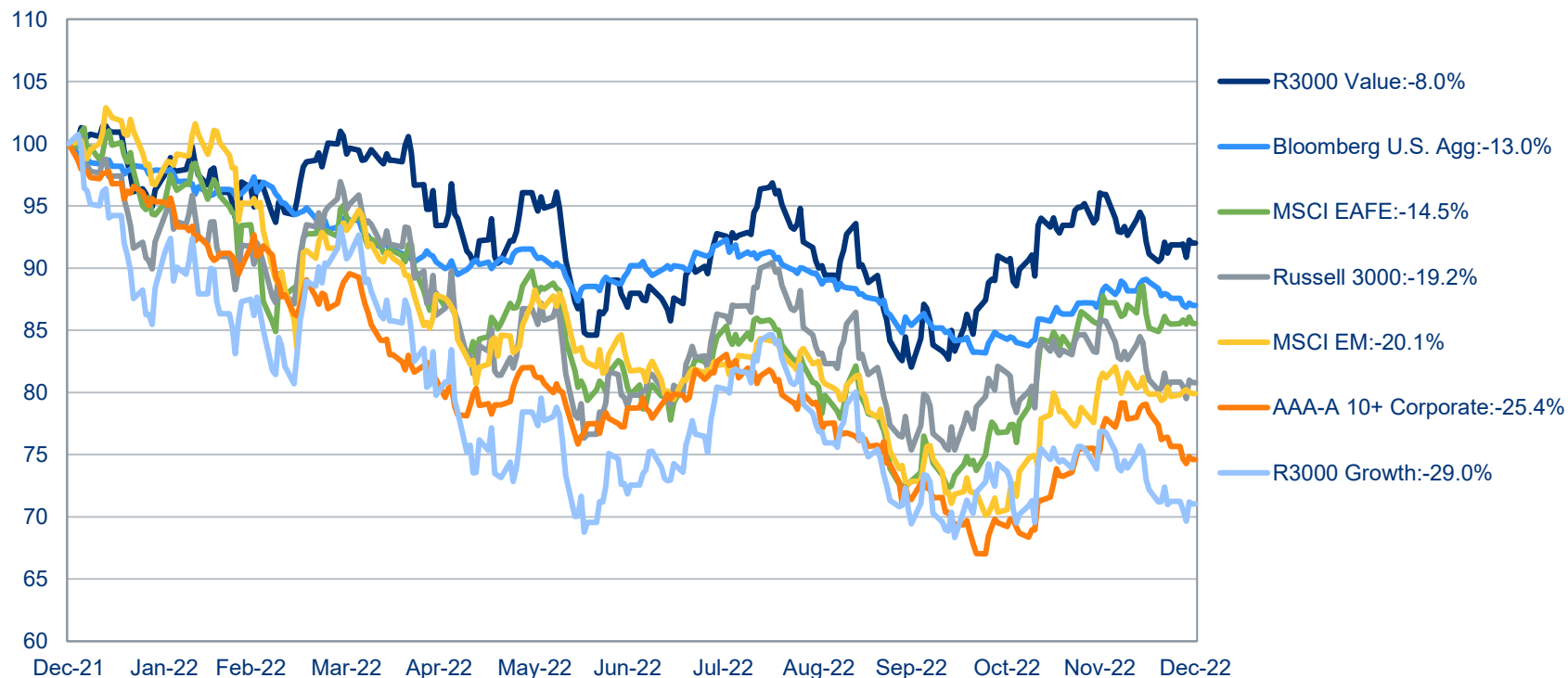
U.S. EQUITY	NON-U.S. EQUITY	HEDGE FUNDS	FIXED INCOME
<p>Strategic U.S. Equity Trust</p> <p>Portable Alpha</p> <ul style="list-style-type: none"> Strategic U.S. Equity Portable Alpha 	<p>Strategic Developed Markets Ex-U.S. Equity Trust</p> <p>Strategic Emerging Markets Equity Trust</p> <p>Portable Alpha</p> <ul style="list-style-type: none"> Strategic Developed Non-U.S. Equity Portable Alpha Strategic Emerging Markets Portable Alpha <p>Liquidity</p> <ul style="list-style-type: none"> MSCI EAFE ETF (iShares Core) MSCI EM ETF (iShares Core) 	<p>Strategic Funds SPC Alpha Segregated Portfolio</p> <p>Pending Liquidations</p> <ul style="list-style-type: none"> Waterfall Eden 	<p>Active Credit</p> <ul style="list-style-type: none"> Ellington Strategic Mortgage Fund, L.P. GoldenTree HY Value Offshore Strategic KKR Global Credit Opportunities Fund (Overseas) L.P. <p>Treasuries</p> <ul style="list-style-type: none"> Strategic Treasury Holdings
<p>GLOBAL EQUITY</p>		<p>REAL ASSETS</p>	<p>Portable Alpha</p> <ul style="list-style-type: none"> Strategic U.S. Fixed Income Portable Alpha <p>Pending Liquidation</p> <ul style="list-style-type: none"> Strategic Active Credit Trust
<p>Strategic Global Equity Trust</p>		<p>Real Estate</p> <ul style="list-style-type: none"> Harrison Street Core Property Prime Property PRISA <p>Commodities</p> <ul style="list-style-type: none"> iShares GSCI Commodity Index <p>TIPS</p> <ul style="list-style-type: none"> Strategic TIPS 	

Newly Added Managers since Q3

The Year In Review – Market Dynamics

Inflation Pressures and Policy Tightening Drive Recent Volatility

2022 Market Returns

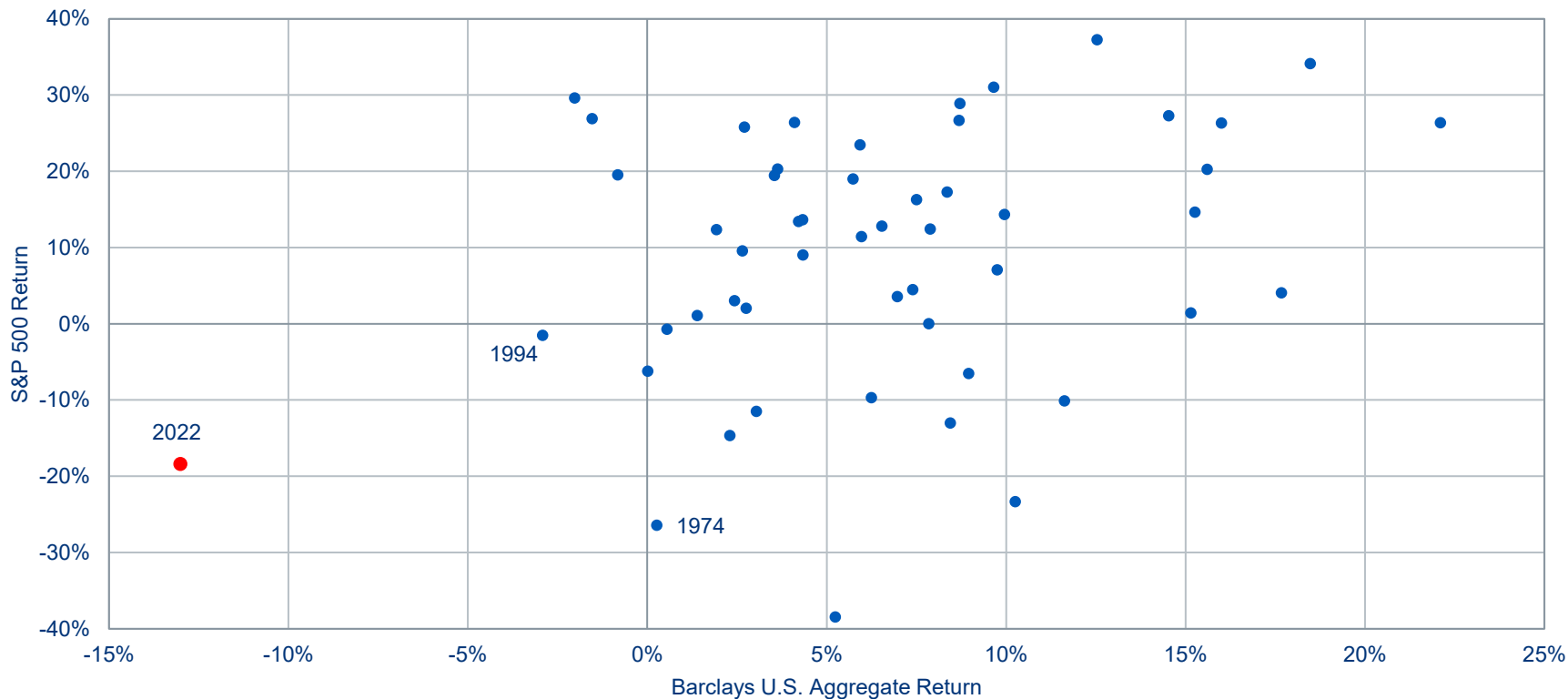


Equity and bond markets experienced steep drawdowns in 2022. Inflation remained higher than investors expected while fears of a recession mounted, driving interest rates up and growth expectations down.

Source: Bloomberg. Data as of December 31, 2022.

2022 – Worst Year for Balanced Portfolios in 50 Years

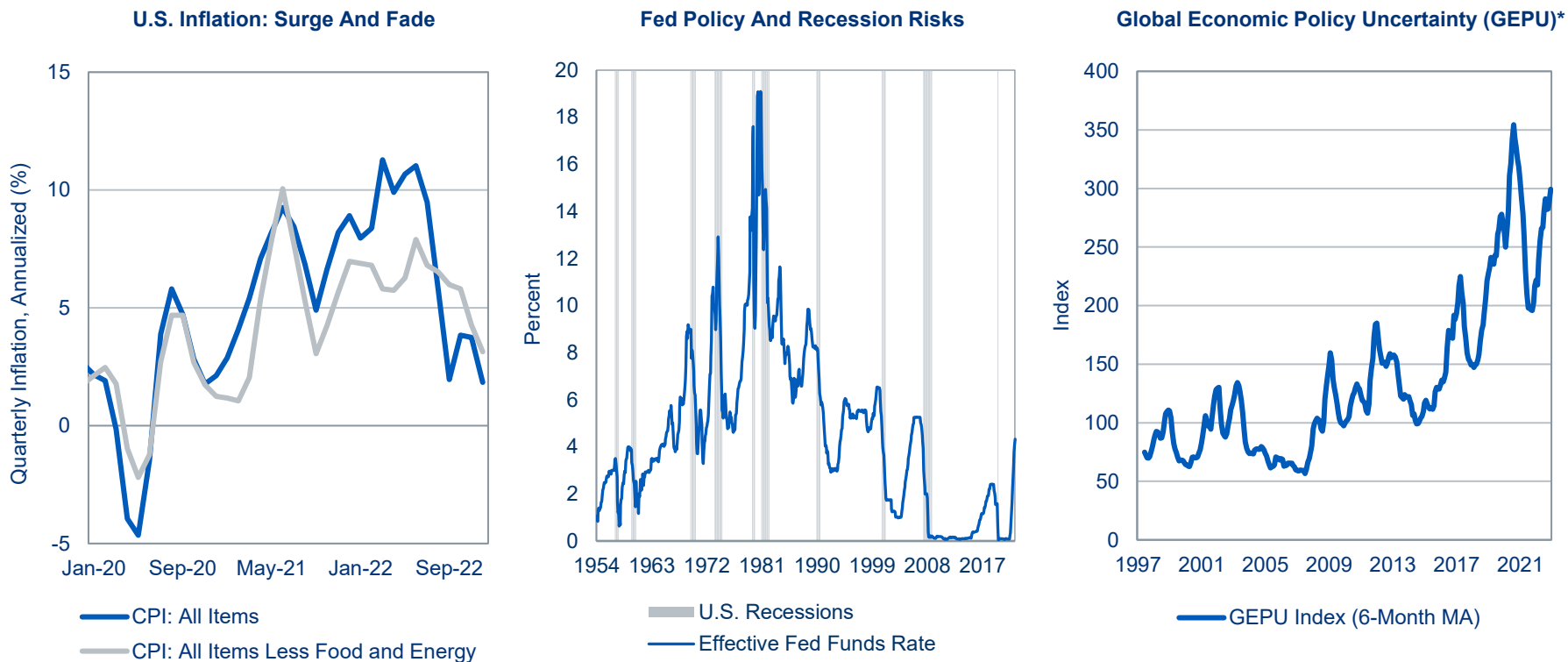
Double Digit Declines in Stocks and Bonds



The only other year that comes close to being as bad is 1994, the next worst year for bond portfolios on record.

The Macro Environment in Three Charts

Inflation, Recession Risk, and Plenty of Uncertainty

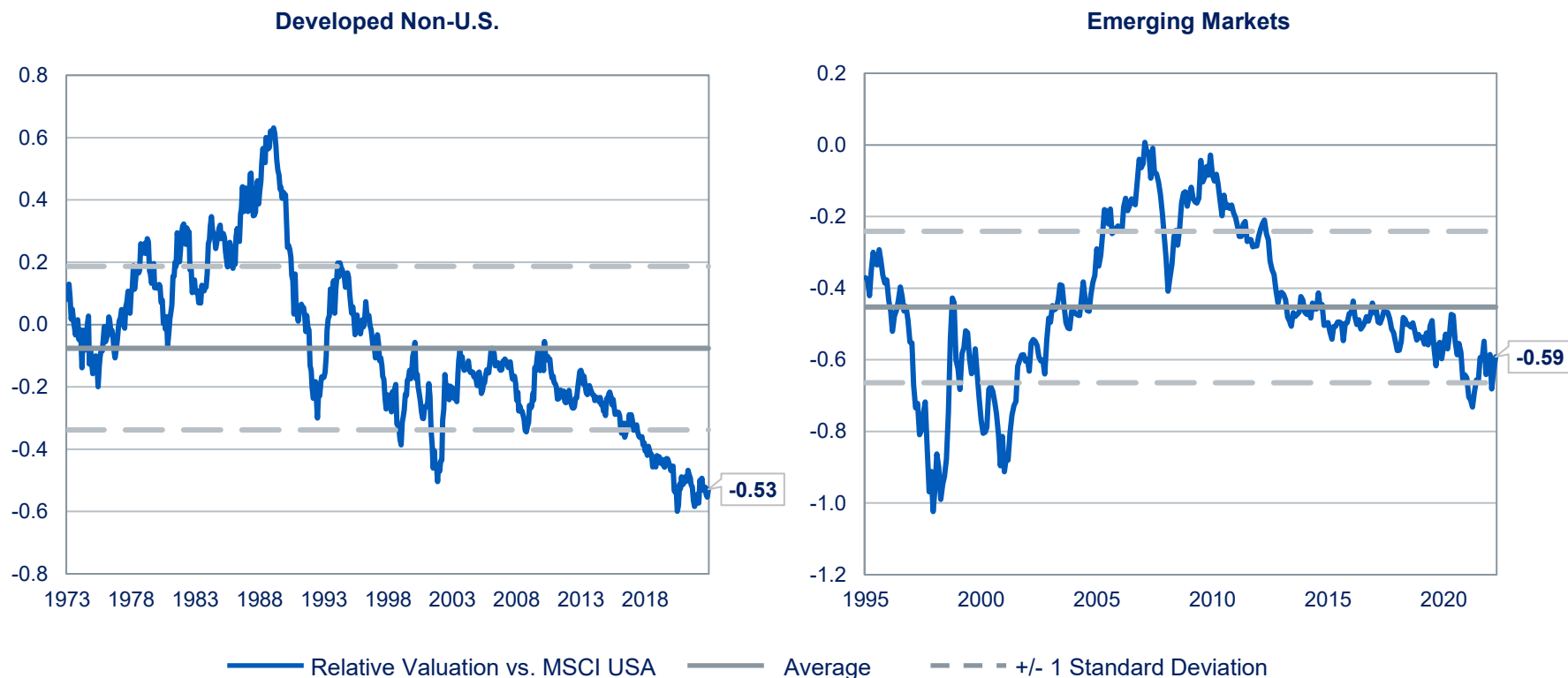


The U.S. inflation surge has alarmed policymakers and investors. While price pressures are beginning to fade, the Fed's inflation fight will likely trigger a recession. Economic uncertainty has only been higher in the early days of the pandemic.

Source: Bloomberg, NBER, data as of January 18, 2023. * The Global Economic Policy Uncertainty Index is a GDP-weighted average of national EPU indices for 21 countries. Each national EPU index reflects the relative frequency of own-country newspaper articles that contain a trio of terms pertaining to the economy (E), policy (P) and uncertainty (U). In other words, each monthly national EPU index value is proportional to the share of own-country newspaper articles that discuss economic policy uncertainty in that month.

