NORTH CAROLINA
DEPARTMENT OF STATE TREASURER

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INVESTMENT MANAGEMENT DIVISION

Opportunistic Fixed Income Review

November 15, 2023

All data as of September 30, 2023 Unless Otherwise Stated

Role in the Portfolio

Attractive Absolute Returns

- Long-term returns that are competitive with long-term public equities, after consideration of lower downside risk, due to opportunistic investments, longer duration private investments, restructurings, leverage, hedging, and trading skill

Competitive Relative Returns

- Achieve or exceed the return on the performance benchmark over a long period of time, within reasonable risk parameters

Diversification

- Enhance the diversification of the total fund relative to public equity and investment grade fixed income

Capital Preservation

- Protect capital through credit-oriented investments and trading strategies that are designed to minimize downside risk

Deflation Protection

- The structure of certain fixed income assets may provide protection against the detrimental effects of deflation

Portfolio Launched June 2009

- The asset class (N.C.G.S. § 147-69.2(b)(6c)) was approved for investment by the NC General Assembly in June 2009.

Source: Investment Policy Statement for North Carolina Retirement Systems

Portfolio Components

Components	Strategies / Types of Investments	
Traditional Corporate Credit	High Yield Bonds	Bank Loans
Distressed Credit	High Yield Bonds	Post-Reorg Equity
	Structured Credit	
Hedge Funds	Long/Short Credit	Relative Value
	Convertible Arbitrage	Distressed Credit
	Derivatives	Event-Driven
Special Situations	Structured Credit	Mezzanine Debt
	Whole Loans	Direct Lending
	Real Estate Loans	Dislocation

* Portfolio Components, Targets, and Maximums come from the Investment Policy Statement for North Carolina Retirement Systems

Opportunistic Fixed Income