Relative Valuations of Non-U.S. Equities

Non-U.S. Markets are Attractively Priced

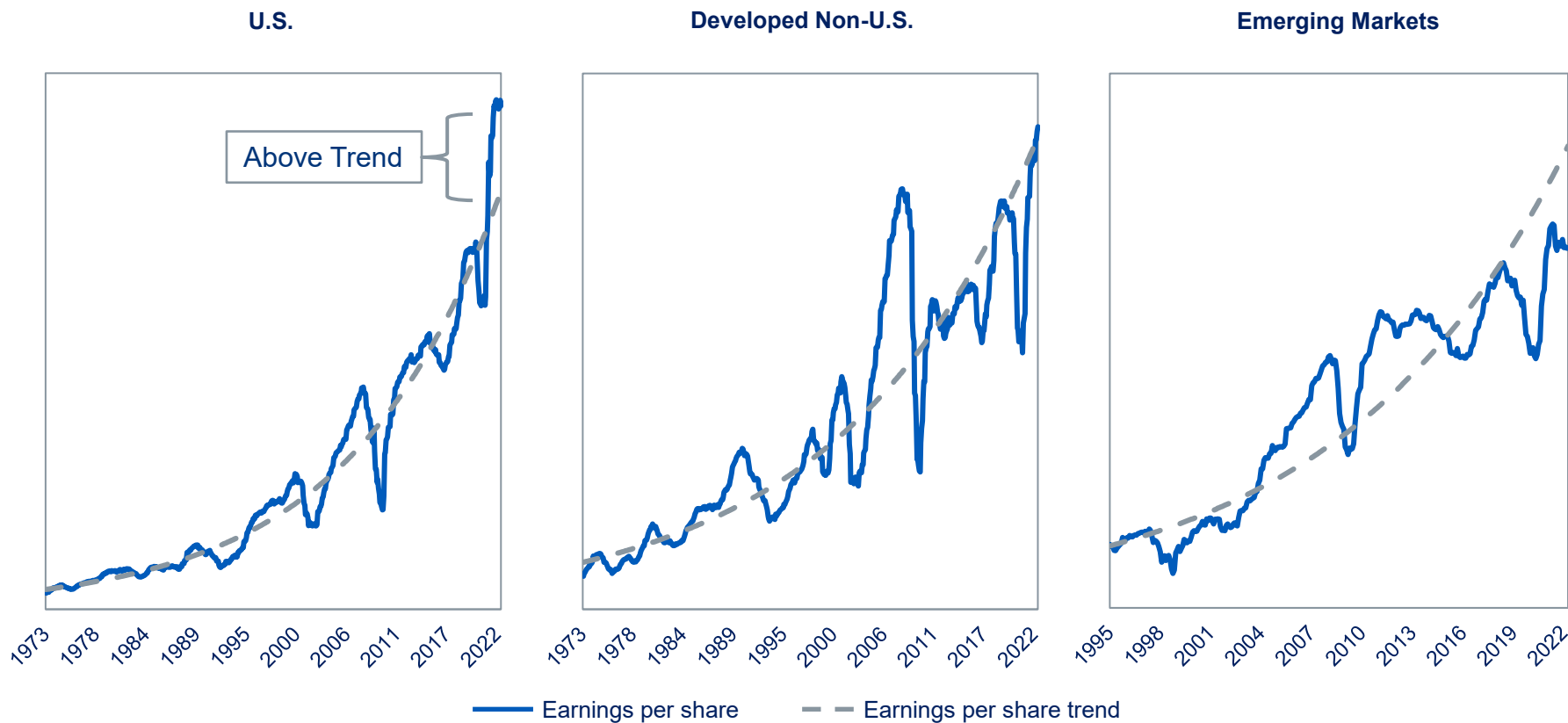


**Developed international markets' valuations are near multi-decade lows relative to the U.S.
Emerging markets are at 15-year relative lows.**

Source: MSCI. Data as of December 31, 2022.
Data for January 1973 – December 2022 for EAFE and USA; for September 1995 – December 2022 for Emerging Markets.

Long-Term Earnings Growth vs. Trend

Recent Earnings Growth in the U.S. Is Unlikely to be Sustainable



Earnings reverting to trend would favor Non-U.S. equities.

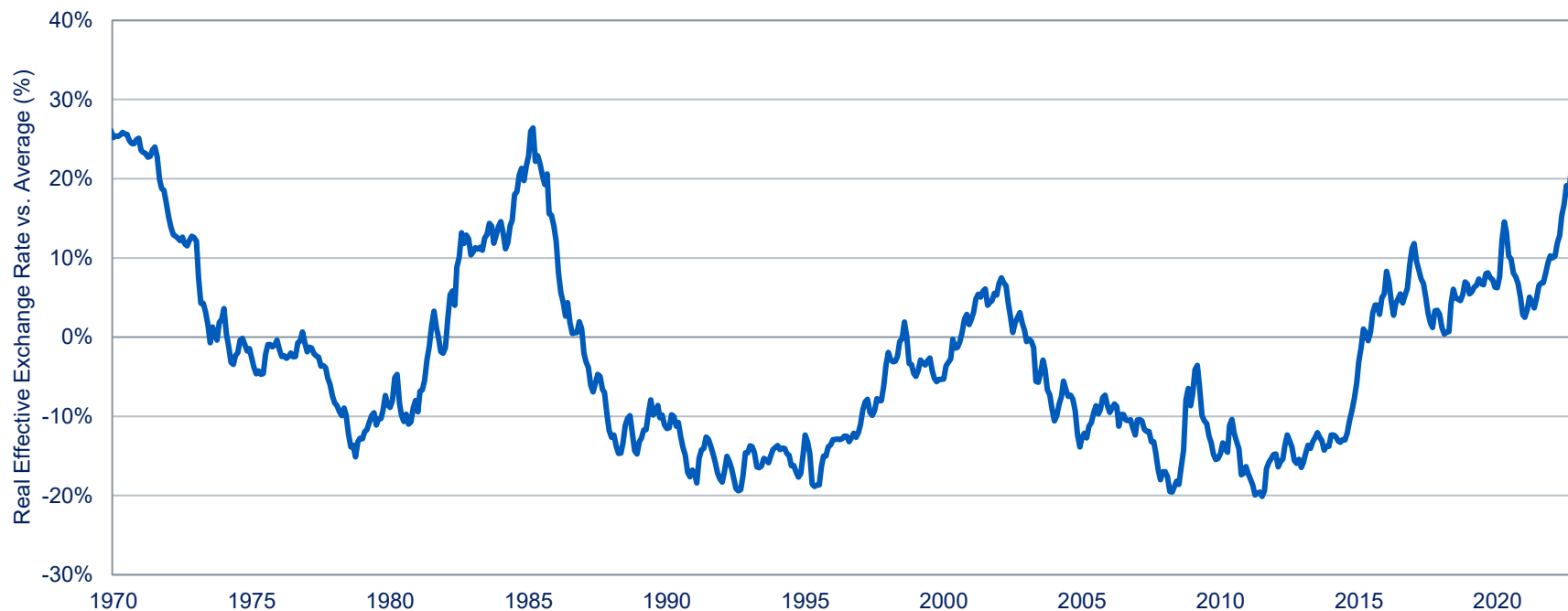
Source: MSCI. Data as of December 31, 2022.

Data for January 1973 – December 2022 for MSCI EAFE and MSCI USA; for September 1995 – December 2022 for MSCI Emerging Markets.

Valuation of U.S. Dollar

The U.S. Dollar Is at Its Most Expensive Valuation Since 1985

Valuation of U.S. Dollar Real Effective Exchange Rate



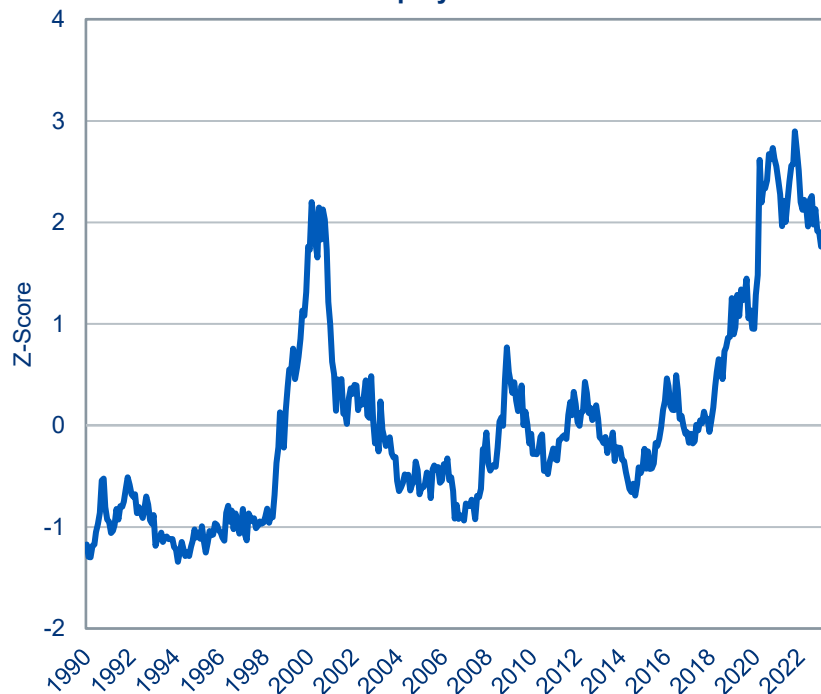
**The U.S. Dollar strength in recent years has been a headwind for Non-U.S. Equities.
Over long time periods, this strength is rarely sustainable.**

Source: Economic Research Federal Reserve Bank of St. Louis (FRED). Data as of November 30, 2022.
Valuation based on Narrow Real Effective Exchange Rate.

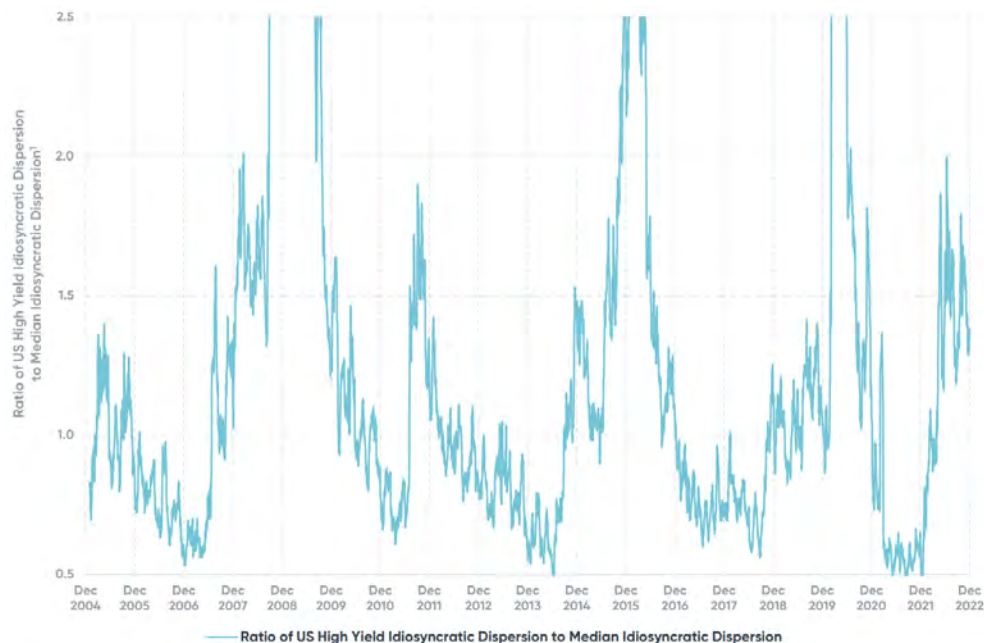
Outlook for Active Management

2023 Represents a Continuing Rich Opportunity Set for Security Selection

Industry Neutral Valuation Dispersion,
U.S. Equity Forward P/E



U.S. High Yield Credit Idiosyncratic Dispersion¹



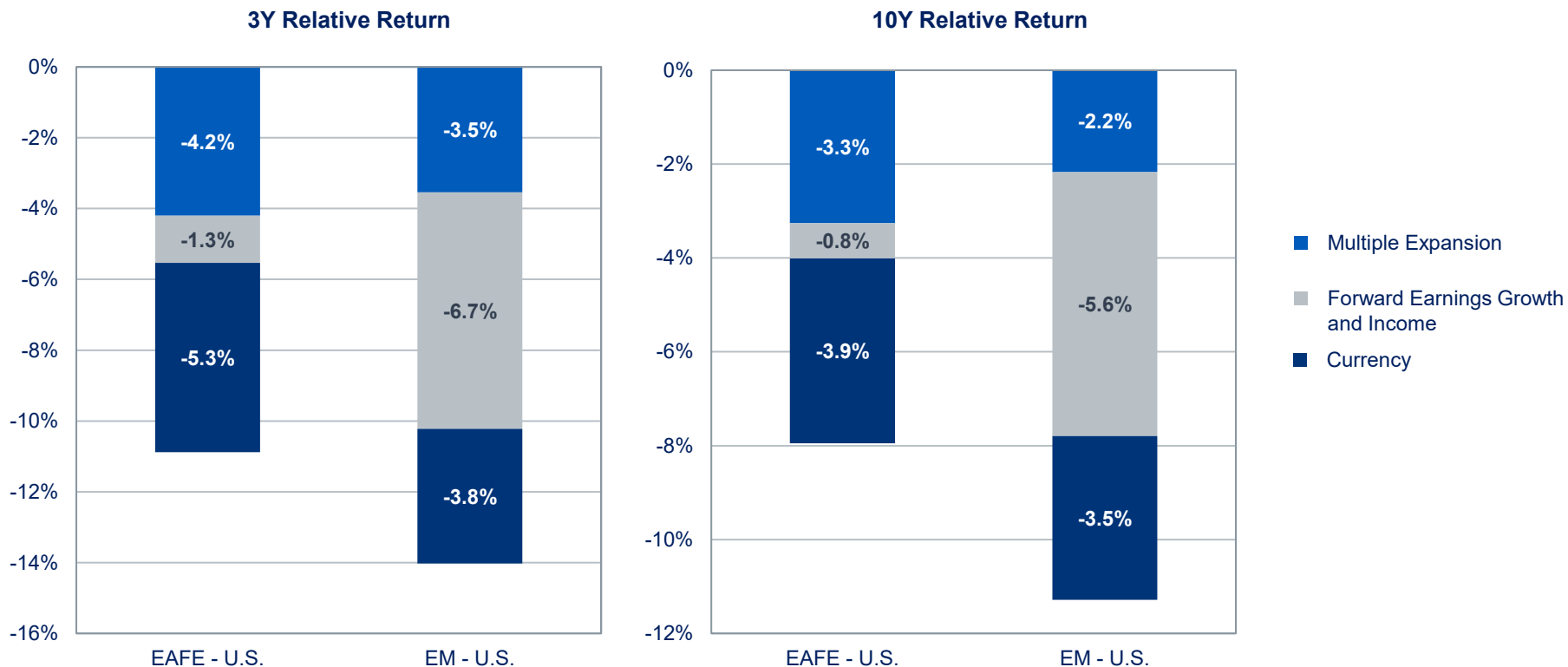
Across equities and credit, fundamentals continue to reassert themselves as an anchor to price. Equity valuation dispersion has room to run and higher-than-normal credit dispersion is expected to persist in a rising default environment.

Data as of December 31, 2022.

¹ The Ratio of U.S. High Yield Idiosyncratic Dispersion to its Median Dispersion is a proprietary series generated by BlueCove; median is defined by the median idiosyncratic dispersion since January 2005.

Components of Relative Return vs. U.S. Equities

Multiples, Earnings, and Currency Have Been Headwinds for Non-U.S. Equities

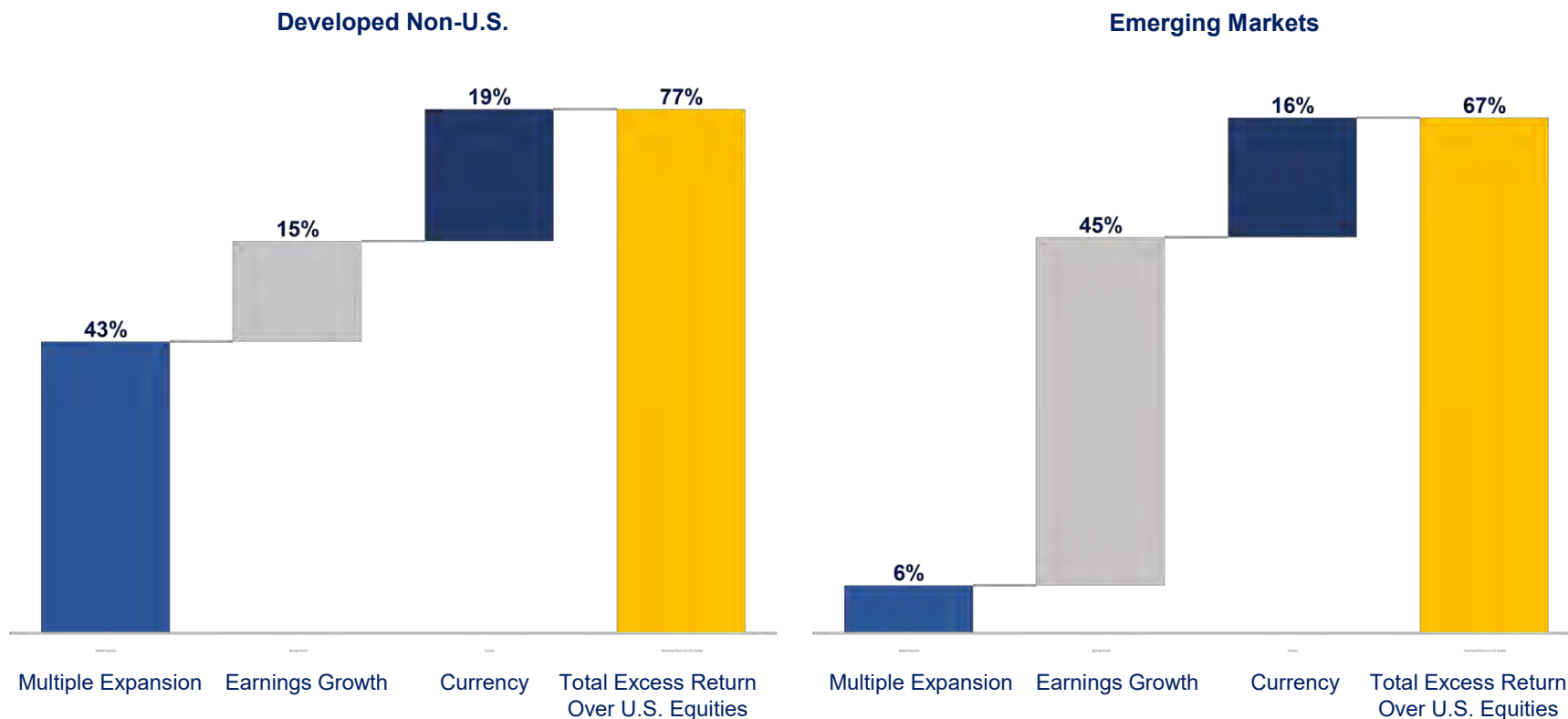


More recent below-trend earnings growth, and a strong U.S. Dollar have been headwinds for Non-U.S. Equities. Despite U.S. multiple contraction over 2022, Non-U.S. Equities relative valuations still have room to expand.

Source: MSCI. Data as of December 31, 2022.

Returns from Reversal to Long-Term Averages

Sources of Potential Excess Return for Non-U.S. Equities



Reversion to trends in price multiples, earnings, or currency present significant opportunities for Non-U.S. Equities.

Sources: MSCI, Economic Research Federal Reserve Bank of St. Louis. Data as of December 31, 2022.

Portfolio Positioning

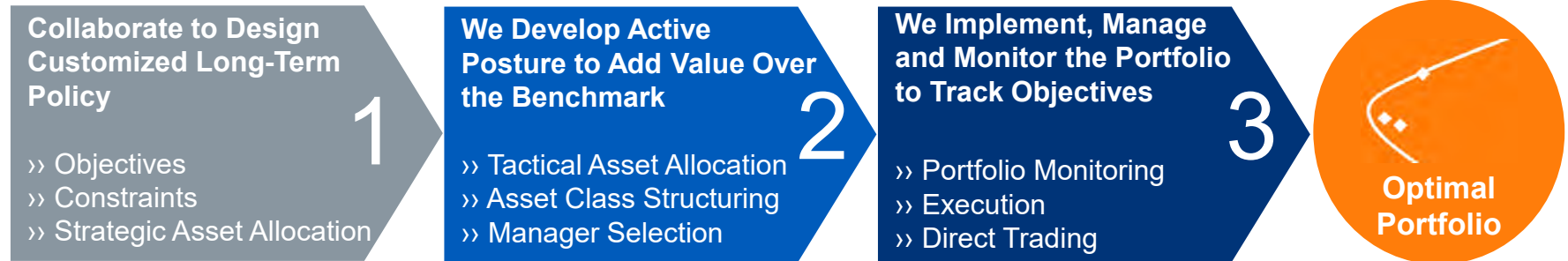
As of the Start of 2023

	Underweight	Neutral	Overweight
U.S. Equity	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Large Value	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Large Growth	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Small Cap	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Non U.S. Equity	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Developed Markets	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Non-U.S. Small Cap	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Emerging Markets	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Alternatives	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Hedge Funds	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Private Equities	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Real Assets	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Real Estate	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
TIPS	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Commodity Futures	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Fixed Income	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
U.S. Treasury Risk	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Credit Risk	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Current outlook and strategy provided for illustrative purposes only and is subject to change at the sole discretion of Strategic. Positioning as of December 31, 2022.

Investment Process and Philosophy

Key Steps and Decisions



We are price sensitive

- Fundamental valuation drives our top-down positioning and informs our manager selection decisions.
- Our pattern of positioning reflects the evolution of market pricing.

We are risk aware

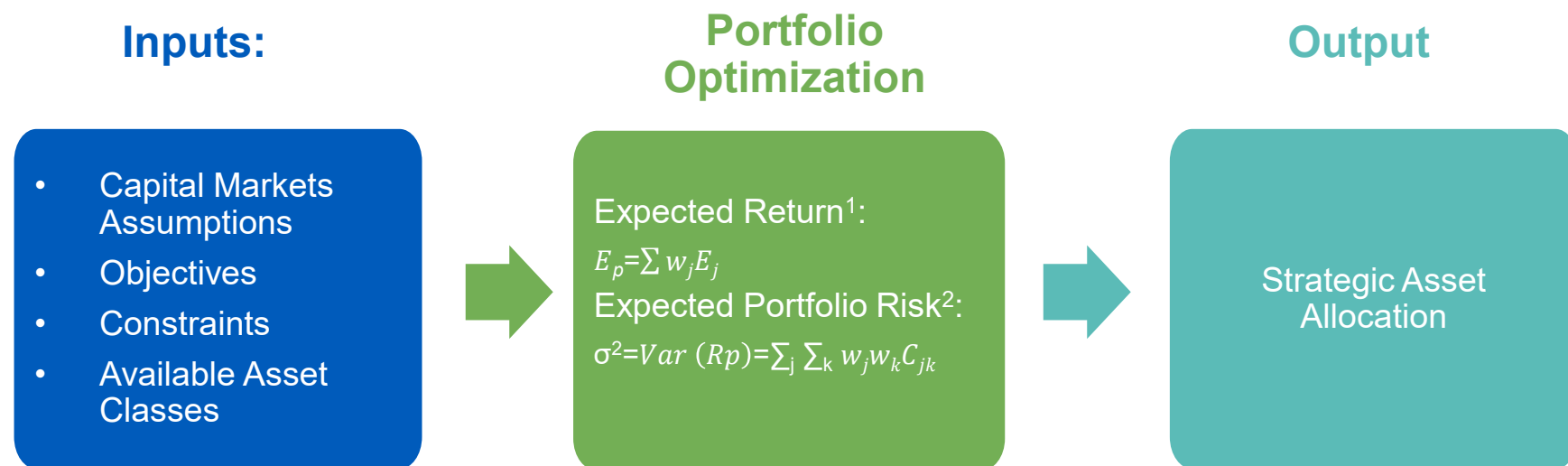
- We want risk to be explicit, intentional, and compensated.
- We balance risk with opportunity and conviction.
- In most environments we primarily focus on getting bottom-up decisions right.

We are active investors

- We want high conviction, disciplined investment processes that are independent to drive bottom-up decisions.
- Competing objectives for supply and demand of capital, sentiment and technicals creates opportunity.

Collaborating Toward the Right Policy

Modeling Strategic Asset Allocation for Miami University Foundation



Through iterative process, Strategic will collaborate with Miami University Foundation and utilize our statistical tools to build the optimal long-term asset allocation based on a real return objective, unique risk profile, and circumstances.

1. Expected Return: E_p = The expected return on a portfolio; w_j = The weight of funds to be invested;

2. Expected Portfolio Risk: E_j = The expected return on each asset j ; σ^2 = The variance of the return on a portfolio; C_{jk} = The covariance between assets j and k .

Strategic's Capital Market Assumptions

Return and Risk Expectations for Investments

Return Expectations



Risk Expectations (Standard Deviation)



1. Total Expected Risk is the square root of the sum of the squares of passive risk and active risk assuming passive risk and active risk are uncorrelated.

Strategic's Expected Alpha Scorecard

Assessing the Forward-Looking Efficiency of Market Segments

Asset Class	Previous Expected Alpha	Expected Alpha Updated Mar. 2021	Fundamental Drivers							Empirical Evidence				Total Final Average (70% Fundamental, 30% Empirical)	
			Analytical Complexity	Effective Market Breadth	Presence of Less Informed or Noneconomic Investors	Cross-Sectional Volatility of Fundamentals and Returns	Easy Benchmarks	Low Active Fees	Unattractive Passive Options	Fundamental Average	Strategic Net Alpha	Median Net Manager Alpha	Dispersion in Manager Alpha		Empirical Average
US Equity	0.50%	0.40%	2	3	3	3	3	3	3	3	3	3	3	3	2.0
Non US Equity	0.90%	0.60%	2	3	3	3	3	3	3	3	3	3	3	3	2.7
EM Equity	1.10%	0.80%	3	3	3	3	3	3	3	3	3	3	3	3	3.1
China A		1.80%	3	3	3	3	3	3	3	3	3	3	3	3	3.6
Private Equity	1.00%	2.00%	3	3	3	3	3	3	3	3	3	3	3	3	3.1
Buyout	1.00%	1.95%	3	3	3	3	3	3	3	3	3	3	3	3	3.1
Venture	1.00%	2.20%	3	3	3	3	3	3	3	3	3	3	3	3	3.2
Hedge Funds	1.30%	2.00%	3	3	3	3	3	3	3	3	3	3	3	3	3.5
Directional HFs	1.30%	1.70%	3	3	3	3	3	3	3	3	3	3	3	3	3.4
Market Neutral HFs	1.30%	2.20%	3	3	3	3	3	3	3	3	3	3	3	3	3.5
Real Estate	0.25%	0.25%	2	3	3	3	3	3	3	3	3	3	3	3	2.4
Core RE (Open End)	0.25%	0.20%	2	3	3	3	3	3	3	3	3	3	3	3	2.0
Value Add, Opp RE (Closed End)	0.25%	0.30%	2	3	3	3	3	3	3	3	3	3	3	3	2.8
TIPS	0.00%	0.00%	2	3	3	3	3	3	3	3	3	3	3	3	0.9
Commodities	0.00%	0.00%	2	3	3	3	3	3	3	3	3	3	3	3	2.2
U.S. Fixed Income	0.30%	0.20%	2	3	3	3	3	3	3	3	3	3	3	3	1.9
High Yield	1.00%	0.70%	2	3	3	3	3	3	3	3	3	3	3	3	2.7

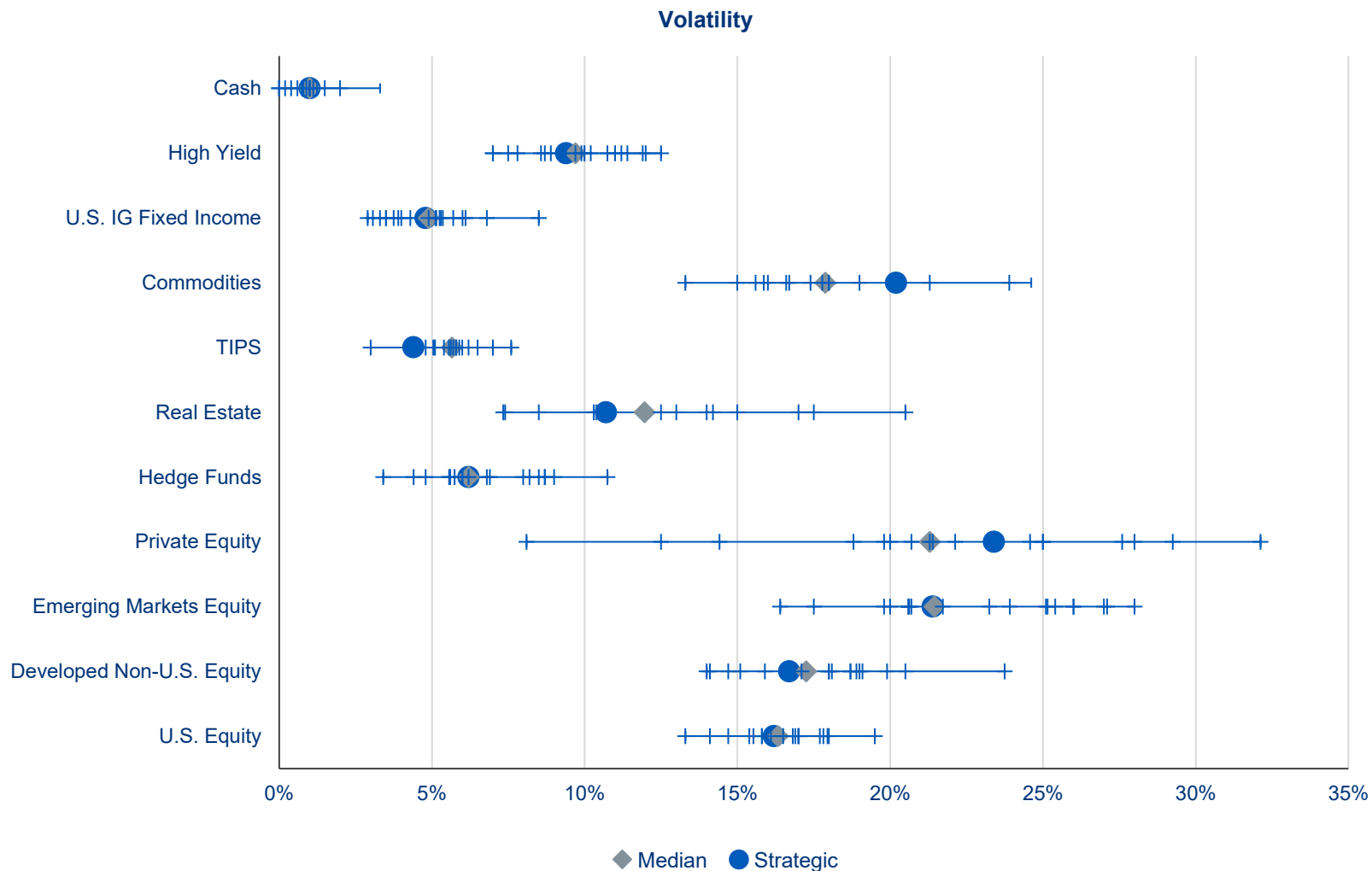
Legend	
Least attractive for active management	1
	2
	3
	4
Most attractive for active management	5

While each input requires a certain amount of arbitrary judgment, clear patterns become visible in this framework. PE, hedge funds, and China A offer the best opportunities.

Source: Strategic. As of September 30, 2022.

Strategic's Capital Markets Assumptions Versus Peers

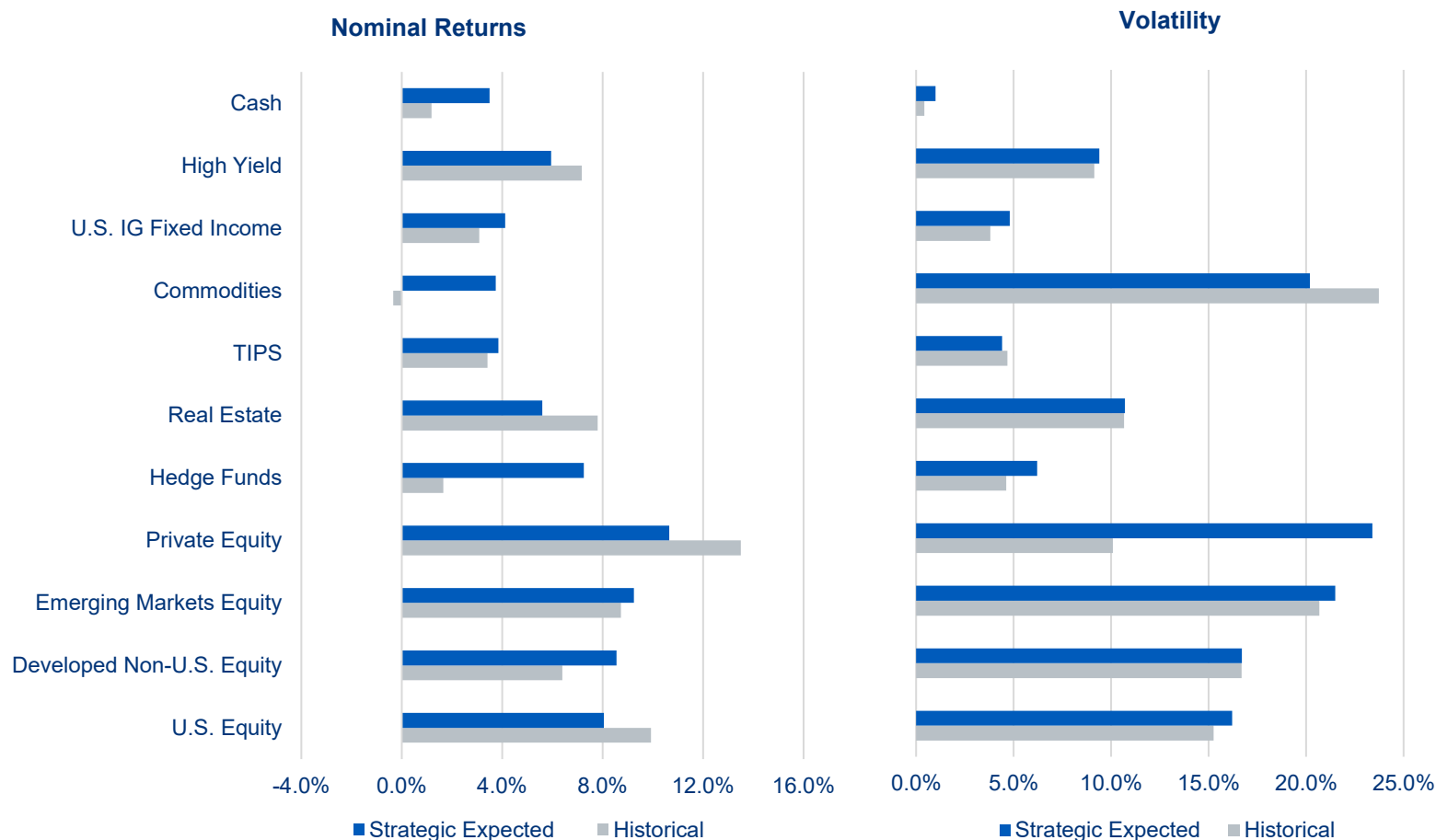
Volatilities by Asset Class



Sources: see Appendix. Estimates as of September 2022. Note that Strategic's assumptions include no change in asset class volatility due to active management. Forecast horizon is 10 years or longer

Strategic's Capital Markets Assumptions Vs. Historical Results

Nominal Returns and Volatilities by Asset Class



Sources: Strategic. Estimates as of September 2022. Historical returns are 20-year annualized geometric returns. Historical equity returns are in USD terms. Note that Strategic's assumptions include no change in asset class volatility due to active management.

Appendix

External Data Sources: Capital Market Assumptions and Strategic Asset Allocation Analysis

AON

BlackRock Investment Institute

BNY Mellon

Cliffwater

Goldman Sachs

Invesco

J.P. Morgan

Morgan Stanley

NEPC

Northern Trust

PIMCO

Sellwood

Shroders

T Rowe Price

UBS- Strategic

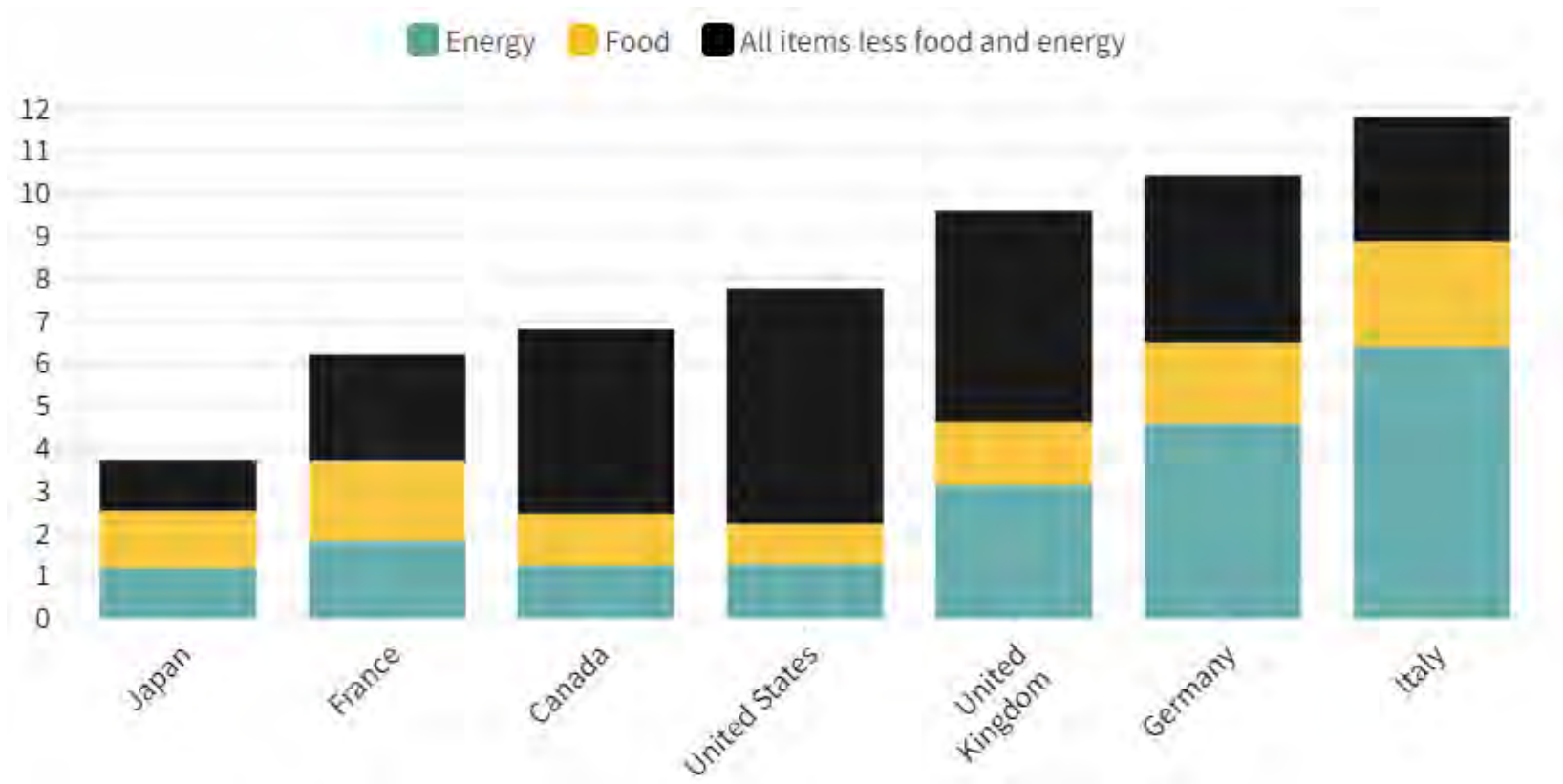
UBS-Equilibrium

Verus

Voya

Sources of Inflation

European Inflation Driven by Energy Prices; U.S. Inflation More Broad-Based



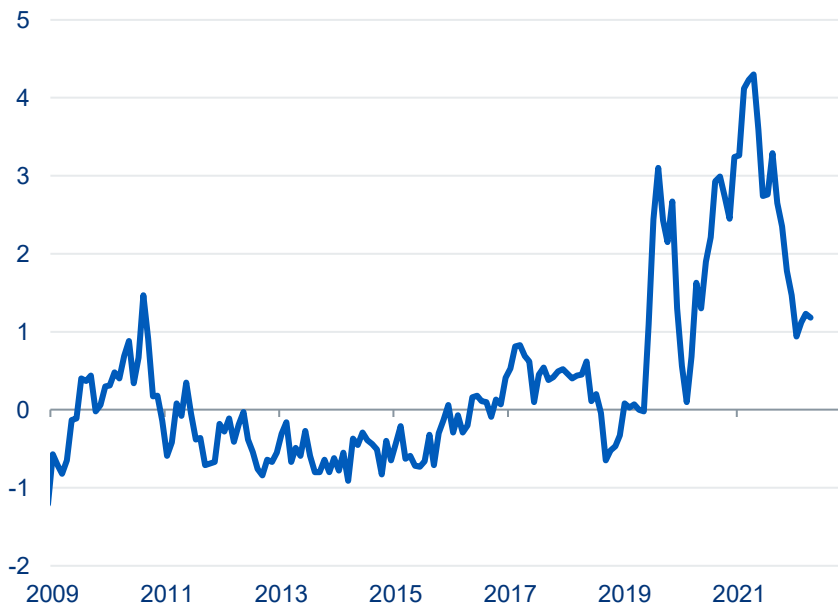
In most advanced economies, energy and food prices are the main inflation drivers. Emerging economies hit hard by high import prices for food and energy and a strong dollar.

Source: OECD, YoY percent change October 2022.

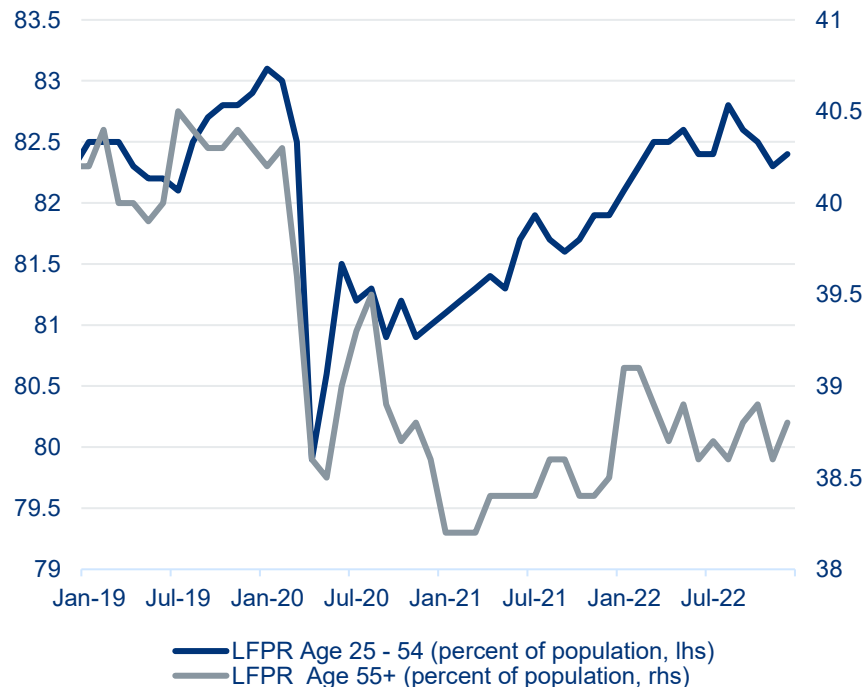
Global Supply Pressures and Labor Market Disruption

Signs of Rebalancing

Fed NY Global Supply Chain Pressure Index
(long-term average = 0)



Labor Force Participation Is Recovering



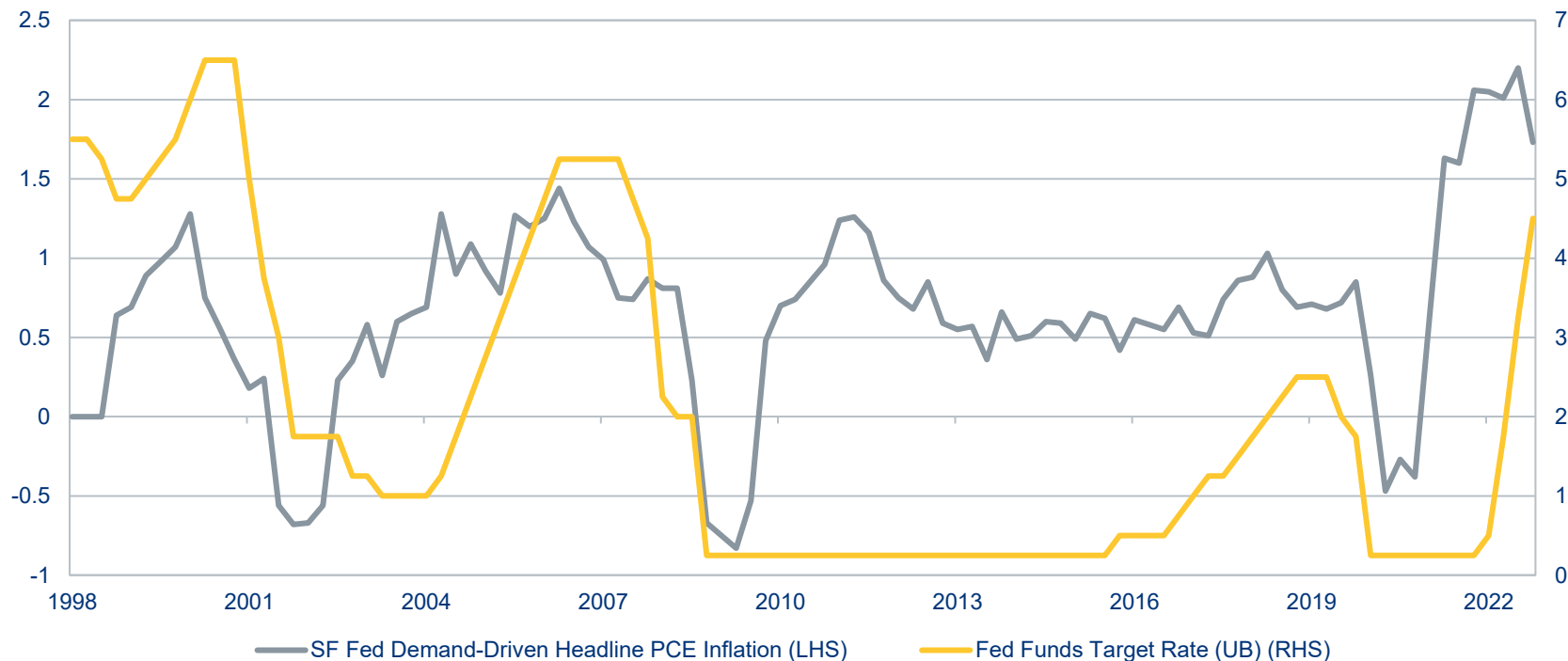
Supply chain distortions are fading substantially. Labor force participation has rebounded, with the remaining short-fall mainly due to missing part-time workers. There is some evidence that Long-Covid has added to labor shortages.

Sources: Fed New York, September 30, 2022; Bloomberg; The Global Supply Chain Pressure Index uses a data set of twenty-seven variables: three country-specific supply chain variables for each of the economies in our sample (the euro area, China, Japan, South Korea, Taiwan, the U.K., and the U.S.), two global shipping rates, and four price indices summarizing airfreight costs between the U.S., Asia, and Europe. All these variables are corrected for demand effects. For an in-depth description refer to <https://libertystreeteconomics.newyorkfed.org/2022/01/a-new-barometer-of-global-supply-chain-pressures>.

Monetary Policy Outlook

Does Monetary Policy Work At All?

Fed Policy Rate and the Demand-Driven Portion of Overall Inflation (quarterly data)



Monetary policy works – but with multiple lags. In the past, the interest rate sensitive portion of inflation has not dropped until the end of the tightening cycle.

Crises Considered in the Stress Tests

Major Market Dislocations of the Recent Past

Inflation's Return (*December 2021 – September 2022*)

- Markets experienced an inflation shock that triggered a spike in correlations across stock and bond markets.
- The inflation shock combined with high levels of uncertainty over the outlook for growth sent richly priced assets tumbling. Global stocks and bonds suffered double digit declines. The fall in the S&P 500 was the sixth largest since the Great Depression and the U.S. aggregate bond index had its largest fall ever.

COVID Crash (*February 24, 2020 – March 23, 2020*)

- Fears of a global pandemic and its impact on economic conditions sent global risk assets into a tailspin. Liquidity was sparse resulting in the U.S. 10-Year Treasury yield falling over 50% and the S&P 500 plummeting 32.8%.

Great Financial Crisis (*November 2007 – February 2009*)

- Dislocation in the subprime mortgage market led to a shadow banking crisis and a severe liquidity event necessitating an extraordinary degree of intervention by global central banks.
- A broad-based and protracted market sell off hit all but the safest and most liquid assets. The peak-to-trough drawdown of the S&P500 exceeded 50%.
- The ensuing economic downturn saw U.S. GDP fall 4.3% during 2007-09 and unemployment peak in 2009 at 10%. The net worth of U.S. households fell by one fifth peak to trough. Growth has remained below pre-crisis trends since.

Tech Bubble Burst (*April 2000 – September 2002*)

- Internet euphoria led to wildly overvalued tech shares. When the bubble burst, tech shares were hardest hit.
- The NASDAQ fell 78% peak-to-trough.

1987 Market Crash (*September 1987 – November 1987*)

- Trend following strategies inspired by option-based portfolio insurance contributed to a self-reinforcing downward spiral in the U.S. equity market.
- Dow dropped 508.32 points (22.6%) in the single trading session of October 19, 1987. Markets froze, unable to handle the massive volume of sell orders.

We complement the stress tests based on past crises with an estimate of a 2-standard deviation drawdown on your portfolio.

Stress Test Methodology and Disclosures

- The stress test augments and complements the monthly output of Strategic's statistical risk management system, which estimates and monitors portfolio risk in terms of ex-ante estimates of the standard deviation of portfolio returns (portfolio volatility) and the standard deviation of the difference between portfolio returns and policy targets (tracking error).
- We base the stress test on the peak-to-trough decline experienced in past historical crises. We have chosen major market disruptions of recent history to illustrate how a recurrence of these severe market dislocations would affect the investment policy and current active asset allocation of our client portfolios. Stress tests are not based on a model or on assumptions about investment returns. Rather, they reflect market movements actually experienced.
- Asset class returns are displayed in the local currency of each market. Total portfolio returns are shown in the portfolio's currency, which may include the impact of currency translation.
- The returns presented in the stress test are derived by translating the exposure of portfolio investments and policy benchmarks to Strategic's risk model. Each of the factors in this model is then mapped to a market index and corresponding returns of the index for the given stress periods. Thus, to the extent that there are any tactical tilts relative to the policy, the relative performance reflects the impact of current tilts in the event of a recurrence of each crisis period. Additional details, including performance of each stress factor, are available upon request.
- The stress tests comprise the following historical crises:
 - Inflation's Return: December 31, 2021 – September 30, 2022
 - COVID Crash: February 24, 2020 – March 23, 2020
 - Great Financial Crisis: November 2007 – February 2009
 - Tech Bubble Burst: April 2000 – September 2002
 - 1987 Market Crash: September 1987 – November 1987
- We supplement the stress tests with a calculation of a two-standard deviation decline at the total portfolio level. This two-standard deviation drawdown uses the expected volatility of each client's investment policy. The expected return from which the two standard deviation is calculated is zero given that the shock is intended to occur instantaneously.
- The Policy Target represents your long-term investment policy, adjusted for Private Equity and/or Real Estate floats; the Current Portfolio represents Strategic's current investment posture relative to the Policy Target.
- It is important to note that the scenario analysis, including the Stress Test and two standard deviation decline calculation, should not be interpreted to represent worst-case scenarios. The past crises used in the stress test were chosen for the magnitude of their market impact. It is possible that the ill effects of these crises will be surpassed in the future.
- This material is for informational purposes only and should not be construed as investment advice or an offer to sell, or the solicitation of offers to buy, any security. Opinions expressed herein are current as of the date appearing in this material and are subject to change at the sole discretion of Strategic. This document is not intended as a source of any specific investment recommendations.

MU Investment Subcommittee – FY2023 Calendar

Draft as of November 9, 2022



FY 2023 MU Investment Subcommittee Calendar

Topic	MU IsC Meeting Oxford, Ohio September 21, 2022	MU IsC Meeting Oxford, Ohio December 7, 2022	MU IsC Meeting Oxford, Ohio March 1, 2023	MU IsC Meeting Oxford, Ohio May 10, 2023	MU IsC Meeting Oxford, Ohio June 21, 2023
OCIO Nonendowment Performance and Capital Markets Review	<ol style="list-style-type: none"> 1. Performance Review (Nonendowment & PIF) 2. Asset Allocation vs. Policy (Nonendowment & PIF) 3. Capital Markets Update 	<ol style="list-style-type: none"> 1. Performance Review (Nonendowment & PIF) 2. Asset Allocation vs. Policy (Nonendowment & PIF) 3. Capital Markets Update 	<ol style="list-style-type: none"> 1. Performance Review (Nonendowment & PIF) 2. Asset Allocation vs. Policy (Nonendowment & PIF) 3. Capital Markets Update 	<ol style="list-style-type: none"> 1. Performance Review (Nonendowment & PIF) 2. Asset Allocation vs. Policy (Nonendowment & PIF) 3. Capital Markets Update 	<ol style="list-style-type: none"> 1. Performance Review (Nonendowment & PIF) 2. Asset Allocation vs. Policy (Nonendowment & PIF) 3. Capital Markets Update
OCIO Updates /Portfolio Strategies and Asset Class Reviews	<ol style="list-style-type: none"> 1. Asset Class Review: Public Equity 	<ol style="list-style-type: none"> 1. Invest. Mgmt. Fees, Expenses Review 2. Strategic Real Estate Series Introduction 	<ol style="list-style-type: none"> 1. Review LT Capital Markets Assumptions 2. Review LT Policy Portfolio Construction 3. Nonendowment and PIF Stress Test / Scenario Analysis Risk Review 	<ol style="list-style-type: none"> 1. Asset Class Review: Real Assets 	<ol style="list-style-type: none"> 1. FYTD Performance Attribution (Nonendowment & PIF)
Treasury Updates	<ol style="list-style-type: none"> 1. Capital Stack and Tier Allocation 2. Compliance Report 3. FYE Updates – Endowment (a) Annual Spending Distribution and (b) Administrative Fee 	<ol style="list-style-type: none"> 1. Capital Stack and Tier Allocation 2. Educational Updates: MU Climate Commitment, STARS, ESG report from Moody's 	<ol style="list-style-type: none"> 1. Capital Stack and Tier Allocation 2. Stress Testing Distributions 	<ol style="list-style-type: none"> 1. Capital Stack and Tier Allocation 	<ol style="list-style-type: none"> 1. Capital Stack and Tier Allocation 2. FY Cash Flow 3. Investment Earnings Budget 4. Annual Evaluation of Service Providers
Governance Items	<ol style="list-style-type: none"> 1. Key Takeaways from Annual Evaluation Process 2. Approve new FY IsC Goals 3. ESG / DEI Reporting 	<ol style="list-style-type: none"> 1. Alternative Retirement Plan Update 	<ol style="list-style-type: none"> 1. Governance and regulatory updates 2. Annual Review of Nonendowment IPS 	<ol style="list-style-type: none"> 1. Annual Review of Endowment Distribution Policy and Endowment Administrative Fee Policy 	<ol style="list-style-type: none"> 1. Review Progress on last FY Goals 2. Discuss new FY Goals 3. Review FY IsC Calendar

PERFORMANCE SUMMARY

Miami University
December 31, 2022



Asset Class <i>Benchmark</i>	Market Value (\$ mill)	Strategic Portfolio (%)	Rates of Return (%)								Since Policy Inception	Since Inception	Inception Date
			1 Month	3 Month	Fiscal Year To Date	Calendar Year To Date	1 Year	3 Year	5 Year	10 Year			
Miami University Long-Term Capital Tier III (Net of Sub-Mgr Fees)	547.821	100.0%	(1.7)	6.7	1.2	(9.2)	(9.2)	4.6	4.9	4.4	7.3	4.6	30-Jun-02
Miami University Long-Term Capital Tier III (Net of Sub-Mgr and Strategic Fees)	547.821	100.0%	(1.7)	6.7	1.1	(9.4)	(9.4)	4.4	-	-	7.1	-	31-Dec-18
<i>Total Portfolio Policy Benchmark</i>			(2.1)	6.4	0.7	(12.6)	(12.6)	2.7	4.0	4.0	6.3	4.4	
<i>Total Portfolio Policy Benchmark (Net of Fees)</i>			(2.1)	6.3	0.6	(12.7)	(12.7)	2.6	-	-	6.2	-	
Miami University - Baseline Tier II (Net of Sub-Mgr Fees)	187.588	100.0%	0.4	0.6	0.6	0.0	0.0	0.4	0.9	1.0	1.0	2.3	30-Jun-02
Miami University - Baseline Tier II (Net of Sub-Mgr and Strategic Fees)	187.588	100.0%	0.3	0.6	0.6	(0.1)	(0.1)	0.4	-	-	0.9	-	31-Dec-18
<i>Total Portfolio Policy Benchmark</i>			0.3	0.7	0.2	(1.1)	(1.1)	0.2	0.9	0.7	0.9	1.9	
<i>Total Portfolio Policy Benchmark (Net of Fees)</i>			0.3	0.7	0.2	(1.2)	(1.2)	0.1	-	-	0.7	-	
Miami University Special Initiatives Fund (Net of Sub-Mgr Fees)	30.026	100.0%	0.1	0.9	(0.4)	(3.4)	(3.4)	0.1	-	-	1.8	1.8	19-Sep-18
Miami University Special Initiatives Fund (Net of Sub-Mgr and Strategic Fees)	30.026	100.0%	0.1	0.9	(0.5)	(3.5)	(3.5)	0.0	-	-	1.7	1.7	19-Sep-18
<i>Total Portfolio Policy Benchmark</i>			0.1	0.9	(0.5)	(3.5)	(3.5)	0.0	-	-	1.7	1.7	
Miami University Core Cash (Net of Sub-Mgr Fees)	217.614		0.3	0.7	0.5	(0.6)	(0.6)	0.6	1.4	1.2	1.6	2.5	30-Jun-02
Miami University Core Cash (Net of Sub-Mgr and Strategic Fees)	217.614		0.3	0.7	0.5	(0.6)	(0.6)	0.5	-	-	1.5	-	31-May-18
Total Miami University Client Group (Net of Sub-Mgr and Strategic Fees)	765.435		(1.2)	4.9	0.9	(6.9)	(6.9)	2.9	3.5	3.0	3.3	3.3	30-Jun-02

PERFORMANCE SUMMARY

Miami University Long-Term Capital Tier III

December 31, 2022



Asset Class <i>Benchmark</i>	Market Value (\$ mill)	Portfolio (%)	Rates of Return (%)										Inception Date
			1 Month	3 Month	Fiscal Year To Date	Calendar Year To Date	1 Year	3 Year	5 Year	10 Year	Since Policy Inception	Since Inception	
U.S. Equity <i>U.S. Equity Policy Benchmark</i>	106.104	19.4%	(5.0)	8.7	4.0	(15.7)	(15.7)	8.3	-	-	13.4	8.2	31-Aug-18
			(5.9)	7.2	2.4	(19.2)	(19.2)	7.1	-	-	12.6	7.4	
Non-U.S. Equity <i>Non-U.S. Equity Policy Benchmark</i>	142.558	26.0%	(0.7)	14.6	2.8	(14.4)	(14.4)	2.8	-	-	7.1	3.3	31-Aug-18
			(0.7)	13.9	2.5	(16.8)	(16.8)	(0.2)	-	-	4.9	1.3	
Global Equity <i>Global Equity Benchmark</i>	42.393	7.7%	(3.3)	12.3	3.8	(18.7)	(18.7)	2.7	-	-	-	4.9	30-Apr-19
			(3.9)	10.0	3.0	(18.1)	(18.1)	4.6	-	-	-	6.3	
Total Equity	291.055	53.1%	(2.6)	12.1	3.4	(15.4)	(15.4)	4.8	-	-	9.7	5.2	31-Aug-18
Hedge Funds (Net Exposure) <i>Hedge Funds Policy Benchmark</i>	55.550	10.1%	1.6	1.2	2.3	2.9	2.9	5.8	4.7	5.0	5.5	4.0	30-Jun-02
			0.1	0.8	1.4	(3.9)	(3.9)	1.5	1.7	6.1	2.4	6.3	
Total Alternatives	55.550	10.1%	-	-	-	-	-	-	-	-	-	-	30-Jun-02
Real Estate - IRR <i>Real Estate Policy Benchmark - IRR</i>	13.028	2.4%	-	(3.9)	(3.8)	5.8	5.8	8.5	-	-	-	8.3	28-Jun-19
			-	(5.1)	(5.1)	5.7	5.7	8.6	-	-	-	8.4	
Commodities <i>Commodities Policy Benchmark</i>	16.985	3.1%	(1.6)	3.2	(8.2)	24.7	24.7	9.3	-	-	-	8.4	31-Jan-19
			(1.4)	3.4	(7.2)	26.0	26.0	10.5	-	-	-	10.1	
TIPS <i>TIPS Policy Benchmark</i>	24.627	4.5%	(0.7)	1.7	(1.5)	(4.8)	(4.8)	2.2	-	-	-	3.0	30-Jan-19
			(0.7)	1.6	(2.4)	(7.3)	(7.3)	2.0	-	-	-	3.1	
Total Real Assets	54.640	10.0%	(1.8)	0.6	(4.0)	6.3	6.3	6.7	-	-	-	6.5	30-Jan-19
U.S. Fixed Income <i>U.S. Fixed Income Policy Benchmark</i>	119.107	21.7%	(1.0)	0.9	(2.4)	(10.0)	(10.0)	(0.2)	-	-	1.4	1.6	30-Jun-18
			(0.5)	2.1	(2.3)	(12.8)	(12.8)	(2.4)	-	-	0.4	0.8	
Total Fixed Income	119.107	21.7%	(1.0)	0.9	(2.4)	(10.0)	(10.0)	(0.2)	1.4	2.0	1.4	4.1	30-Jun-02
Total Cash, Accruals, and Pending Trades	27.469	5.0%	0.1	0.2	0.5	1.0	1.0	1.0	-	-	1.0	1.0	27-Aug-18
Miami University Long-Term Capital Tier III (Net of Sub-Mgr Fees)	547.821	100.0%	(1.7)	6.7	1.2	(9.2)	(9.2)	4.6	4.9	4.4	7.3	4.6	30-Jun-02
Miami University Long-Term Capital Tier III (Net of Sub-Mgr and Strategic Fees)	547.821	100.0%	(1.7)	6.7	1.1	(9.4)	(9.4)	4.4	-	-	7.1	-	31-Dec-18
			(2.1)	6.4	0.7	(12.6)	(12.6)	2.7	4.0	4.0	6.3	4.4	
			(2.1)	6.3	0.6	(12.7)	(12.7)	2.6	-	-	6.2	-	
Cintrifuse Syndicate Fund II, LLC	1.134												
TOTAL	548.955												30-Jun-02

PERFORMANCE DETAIL

Miami University Long-Term Capital Tier III

December 31, 2022



ASSET CLASS Style	Investment Benchmark	Market Value (\$ mill)	Portfolio (%)	Asset Class (%)	Rates of Return (%)								Since Inception	Inception Date	
					1 Month	3 Month	Fiscal Year To Date ⁽¹²⁾	Calendar Year To Date	1 Year	3 Year	5 Year	10 Year			
U.S. Equity															
	Strategic U.S. Equity Trust^{15,16}	74.944	14.2%	69.6%	9.2	(3.6)	4.5	(15.1)	(12.3)	9.8	-	-	12.8	7.1	31-Aug-18
	<i>Strategic U.S. Equity Trust Benchmark</i>				8.2	(5.5)	3.4	(18.4)	(16.5)	9.8	-	-	13.5	8.3	
	Active Core														
	Manager 1		0.8%	4.1%	8.8	(2.1)	4.7	(7.9)	(0.6)	-	-	-	-	10.8	31-Mar-21
	<i>S&P 500 Total Return Index</i>				8.1	(5.9)	2.8	(17.7)	(14.6)	-	-	-	-	(0.2)	
	Manager 2		1.6%	7.6%	8.4	(3.2)	5.3	(14.9)	(11.9)	9.6	-	-	-	9.0	30-Apr-19
	<i>Russell 1000 Total Return Index</i>				8.0	(5.7)	3.0	(18.5)	(16.4)	10.0	-	-	-	9.6	
	Manager 3		2.7%	13.2%	8.1	(3.3)	5.8	(8.5)	(3.4)	12.0	-	-	13.6	8.1	28-Sep-18
	<i>S&P 500 Total Return Index</i>				8.1	(5.9)	2.8	(17.7)	(14.6)	10.2	-	-	13.9	9.1	
	Manager 4		0.6%	3.2%	13.5	(0.6)	7.4	(13.4)	(11.4)	-	-	-	-	(7.0)	08-Jul-21
	<i>Russell 2000 Value Total Return Index</i>				12.6	(2.1)	7.4	(11.2)	(10.7)	-	-	-	-	(5.0)	
	Manager 5		2.1%	10.5%	8.3	(3.8)	4.3	(13.8)	(11.3)	11.7	-	-	14.8	9.4	31-Aug-18
	<i>Russell 3000 Total Return Index</i>				8.2	(5.5)	3.4	(18.4)	(16.5)	9.8	-	-	13.5	8.3	
	Manager 6		0.5%	2.6%	7.8	(12.0)	0.4	(37.3)	(40.0)	(1.6)	-	-	6.1	1.1	31-Aug-18
	<i>Russell 1000 Total Return Index</i>				8.0	(5.7)	3.0	(18.5)	(16.4)	10.0	-	-	13.7	8.7	
	Manager 7		2.7%	13.1%	8.3	(4.8)	3.1	(17.1)	(12.6)	10.4	-	-	-	11.9	29-Mar-19
	<i>S&P 500 Total Return Index</i>				8.1	(5.9)	2.8	(17.7)	(14.6)	10.2	-	-	-	10.9	
	Style														
	Manager 8		1.4%	7.0%	13.1	0.3	5.8	(5.9)	(2.7)	8.8	-	-	11.5	5.9	31-Aug-18
	<i>Russell 1000 Value Total Return Index</i>				10.3	(2.4)	4.1	(9.3)	(7.0)	7.3	-	-	10.7	6.6	
	Manager 9		0.9%	4.3%	12.9	(1.0)	3.5	(10.5)	(6.5)	-	-	-	-	16.2	24-Jun-20
	<i>Rhumbline_BTA Total Return Index</i>				12.9	(1.0)	3.5	(10.5)	(6.5)	-	-	-	-	16.4	
	Manager 10		0.5%	2.4%	6.8	(7.1)	3.6	(46.3)	(52.2)	1.5	-	-	6.8	1.5	31-Aug-18
	<i>Russell 1000 Growth Total Return Index</i>				5.8	(8.9)	2.0	(26.6)	(24.6)	11.7	-	-	16.0	10.2	
	Liquidity														
	Manager 11		0.3%	1.7%	7.8	(6.5)	2.0	(18.6)	-	-	-	-	-	(17.4)	19-Nov-21
	<i>S&P 500 Total Return Index</i>				8.1	(5.9)	2.8	(17.7)	-	-	-	-	-	(16.4)	
	Cash and Other														
	Cash, Accruals, and Pending Trades		0.0%		-	-	-	-	-	-	-	-	-	-	
	Portable Alpha														
	Strategic U.S. Equity Portable Alpha	32.811	6.2%	30.4%	7.8	(5.0)	3.3	(17.1)	(14.4)	14.9	-	-	18.1	14.5	31-Oct-18
	<i>MO3 U.S. Equity Portable Alpha Benchmark Total Return Index</i>				8.1	(5.9)	2.8	(17.7)	(14.6)	10.2	-	-	13.9	11.2	
	Total U.S. Equity	107.755	20.4%	100.0%	8.8	(4.0)	4.1	(15.6)	(12.8)	10.9	-	-	14.1	8.5	31-Aug-18
	<i>U.S. Equity Policy Benchmark³</i>				8.2	(5.5)	3.4	(18.4)	(16.5)	9.8	-	-	13.5	8.0	
Non-U.S. Equity															
	Strategic Developed Markets Ex-U.S. Equity Trust^{15,17}	72.785	13.8%	52.7%	4.9	(8.7)	(5.6)	(20.0)	(19.0)	3.0	-	-	6.2	2.5	31-Aug-18
	<i>Strategic Developed Markets Ex-U.S. Equity Trust Benchmark</i>				5.4	(9.1)	(4.4)	(23.1)	(23.1)	(0.6)	-	-	3.7	0.1	
	Core														
	Manager 12		5.4%	20.5%	3.6	(8.9)	(7.0)	(18.5)	(15.4)	7.3	-	-	9.5	5.6	31-Aug-18
	<i>MSCI All Country World Ex-U.S. IMI Total Return (Net) Index (USD)</i>				3.0	(10.3)	(7.0)	(24.7)	(25.2)	(1.4)	-	-	2.6	(0.6)	

PERFORMANCE DETAIL

Miami University Long-Term Capital Tier III

December 31, 2022



ASSET CLASS Style	Investment Benchmark	Market Value (\$ mill)	Portfolio (%)	Asset Class (%)	Rates of Return (%)										Inception Date
					1 Month	3 Month	Fiscal Year To Date ⁽¹²⁾	Calendar Year To Date	1 Year	3 Year	5 Year	10 Year	Since Policy Inception	Since Inception	
Developed Markets															
Manager 13			1.2%	4.5%	4.7	(10.5)	(4.5)	(26.5)	(25.9)	2.2	-	-	5.6	0.3	31-Aug-18
<i>MSCI EAFE Small Cap Total Return (Net) Index (USD)</i>					4.2	(11.8)	(6.0)	(29.2)	(30.3)	(2.3)	-	-	2.4	(2.2)	
Manager 14			2.9%	11.0%	6.9	(7.4)	(4.7)	(18.8)	(18.6)	0.3	-	-	3.4	(0.5)	31-Aug-18
<i>MSCI EAFE Total Return (Net) Index (USD)</i>					5.4	(9.0)	(4.5)	(23.2)	(23.0)	(1.3)	-	-	3.1	(0.2)	
Manager 15			1.0%	3.7%	7.8	(6.0)	(0.9)	(11.7)	(11.9)	6.9	-	-	11.1	5.4	31-Aug-18
<i>S&P TSX Capped Composite Index (USD)</i>					7.2	(6.6)	(1.7)	(13.0)	(13.5)	7.6	-	-	11.6	6.5	
Manager 16			2.4%	9.3%	4.9	(8.6)	(4.8)	(23.6)	(24.2)	(1.1)	-	-	3.2	(0.6)	31-Aug-18
<i>MSCI EAFE Total Return (Net) Index (USD)</i>					5.4	(9.0)	(4.5)	(23.2)	(23.0)	(1.3)	-	-	3.1	(0.2)	
Liquidity															
Manager 17			0.3%	1.2%	5.7	(10.3)	(5.7)	(23.5)	(24.0)	-	-	-	-	(21.0)	31-Aug-21
<i>MSCI EAFE Total Return (Net) Index (USD)</i>					5.4	(9.0)	(4.5)	(23.2)	(23.0)	-	-	-	-	(20.4)	
Manager 18			0.0%	0.0%	5.8	(10.2)	(5.3)	(23.8)	(24.2)	(1.2)	-	-	3.3	(0.3)	31-Aug-18
<i>MSCI EAFE IMI Total Return (Net) Index (USD)</i>					5.2	(9.4)	(4.7)	(24.1)	(24.1)	(1.4)	-	-	3.0	(0.5)	
Manager 19			0.6%	2.4%	5.0	-	-	-	-	-	-	-	-	0.1	15-Sep-22
<i>TOPIX Total Return Index (JPY)</i>					5.1	-	-	-	-	-	-	-	-	0.0	
Cash and Other															
Cash, Accruals, and Pending Trades			(0.6%)		-	-	-	-	-	-	-	-	-	-	
Emerging Markets - Core															
Strategic Emerging Markets Equity Trust^{15,18}		25.301	4.8%	18.3%	(2.5)	(12.9)	(12.5)	(29.8)	(31.3)	(3.0)	-	-	0.5	(3.2)	31-Aug-18
<i>Strategic Emerging Markets Equity Trust Benchmark</i>					(3.1)	(14.1)	(14.3)	(29.4)	(31.0)	(4.4)	-	-	(1.0)	(2.8)	
Emerging Markets - Core															
Manager 20			1.1%	4.3%	(3.1)	(15.4)	(16.5)	(31.3)	(32.4)	(4.2)	-	-	(0.9)	(2.9)	31-Aug-18
<i>MSCI Emerging Markets Total Return (Net) Index (USD)</i>					(3.1)	(14.1)	(14.3)	(29.4)	(31.0)	(4.4)	-	-	(1.0)	(2.8)	
Manager 21			0.8%	3.2%	(2.2)	(12.9)	(9.1)	(38.8)	(42.8)	(10.4)	-	-	(2.4)	(5.6)	31-Aug-18
<i>MSCI Emerging Markets Total Return (Net) Index (USD)</i>					(3.1)	(14.1)	(14.3)	(29.4)	(31.0)	(4.4)	-	-	(1.0)	(2.8)	
Manager 22			0.1%	0.4%	4.6	-	-	-	-	-	-	-	-	17.3	31-Oct-22
<i>MSCI China A Onshore Total Return Index (USD)</i>					1.8	-	-	-	-	-	-	-	-	13.0	
Manager 23			1.1%	4.4%	(2.3)	(12.7)	(12.7)	(27.3)	(26.7)	(0.5)	-	-	1.4	(2.0)	31-Aug-18
<i>MSCI Emerging Markets Total Return (Net) Index (USD)</i>					(3.1)	(14.1)	(14.3)	(29.4)	(31.0)	(4.4)	-	-	(1.0)	(2.8)	
Manager 24			0.8%	3.0%	(3.6)	(12.8)	(14.1)	(32.3)	(35.3)	-	-	-	-	(7.5)	17-Dec-19
<i>MSCI Emerging Markets Total Return (Net) Index (USD)</i>					(3.1)	(14.1)	(14.3)	(29.4)	(31.0)	-	-	-	-	(6.5)	
Emerging Markets - Non-Core															
Manager 25			0.6%	2.2%	(0.3)	(5.6)	(3.2)	(11.5)	(11.6)	8.1	-	-	5.7	2.6	31-Aug-18
<i>Strategic Non-Core EM Equity Trust Benchmark</i>					(3.4)	(10.8)	(9.4)	(27.9)	(29.4)	(1.6)	-	-	1.5	0.0	

PERFORMANCE DETAIL

Miami University Long-Term Capital Tier III

December 31, 2022



ASSET CLASS Style	Investment Benchmark	Market Value (\$ mill)	Portfolio (%)	Asset Class (%)	Rates of Return (%)										Inception Date
					1 Month	3 Month	Fiscal Year To Date ⁽¹⁾⁽²⁾	Calendar Year To Date	1 Year	3 Year	5 Year	10 Year	Since Policy Inception	Since Inception	
Emerging Markets - Non-Core															
Manager 26			0.2%	0.6%	0.2	(5.4)	(4.7)	(15.9)	(18.7)	7.1	-	-	5.8	3.5	31-Aug-18
<i>Acadian Frontier Custom Benchmark MGR Total Return Index (USD)</i>					(0.9)	(8.9)	(7.0)	(22.6)	(24.7)	(2.4)	-	-	0.8	(0.6)	
Manager 27			0.1%	0.4%	(2.9)	(6.8)	(6.8)	(15.9)	(12.4)	(2.8)	-	-	(4.7)	(7.5)	31-Aug-18
<i>FTSE ASEA Pan Africa Index ex South Africa Total Return Index (USD)</i>					(2.5)	(8.4)	(11.5)	(24.9)	(26.5)	(1.3)	-	-	(0.3)	(2.0)	
Manager 28			0.2%	0.6%	0.1	(2.6)	3.7	10.1	8.8	16.5	-	-	11.6	9.0	31-Aug-18
<i>S&P Pan Arab Composite Large Mid Cap Net Total Return Index (USD)</i>					2.4	(4.1)	1.8	3.7	3.1	14.3	-	-	12.3	11.0	
Manager 29			0.1%	0.5%	1.1	(7.1)	(3.9)	(18.4)	(15.6)	10.9	-	-	10.8	5.2	31-Aug-18
<i>MSCI Emerging Markets Small Cap Total Return (Net) Index (USD)</i>					(0.1)	(7.9)	(5.3)	(24.3)	(23.4)	4.2	-	-	4.8	1.7	
Liquidity															
Manager 30			0.0%	0.1%	(1.5)	(13.7)	(13.7)	(28.3)	(29.6)	-	-	-	-	(22.5)	04-May-21
<i>MSCI Emerging Markets IMI Total Return (Net) Index (USD)</i>					(2.7)	(13.3)	(13.2)	(28.8)	(30.1)	-	-	-	-	(22.9)	
Cash and Other															
Cash, Accruals, and Pending Trades			0.0%		-	-	-	-	-	-	-	-	-	-	
Liquidity															
Manager 31			0.2%	0.8%	(2.1)	(14.9)	(15.3)	(29.6)	(31.4)	-	-	-	-	(29.2)	31-Aug-21
<i>MSCI Emerging Markets Total Return (Net) Index (USD)</i>					(3.1)	(14.1)	(14.3)	(29.4)	(31.0)	-	-	-	-	(29.2)	
Manager 32			0.0%	0.0%	(1.5)	(13.7)	(13.7)	(28.4)	(29.8)	(3.4)	-	-	(0.3)	(2.3)	31-Aug-18
<i>MSCI Emerging Markets IMI Total Return (Net) Index (USD)</i>					(2.7)	(13.3)	(13.2)	(28.8)	(30.1)	(3.4)	-	-	(0.3)	(2.3)	
Cash and Other															
Cash, Accruals, and Pending Trades			0.0%		-	-	-	-	-	-	-	-	-	-	
Portable Alpha															
Strategic Developed Non-U.S. Equity Portable Alpha	21.510	4.1%	15.6%	5.7	(9.0)	(4.6)	(22.2)	(22.9)	3.3	-	-	-	5.4	31-Jan-19	
<i>MO3 Developed Non-U.S. Equity Portable Alpha Benchmark Total Return Index (USD)</i>					5.4	(9.0)	(4.5)	(23.2)	(23.0)	(1.3)	-	-	-	1.4	
Strategic Emerging Markets Portable Alpha	17.285	3.3%	12.5%	(2.0)	(13.5)	(14.2)	(28.2)	(30.4)	-	-	-	-	4.6	10-Mar-20	
<i>MO3 Emerging Markets Portable Alpha Benchmark Total Return Index (USD)</i>					(3.1)	(14.1)	(14.3)	(29.4)	(31.0)	-	-	-	-	2.4	
Liquidity															
MSCI EAFE ETF (iShares Core)	0.944	0.2%	0.7%	5.8	(10.2)	(5.3)	(23.8)	(24.2)	-	-	-	-	(2.0)	31-Jan-20	
<i>MSCI EAFE IMI Total Return (Net) Index (USD)</i>					5.2	(9.4)	(4.7)	(24.1)	(24.1)	-	-	-	-	(2.4)	
MSCI Emerging Markets ETF	0.385	0.1%	0.3%	(1.5)	(13.7)	(13.7)	(28.4)	(29.8)	(3.4)	-	-	(0.3)	(1.1)	30-Nov-18	
<i>MSCI Emerging Markets IMI Total Return (Net) Index (USD)</i>					(2.7)	(13.3)	(13.2)	(28.8)	(30.1)	(3.4)	-	-	(0.3)	(0.9)	
Total Non-U.S. Equity	138.210	26.2%	100.0%	2.7	(10.2)	(7.9)	(23.3)	(23.4)	1.2	-	-	4.4	0.8	31-Aug-18	
<i>Non-U.S. Equity Policy Benchmark ⁴</i>					2.5	(10.8)	(7.7)	(25.2)	(25.8)	(1.8)	-	-	2.2	(1.2)	
Global Equity															
Global															
Strategic Global Equity Trust^{15,19}	40.298	7.6%	100.0%	6.7	(8.8)	(1.3)	(22.7)	(22.4)	2.9	-	-	-	3.6	30-Apr-19	
<i>Strategic Global Equity Trust Benchmark</i>					6.7	(7.2)	(0.1)	(20.6)	(19.2)	5.5	-	-	-	5.7	

PERFORMANCE DETAIL

Miami University Long-Term Capital Tier III

December 31, 2022



ASSET CLASS Style	Investment Benchmark	Market Value (\$ mill)	Portfolio (%)	Asset Class (%)	Rates of Return (%)								Since Policy Inception	Since Inception	Inception Date
					1 Month	3 Month	Fiscal Year To Date ⁽¹²⁾	Calendar Year To Date	1 Year	3 Year	5 Year	10 Year			
Global															
Manager 33			2.3%	29.7%	4.6	(11.8)	(3.6)	(26.9)	(25.2)	3.4	-	-	-	4.4	30-Apr-19
<i>MSCI World Total Return (Net) Index (USD)</i>					7.2	(6.8)	0.5	(20.1)	(18.5)	6.1	-	-	-	6.3	
Manager 34			2.2%	29.1%	7.5	(7.6)	2.1	(24.5)	(25.7)	3.0	-	-	-	3.6	30-Apr-19
<i>MSCI World Total Return (Net) Index (USD)</i>					7.2	(6.8)	0.5	(20.1)	(18.5)	6.1	-	-	-	6.3	
Manager 35			2.8%	36.7%	8.5	(6.9)	(1.6)	(17.0)	(16.4)	3.7	-	-	-	4.0	31-Jul-19
<i>MSCI All Country World IMI Total Return (Net) Index (USD)</i>					6.2	(7.5)	(0.9)	(21.1)	(20.2)	4.8	-	-	-	5.1	
Liquidity															
Manager 36			0.0%	0.6%	5.9	(10.2)	(5.6)	(23.4)	-	-	-	-	-	(23.7)	31-Dec-21
<i>MSCI EAFE Total Return (Net) Index (USD)</i>					5.4	(9.0)	(4.5)	(23.2)	-	-	-	-	-	(23.2)	
Manager 37			0.0%	0.0%	5.8	(10.2)	(5.3)	(23.8)	(24.2)	-	-	-	-	(21.4)	31-Aug-21
<i>MSCI EAFE IMI Total Return (Net) Index (USD)</i>					5.2	(9.4)	(4.7)	(24.1)	(24.1)	-	-	-	-	(21.6)	
Manager 38			0.0%	0.1%	8.1	(5.9)	2.8	(17.7)	(14.6)	-	-	-	-	(11.2)	31-Aug-21
<i>S&P 500 Total Return Index (USD)</i>					8.1	(5.9)	2.8	(17.7)	(14.6)	-	-	-	-	(11.1)	
Manager 39			0.2%	3.1%	5.0	-	-	-	-	-	-	-	-	0.1	15-Sep-22
<i>TOPIX Total Return Index (JPY)</i>					5.1	-	-	-	-	-	-	-	-	0.0	
Manager 40			0.1%	0.9%	7.9	(6.4)	2.1	(18.5)	-	-	-	-	-	(18.5)	31-Dec-21
<i>S&P 500 Total Return Index (USD)</i>					8.1	(5.9)	2.8	(17.7)	-	-	-	-	-	(17.7)	
Cash and Other															
Cash, Accruals, and Pending Trades			(0.2%)		-	-	-	-	-	-	-	-	-	-	
Total Global Equity		40.298	7.6%	100.0%	6.7	(8.8)	(1.3)	(22.7)	(22.4)	2.9	-	-	-	3.6	30-Apr-19
<i>Global Equity Benchmark ⁵</i>					6.7	(7.2)	(0.1)	(20.6)	(19.2)	5.5	-	-	-	5.7	
Total - Equity		286.264	54.2%	100.0%	5.5	(7.7)	(2.7)	(20.4)	(19.4)	5.0	-	-	8.4	3.9	31-Aug-18
<i>Equity Policy Benchmark</i>					5.4	(8.1)	(2.3)	(21.8)	(21.2)	3.9	-	-	7.8	3.4	
Hedge Funds															
Strategic Funds SPC Alpha Segregated Portfolio^{15,20}		129.127	24.5%	282.7%	0.0	1.4	1.1	1.7	1.3	6.3	-	-	5.7	4.9	31-Oct-18
<i>Strategic Funds SPC Alpha Segregated Portfolio Benchmark</i>					0.5	0.3	1.1	(4.2)	(4.7)	1.9	-	-	2.5	1.9	
Equity Market-Neutral															
Manager 41			1.4%	15.7%	1.9	4.2	3.0	11.7	16.7	20.0	-	-	16.6	15.4	31-Oct-18
<i>HFRX Equity Market Neutral Index</i>					0.4	1.1	1.6	(0.8)	(0.1)	(1.7)	-	-	(1.5)	(1.9)	
Manager 42			1.2%	13.4%	(0.3)	2.2	2.6	4.8	8.9	8.3	-	-	8.0	6.4	31-Oct-18
<i>HFRX Equity Market Neutral Index</i>					0.4	1.1	1.6	(0.8)	(0.1)	(1.7)	-	-	(1.5)	(1.9)	
Manager 43			0.4%	5.1%	0.7	5.4	8.1	16.9	19.6	8.0	-	-	8.1	7.2	31-Oct-18
<i>HFRX Equity Market Neutral Index</i>					0.4	1.1	1.6	(0.8)	(0.1)	(1.7)	-	-	(1.5)	(1.9)	
Manager 44			1.2%	13.7%	1.9	(0.5)	(1.0)	1.3	3.3	7.8	-	-	9.8	9.5	31-Oct-18
<i>HFRX Equity Market Neutral Index</i>					0.4	1.1	1.6	(0.8)	(0.1)	(1.7)	-	-	(1.5)	(1.9)	
Manager 45			0.7%	8.6%	0.0	1.3	(1.0)	-	-	-	-	-	-	(8.3)	31-Jan-22
<i>HFRX Equity Market Neutral Index</i>					0.4	1.1	1.6	-	-	-	-	-	-	(1.3)	

PERFORMANCE DETAIL

Miami University Long-Term Capital Tier III

December 31, 2022



ASSET CLASS Style	Investment Benchmark	Market Value (\$ mill)	Portfolio (%)	Asset Class (%)	Rates of Return (%)										Inception Date
					1 Month	3 Month	Fiscal Year To Date ⁽¹²⁾	Calendar Year To Date	1 Year	3 Year	5 Year	10 Year	Since Policy Inception	Since Inception	
Fixed Income Relative Value															
Manager 46			1.2%	13.8%	1.8	4.3	6.0	7.5	5.5	-	-	-	-	0.8	31-Aug-20
	HFRX Relative Value Arbitrage Index				0.7	(2.1)	0.0	(9.2)	(9.4)	-	-	-	-	(2.5)	
Manager 47			1.3%	14.8%	0.1	0.1	0.1	(1.2)	(1.0)	2.6	-	-	2.9	2.7	31-Oct-18
	HFRX Relative Value Arbitrage Index				0.7	(2.1)	0.0	(9.2)	(9.4)	0.0	-	-	1.3	0.6	
Manager 48			1.4%	16.1%	0.5	(1.0)	0.4	(3.1)	(3.4)	10.2	-	-	9.1	8.4	31-Oct-18
	HFRX Relative Value Arbitrage Index				0.7	(2.1)	0.0	(9.2)	(9.4)	0.0	-	-	1.3	0.6	
Equity Long/Short															
Manager 49			0.8%	8.8%	1.1	0.3	-	-	-	-	-	-	-	0.3	29-Jul-22
	HFRX Equity Hedge Index				1.0	(0.2)	-	-	-	-	-	-	-	(0.2)	
Manager 50			0.9%	10.3%	0.8	(3.2)	(1.0)	(13.5)	(12.5)	0.8	-	-	2.9	2.9	31-Oct-18
	HFRX Equity Hedge Index				1.0	(0.2)	0.9	(3.8)	(3.5)	4.8	-	-	6.0	4.4	
Manager 51			1.3%	15.2%	5.1	8.0	8.6	33.6	30.7	-	-	-	-	39.0	30-Jun-20
	HFRX Equity Hedge Index				1.0	(0.2)	0.9	(3.8)	(3.5)	-	-	-	-	8.3	
Manager 52			1.1%	13.3%	0.6	4.5	5.4	14.5	20.8	5.2	-	-	7.1	4.9	31-Oct-18
	HFRX Equity Hedge Index				1.0	(0.2)	0.9	(3.8)	(3.5)	4.8	-	-	6.0	4.4	
Manager 53			1.1%	13.1%	1.0	0.6	3.0	(4.7)	(9.9)	6.8	-	-	8.9	7.5	31-Oct-18
	HFRX Equity Hedge Index				1.0	(0.2)	0.9	(3.8)	(3.5)	4.8	-	-	6.0	4.4	
Credit Long/Short															
Manager 54			0.6%	6.6%	(0.2)	10.5	4.8	7.6	5.6	10.5	-	-	7.3	6.4	31-Oct-18
	HFRX Event Driven Index				(1.7)	(0.3)	(0.7)	(6.9)	(9.0)	2.0	-	-	3.0	2.3	
Manager 55			0.9%	9.8%	(0.5)	(0.1)	(0.5)	(3.1)	(4.6)	5.5	-	-	4.6	3.8	31-Oct-18
	HFRX Event Driven Index				(1.7)	(0.3)	(0.7)	(6.9)	(9.0)	2.0	-	-	3.0	2.3	
Global Macro															
Manager 56			1.4%	15.8%	(8.8)	1.1	(7.2)	22.8	24.3	6.8	-	-	3.9	5.3	31-Oct-18
	HFRX Macro/CTA Index				0.1	4.4	2.9	6.2	4.3	3.6	-	-	3.8	3.8	
Manager 57			1.1%	12.5%	(2.4)	1.0	1.9	(4.0)	(2.9)	1.6	-	-	3.2	1.2	31-Oct-18
	HFRX Macro/CTA Index				0.1	4.4	2.9	6.2	4.3	3.6	-	-	3.8	3.8	
Multi-Strategy															
Manager 58			1.2%	14.0%	(0.7)	1.7	1.5	0.9	1.6	10.4	-	-	9.1	8.6	31-Oct-18
	HFRX Equal Weighted Strategies Index				0.5	0.3	1.1	(4.2)	(4.7)	1.9	-	-	2.5	1.9	
Manager 59			1.3%	14.6%	(0.8)	(1.5)	(1.5)	(3.3)	(4.6)	2.6	-	-	5.1	4.8	31-Oct-18
	HFRX Equal Weighted Strategies Index				0.5	0.3	1.1	(4.2)	(4.7)	1.9	-	-	2.5	1.9	
Manager 60			1.2%	14.0%	1.3	1.1	0.1	(6.6)	(7.7)	13.7	-	-	12.1	11.8	31-Oct-18
	HFRX Equal Weighted Strategies Index				0.5	0.3	1.1	(4.2)	(4.7)	1.9	-	-	2.5	1.9	
Manager 61			1.1%	13.2%	(1.3)	2.9	1.7	3.7	3.7	7.3	-	-	-	7.3	31-Oct-19
	HFRX Equal Weighted Strategies Index				0.5	0.3	1.1	(4.2)	(4.7)	1.9	-	-	-	1.9	
Manager 62			0.9%	10.9%	0.7	(2.6)	(1.4)	(4.3)	(3.7)	2.3	-	-	2.8	2.8	31-Oct-18
	HFRX Event Driven Index				(1.7)	(0.3)	(0.7)	(6.9)	(9.0)	2.0	-	-	3.0	2.3	
Cash and Other															
Liquidating Funds			0.2%	1.8%	-	-	-	-	-	-	-	-	-	-	
Cash and Other			0.0%		-	-	-	-	-	-	-	-	-	-	
Cash, Accruals, and Pending Trades			0.0%		-	-	-	-	-	-	-	-	-	-	

PERFORMANCE DETAIL

Miami University Long-Term Capital Tier III

December 31, 2022



ASSET CLASS Style	Investment Benchmark	Market Value (\$ mill)	Portfolio (%)	Asset Class (%)	Rates of Return (%)								Since Policy Inception	Since Inception	Inception Date
					1 Month	3 Month	Fiscal Year To Date ⁽¹²⁾	Calendar Year To Date	1 Year	3 Year	5 Year	10 Year			
Liquidity															
Asset Allocation Overlay		(83.971)	(15.9%)	(183.9%)	0.0	0.0	0.0	0.0	-	-	-	-	-	0.0	31-Dec-21
Cash and Other															
Liquidating Funds		0.516	0.1%	1.1%	-	-	-	-	-	-	-	-	-	-	-
Total Hedge Funds		45.671	8.7%	100.0%	0.0	1.4	1.1	1.7	1.3	5.8	4.6	5.0	5.5	3.9	30-Jun-02
	Hedge Funds Policy Benchmark ⁶				0.5	0.3	1.1	(4.2)	(4.7)	1.9	2.3	6.5	2.5	6.3	
Total - Alternatives		45.671	8.7%	100.0%	(0.3)	1.2	1.1	1.7	1.4	5.9	4.7	5.1	5.5	4.0	30-Jun-02
Real Estate															
Core Open-End															
Harrison Street Core Property Fund, L.P		2.526	0.5%	18.4%	-	2.1	2.1	11.0	13.9	8.9	-	-	-	8.7	05-Jul-19
	NCREIF Open End Diversified Core Index				-	(1.5)	(1.4)	10.5	16.0	10.6	-	-	-	10.1	
Prime Property Fund, LLC		6.413	1.2%	46.6%	-	(0.1)	(0.1)	10.3	20.9	11.3	-	-	-	11.1	27-Sep-19
	NCREIF Open End Diversified Core Index				-	(1.5)	(1.4)	10.6	16.2	10.9	-	-	-	10.8	
PRISA Fund		4.824	0.9%	35.1%	-	(0.1)	(0.1)	12.2	19.6	11.7	-	-	-	10.9	28-Jun-19
	NCREIF Open End Diversified Core Index				-	(1.5)	(1.4)	10.4	15.9	10.6	-	-	-	9.9	
Total Real Estate - IRR⁸		13.763	2.6%	100.0%	-	0.4	0.4	10.7	18.7	10.8	-	-	-	10.4	28-Jun-19
	Real Estate Policy Benchmark - IRR ⁷				-	(1.7)	(1.6)	10.0	15.5	10.6	-	-	-	10.3	
Total Real Estate - Time Weighted⁸		13.763	2.6%	100.0%	-	0.4	0.4	10.8	19.0	10.8	-	-	-	10.1	28-Jun-19
	Real Estate Policy Benchmark ⁷				-	(1.5)	(1.4)	10.4	15.9	10.6	-	-	-	9.9	
Commodities															
Liquidity															
iShares GSCI Commodity Index		16.249	3.1%	100.0%	6.2	(4.7)	(5.4)	27.8	22.5	12.6	-	-	-	10.0	31-Jan-19
	S&P GSCI Total Return Index				6.7	(4.3)	(4.3)	30.0	24.7	14.2	-	-	-	11.5	
Total Commodities		16.249	3.1%	100.0%	6.2	(4.9)	(5.6)	28.3	22.9	12.8	-	-	-	9.6	31-Jan-19
	Commodities Policy Benchmark ⁹				6.7	(4.3)	(4.3)	30.0	24.7	14.2	-	-	-	11.5	
TIPS															
Strategic TIPS		22.959	4.3%	100.0%	1.2	(4.9)	(1.9)	(5.2)	(4.7)	2.2	-	-	-	3.0	30-Jan-19
	Bloomberg 1 to 10 Year TIPS Index				1.1	(6.3)	(2.9)	(7.8)	(7.2)	2.1	-	-	-	3.2	
Total TIPS		22.959	4.3%	100.0%	1.2	(4.9)	(1.9)	(5.2)	(4.7)	2.2	-	-	-	3.0	30-Jan-19
	TIPS Policy Benchmark ¹⁰				1.1	(6.3)	(2.9)	(7.8)	(7.2)	2.1	-	-	-	3.1	
Total - Real Assets		52.971	10.0%	100.0%	2.3	(3.6)	(2.4)	8.0	8.4	8.3	-	-	-	7.3	30-Jan-19
U.S. Fixed Income															
Treasuries															
Strategic Treasury Holdings		67.029	12.7%	56.7%	(1.7)	(8.3)	(6.3)	(13.2)	(12.9)	(3.7)	-	-	(1.8)	(1.3)	07-Sep-18
	Duration Adjusted Bloomberg U.S. Treasury Index (Tier III)				(2.1)	(8.4)	(6.6)	(13.6)	(13.4)	(4.4)	-	-	(2.4)	(1.8)	

PERFORMANCE DETAIL

Miami University Long-Term Capital Tier III

December 31, 2022



ASSET CLASS Style	Investment Benchmark	Market Value (\$ mill)	Portfolio (%)	Asset Class (%)	Rates of Return (%)								Since Policy Inception	Since Inception	Inception Date
					1 Month	3 Month	Fiscal Year To Date ⁽¹²⁾	Calendar Year To Date	1 Year	3 Year	5 Year	10 Year			
Active Credit															
	Ellington Strategic Mortgage Fund, L.P. <i>Citigroup Mortgage Index</i>	16.262	3.1%	13.8%	(0.8) (1.4)	- -	- -	- -	- -	- -	- -	- -	- -	(2.1) (6.5)	31-Aug-22
	GoldenTree HY Value Offshore Strategic <i>Citigroup High Yield Market Index</i>	15.574	3.0%	13.2%	2.1 3.1	(2.9) (3.5)	1.9 2.4	- -	- -	- -	- -	- -	- -	1.9 2.4	30-Jun-22
	KKR Global Credit Opportunities Fund (Overseas) L.P. <i>BofA Merrill Lynch High Yield Cash Pay Index</i>	5.702	1.1%	4.8%	0.0 2.9	(2.1) (3.6)	0.5 2.2	- -	- -	- -	- -	- -	- -	(8.0) (8.0)	31-Mar-22
Portable Alpha															
	Strategic U.S. Fixed Income Portable Alpha <i>MO3 U.S. Fixed Income Portable Alpha Benchmark Index</i>	12.365	2.3%	10.5%	(1.9) (1.4)	(7.1) (7.2)	(6.0) (5.7)	(14.6) (14.3)	(14.7) (14.1)	0.8 (3.6)	- -	- -	3.0 (0.9)	3.2 (0.9)	07-Dec-18
Cash and Other															
	Liquidating Funds	1.287	0.2%	1.1%	-	-	-	-	-	-	-	-	-	-	-
	Total U.S. Fixed Income <i>U.S. Fixed Income Policy Benchmark</i>	118.217	22.4%	100.0%	(1.0) (0.9)	(6.3) (7.8)	(4.3) (5.2)	(11.7) (15.3)	(11.4) (15.2)	(0.7) (3.3)	- -	- -	0.9 (0.3)	1.2 0.1	30-Jun-18
	Total - Fixed Income	118.217	22.4%	100.0%	(1.0)	(6.3)	(4.3)	(11.7)	(11.4)	(0.7)	1.0	2.0	0.9	4.1	30-Jun-02
	Total - Fixed Income Segment <i>Fixed Income Policy Benchmark¹¹</i>				(0.9) (0.9)	(7.5) (7.8)	(5.1) (5.2)	(14.3) (15.3)	(14.1) (15.2)	(2.7) (3.3)	- (0.2)	- 0.9	(0.1) (0.3)	0.0 3.3	
	Total - Cash, Accruals, and Pending Trades¹⁴	24.715	4.7%	100.0%	0.1	0.2	0.3	0.8	1.0	1.0	-	-	1.0	1.0	27-Aug-18
	Miami University Long-Term Capital Tier III (Net of Sub-Mgr Fees)¹	527.838	100.0%		2.8	(5.8)	(2.5)	(12.5)	(11.9)	4.7	4.2	4.2	6.6	4.4	30-Jun-02
	Miami University Long-Term Capital Tier III (Net of Sub-Mgr and Strategic Fees)¹	527.838	100.0%		2.8	(5.8)	(2.6)	(12.6)	(12.1)	4.5	-	-	6.4	-	31-Dec-18
	<i>Total Portfolio Policy Benchmark^{1,2}</i>				3.0	(6.7)	(2.6)	(15.4)	(15.0)	2.9	3.4	3.8	5.7	4.3	
	<i>Total Portfolio Policy Benchmark (Net of Fees)^{1,2}</i>				3.0	(6.7)	(2.6)	(15.5)	(15.1)	2.8	-	-	5.6	-	
	Cintrifuse Syndicate Fund II, LLC	1.134													
	TOTAL	548.955													30-Jun-02

Note:

- Rates of return are annualized except for periods of less than one year.
- Rates of return for terminated managers are included in each asset category.
- Returns for individual sub-managers are reported net of sub-manager fees.
- Monthly performance is calculated using actual and estimated intra-month asset valuations on the date of all cash flows (flow-bound performance).
- Strategic reports performance of commingled vehicles as of the date when the net asset value is determined in order to reflect intended market exposures. All other performance is reported on a "trade date" basis. Market values and returns are (1) subject to revisions due to updated valuations of the underlying investments and (2) based on the latest information available at the time of this report.
- We urge you to compare the information in these reports with the account statements and reports that you receive directly from your custodian and administrators. Please be advised that Strategic statements will likely vary from custodial and administrator statements for reasons that often include: differences in accounting procedures, reporting dates, performance calculation methodologies, and valuation methodologies.

- 1) Total Portfolio and Benchmark Returns
 - Total Portfolio (Net of Sub-Manager Fees) - Multi-period returns are net of all sub-manager fees.
 - Portfolio Benchmark: Multi-period returns are calculated assuming benchmark is rebalanced monthly to policy weights.
 - Total Portfolio (Net of Sub-Manager and Strategic Fees) – Multi-period returns are net of both Strategic and sub-manager fees.
 - Portfolio Benchmark (Net of Fees): A management fee is deducted for each asset class that is not already net of a management fee as defined by the investment guidelines. Transaction costs are deducted related to monthly rebalancing, changes to policy allocations and cash flows into or out of the portfolio. The multi-period returns represent Strategic's estimate of realistic performance of an investable, passively-managed benchmark. Additional information regarding management fees and transaction costs is available upon request.
- 2) Total Portfolio Benchmark
 - The long term Total Portfolio Benchmark is 54% Equity (27% U.S., 18% Developed Non-U.S., 9% Emerging Markets), 12% Alternatives (12% Hedge Funds), 10% Real Assets (3% Real Estate, 3% Commodities, 4% TIPS), and 24% Fixed Income (21.5% U.S. Investment Grade, 2.5% U.S. High Yield). The benchmark is adjusted to float Real Estate weight based on its actual weight in the portfolio at the end of each quarter, rounded to the nearest 0.5 percentage point. The portion of the long-term policy benchmark earmarked but not used for Real Estate is allocated to TIPS.
 - During the "Transition Period", which began on 07/01/2018 and ended on 12/31/2018, the benchmark was set to be the actual performance of the account and each asset class benchmark was set to be the performance of the asset class.
- 3) U.S. Equity Policy Benchmark
 - Russell 3000 Index
- 4) Non-U.S. Equity Policy Benchmark
 - 66.7% MSCI World Ex-U.S. IMI (Net) and 33.3% MSCI Emerging Markets Index (Net)
- 5) Global Equity Benchmark
 - A custom benchmark that is the weighted average of the underlying manager benchmarks. Weights are based on the market values of the underlying global equity managers in the portfolio and are rebalanced monthly.
- 6) Hedge Fund Policy Benchmark
 - HFRX Equal Weighted Strategies Index
 - Inception – 6/30/2018: MSCI All Country World Index (Net)
- 7) Real Estate Policy Benchmark
 - NCREIF Open End Diversified Core Index
- 8) Real Estate Returns: Manager returns are shown as internal rates of return (IRR). Returns are only displayed when one of the following three criteria is satisfied 1) three years have passed since manager inception, 2) the manager's investment period has ended, 3) a significant pricing event (sale, downgrade, etc.) has occurred. Total asset class returns will be displayed when a manager within the asset class is

displayed.

- 9) Commodities Policy Benchmark
 - S&P GSCI Total Return Index
- 10) TIPS Policy Benchmark
 - Bloomberg 1 to 10 Year TIPS Index
- 11) Fixed Income Policy Benchmark
 - 90% Bloomberg US Aggregate Index, and 10% Bank of America Merrill Lynch High Yield Cash Pay Index
 - Inception – 6/30/2018: Bloomberg US Aggregate Index
- 12) Fiscal Year-End for the Miami University is June 30th.
- 13)
 - Total Miami University Client Group performance accounts for the combined performance of the Miami University Long-Term Capital, Miami University Baseline Tier II, and Miami University Special Initiatives Fund portfolios. Prior to May 31, 2018, the Miami University Client Group includes the Miami University Operating Cash account.
- 14) Performance shown reflects the returns of an investment in the account's primary money market fund or other cash vehicle rather than actual calculated performance of the account. The value shown, in addition to settled cash, may include cash pending settlement, accruals for fees, and liquidating investments.
- 15) Returns for individual sub-managers are reported net of sub-manager fees. Returns at the total Trust level are reported net of sub-managers' fees, but gross of Strategic's advisory fee. Actual returns will be reduced by advisory fees and other expenses. For example, if \$100,000 were invested and experienced a 10% annual return compounded quarterly for ten years, its ending dollar value, without giving effect to the deduction of advisory fees, would be \$268,506 with an annualized compound return of 10.38%. If an advisory fee of 0.50% of average assets per year were deducted quarterly for the ten-year period, the annualized compounded return would be 9.84% and the ending dollar value would be \$255,715. Information about advisory fees is found in Part II of Strategic's Form ADV.
- 16) Strategic U.S. Equity Trust Footnotes
 - Strategic U.S. Equity Trust Benchmark
 - Russell 3000 Index
 - October 1, 1999 – June 30, 2007: Wilshire 5000 Index
 - Inception – September 30, 1999: S&P 500 Index
- 17) Strategic Developed Markets Ex-U.S. Equity Trust Footnotes
 - The Strategic Developed Markets Ex-U.S. Equity Trust was renamed on January 1, 2019 from the 'Strategic International Equity Trust'. From December 1, 2001, the benchmark for the Strategic International Equity Trust included developed and emerging market exposure, and the return history includes performance of both the developed market and emerging market managers and securities used to execute this broader mandate.
 - Strategic Developed Markets Ex-U.S. Equity Trust Benchmark
 - MSCI World ex-U.S. IMI Index (net)
 - October 1, 2012 - December 31, 2018: A blend of 50% MSCI World IMI ex-U.S. Index (net) and 50% MSCI EM Index (net).
 - September 1, 2010 - September 30, 2012: A blend of 72% MSCI World IMI ex-U.S. Index (net) and 28% MSCI EM Index (net).
 - December 1, 2001 – August 31, 2010: MSCI All Country World Index ex-U.S. (ACWI ex-U.S.) net of dividend withholdings
 - October 1, 1996 - November 30, 2001: EAFE Lite (net)
 - Inception - September 30, 1996: EAFE Index (net)
- 18) Strategic Emerging Markets Equity Trust Footnotes
 - The Strategic Emerging Markets Trust was created on January 1, 2019 using the emerging markets equity managers within the Strategic International Equity Trust. Performance history for the Strategic Emerging Markets Equity Trust for periods prior to January 1, 2019 has been calculated using the weighted average performance of the emerging markets equity managers held within the Strategic

- International Equity Trust until January 1, 2019.
- Strategic Emerging Markets Equity Trust Benchmark
 - MSCI Emerging Markets Index (net)
 - November 1, 1994 - December 31, 1998: A custom benchmark that is the weighted average of the underlying manager benchmarks. Weights are based on the market values of the underlying emerging markets equity managers and are rebalanced monthly.

19) Strategic Global Equity Trust Benchmark

- A custom benchmark that is the weighted average of the underlying manager benchmarks. Weights are based on the market values of the underlying global equity managers in the portfolio and are rebalanced monthly.

20) Strategic Funds SPC Alpha Segregated Footnotes

- Macro Benchmark
 - HFRX Macro Index
 - Inception – March 31, 2003: 90 Day T-Bill +4%
- Equal Weighted Strategies Benchmark
 - HFRX Equal Weighted Strategies Index
 - Inception – March 31, 2003: 90 Day T-bill +4%
- Equity Hedge Benchmark
 - HFRX Equity Hedge Index
 - Inception – March 31, 2003: 90 Day T-bill +4%
- Equity Market Neutral Benchmark
 - HFRX Equity Market Neutral Index
 - Inception – March 31, 2003: 90 Day T-bill +4%
- Event Driven Benchmark
 - HFRX Event Driven Index
 - Inception – March 31, 2003: 90 Day T-bill +4%
- Formerly, several managers were underlying investments in the Strategic Directional Hedge Fund Master Trust. Effective as of March 31, 2010, the Strategic Directional Hedge Fund Master Trust merged into the Strategic Hedge Fund Master Trust and the underlying assets of both Master Trusts were combined in the surviving Strategic Hedge Fund Master Trust. All performance from inception through March 31, 2010 occurred as part of the Strategic Directional Hedge Fund Master Trust.

PERFORMANCE DETAIL

Miami University Baseline Tier II

December 31, 2022



ASSET CLASS Style	Investment Benchmark	Market Value (\$ mill)	Portfolio (%)	Asset Class (%)	Rates of Return (%)								Since Policy Inception	Since Inception	Inception Date
					1 Month	3 Month	Fiscal Year To Date ⁽⁴⁾	Calendar Year To Date	1 Year	3 Year	5 Year	10 Year			
U.S. Fixed Income															
<i>Treasuries</i>															
Strategic Treasury Holdings		187.249	99.8%	100.0%	0.3	0.6	0.6	0.0	0.0	0.4	-	-	1.0	1.1	07-Sep-18
<i>BofA Merrill Lynch 0-2 Year Treasury Index</i>					0.3	0.7	0.2	(1.1)	(1.1)	0.2	-	-	0.9	1.0	
Total U.S. Fixed Income		187.249	99.8%	100.0%	0.3	0.6	0.6	0.0	0.0	0.4	0.9	1.0	1.0	2.3	30-Jun-02
<i>U.S. Fixed Income Policy Benchmark</i>					0.3	0.7	0.2	(1.1)	(1.1)	0.2	0.8	0.7	0.9	1.9	
Total - Fixed Income		187.249	99.8%	100.0%	0.3	0.6	0.6	0.0	0.0	0.4	0.9	1.0	1.0	2.3	30-Jun-02
<i>Fixed Income Policy Benchmark³</i>					0.3	0.7	0.2	(1.1)	(1.1)	0.2	0.8	0.7	0.9	1.9	
Total - Cash, Accruals, and Pending Trades⁵		0.340	0.2%	100.0%	0.1	0.2	0.5	1.0	1.0	1.0	-	-	1.0	1.0	02-Aug-18
Miami University - Baseline Tier II (Net of Sub-Mgr Fees)¹		187.588	100.0%		0.4	0.6	0.6	0.0	0.0	0.4	0.9	1.0	1.0	2.3	30-Jun-02
Miami University - Baseline Tier II (Net of Sub-Mgr and Strategic Fees)¹		187.588	100.0%		0.3	0.6	0.6	(0.1)	(0.1)	0.4	-	-	0.9	-	31-Dec-18
<i>Total Portfolio Policy Benchmark^{1,2}</i>					0.3	0.7	0.2	(1.1)	(1.1)	0.2	0.9	0.7	0.9	1.9	
<i>Total Portfolio Policy Benchmark (Net of Fees)^{1,2}</i>					0.3	0.7	0.2	(1.2)	(1.2)	0.1	-	-	0.7	-	

Note:

- Rates of return are annualized except for periods of less than one year.
- Rates of return for terminated managers are included in each asset category.
- Returns for individual sub-managers are reported net of sub-manager fees.
- Monthly performance is calculated using actual and estimated intra-month asset valuations on the date of all cash flows (flow-bound performance).
- Strategic reports performance of commingled vehicles as of the date when the net asset value is determined in order to reflect intended market exposures. All other performance is reported on a "trade date" basis. Market values and returns are (1) subject to revisions due to updated valuations of the underlying investments and (2) based on the latest information available at the time of this report.
- We urge you to compare the information in these reports with the account statements and reports that you receive directly from your custodian and administrators. Please be advised that Strategic statements will likely vary from custodial and administrator statements for reasons that often include: differences in accounting procedures, reporting dates, performance calculation methodologies, and valuation methodologies.

- 1) Total Portfolio and Benchmark Returns
 - Total Portfolio (Net of Sub-Manager Fees) - Multi-period returns are net of all sub-manager fees.
 - Portfolio Benchmark: Multi-period returns are calculated assuming benchmark is rebalanced monthly to policy weights.
 - Total Portfolio (Net of Sub-Manager and Strategic Fees) – Multi-period returns are net of both Strategic and sub-manager fees.
 - Portfolio Benchmark (Net of Fees): A management fee is deducted for each asset class that is not already net of a management fee as defined by the investment guidelines. Transaction costs are deducted related to monthly rebalancing, changes to policy allocations and cash flows into or out of the portfolio. The multi-period returns represent Strategic's estimate of realistic performance of an investable, passively-managed benchmark. Additional information regarding management fees and transaction costs is available upon request.
- 2) Total Portfolio Benchmark
 - The long term Total Portfolio Benchmark is the ICE BAML 0-2 Year Treasury Index
 - *Inception – 6/30/2018: Bloomberg 1-3 Year U.S. Government Index.*
 - *During the 'Transition Period', which began on 07/01/2018 and ended on 12/31/2018, the benchmark was set to be the actual performance of the account, and each asset class benchmark was set to be the performance of the asset class.*
- 3) Fixed Income Policy Benchmark
 - ICE BAML 0-2 Year Treasury Index
 - *Inception – 6/30/2018: Bloomberg 1-3 Year U.S. Government Index.*
- 4) Fiscal Year-End for the Miami University is June 30th.
- 5) Performance shown reflects the returns of an investment in the account's primary money market fund or other cash vehicle rather than actual calculated performance of the account. The value shown, in addition to settled cash, may include cash pending settlement, accruals for fees, and liquidating investments.

PERFORMANCE DETAIL

Miami University Special Initiatives Fund

December 31, 2022



ASSET CLASS Style	Investment Benchmark	Market Value (\$ mill)	Portfolio (%)	Asset Class (%)	Rates of Return (%)								Since Policy Inception	Since Inception	Inception Date
					1 Month	3 Month	Fiscal Year To Date ⁽³⁾	Calendar Year To Date	1 Year	3 Year	5 Year	10 Year			
U.S. Fixed Income															
<i>Treasuries</i>															
Strategic Treasury Holdings		30.026	100.0%	100.0%	0.1	0.9	(0.4)	(3.4)	(3.4)	0.1	-	-	1.8	1.8	19-Sep-18
Total U.S. Fixed Income		30.026	100.0%	100.0%	0.1	0.9	(0.4)	(3.4)	(3.4)	0.1	-	-	1.8	1.8	19-Sep-18
<i>U.S. Fixed Income Policy Benchmark</i>					<i>0.1</i>	<i>0.9</i>	<i>(0.4)</i>	<i>(3.4)</i>	<i>(3.4)</i>	<i>0.1</i>	<i>-</i>	<i>-</i>	<i>1.7</i>	<i>1.7</i>	
Total - Fixed Income		30.026	100.0%	100.0%	0.1	0.9	(0.4)	(3.4)	(3.4)	0.1	-	-	1.8	1.8	19-Sep-18
<i>Fixed Income Policy Benchmark</i>					<i>0.1</i>	<i>0.9</i>	<i>(0.4)</i>	<i>(3.4)</i>	<i>(3.4)</i>	<i>0.1</i>	<i>-</i>	<i>-</i>	<i>1.7</i>	<i>1.7</i>	
Miami University Special Initiatives Fund (Net of Sub-Mgr Fees)		30.026	100.0%		0.1	0.9	(0.4)	(3.4)	(3.4)	0.1	-	-	1.8	1.8	19-Sep-18
Miami University Special Initiatives Fund (Net of Sub-Mgr and Strategic Fees)		30.026	100.0%		0.1	0.9	(0.5)	(3.5)	(3.5)	0.0	-	-	1.7	1.7	19-Sep-18
<i>Total Portfolio Policy Benchmark²</i>					<i>0.1</i>	<i>0.9</i>	<i>(0.5)</i>	<i>(3.5)</i>	<i>(3.5)</i>	<i>0.0</i>	<i>-</i>	<i>-</i>	<i>1.7</i>	<i>1.7</i>	

Note:

- Rates of return are annualized except for periods of less than one year.
- Rates of return for terminated managers are included in each asset category.
- Returns for individual sub-managers are reported net of sub-manager fees.
- Monthly performance is calculated using actual and estimated intra-month asset valuations on the date of all cash flows (flow-bound performance).
- Strategic reports performance of commingled vehicles as of the date when the net asset value is determined in order to reflect intended market exposures. All other performance is reported on a “trade date” basis. Market values and returns are (1) subject to revisions due to updated valuations of the underlying investments and (2) based on the latest information available at the time of this report.
- We urge you to compare the information in these reports with the account statements and reports that you receive directly from your custodian and administrators. Please be advised that Strategic statements will likely vary from custodial and administrator statements for reasons that often include: differences in accounting procedures, reporting dates, performance calculation methodologies, and valuation methodologies.

- 1) Total Portfolio Returns
 - Total Portfolio (Net of Sub-Manager Fees) – Multi-period returns are net of all sub-manager fees.
 - Total Portfolio (Net of Sub-Manager and Strategic Fees) – Multi-period returns are net of both Strategic and sub-manager fees.
- 2) Total Portfolio Benchmark
 - This portion of the Core Cash (Tier II) Sub-Account is earmarked for special projects. The benchmark index used for this portion of the Core Cash (Tier II) Sub-Account is the actual performance of the account.
- 3) Fiscal Year-End for the Miami University is June 30th.

Empowering investors through experience, innovation, and excellence.

1001 Nineteenth Street North
17th Floor
Arlington, VA 22209 USA

+1 703.243.4433 TEL
+1 703.243.2266 FAX

strategicgroup.com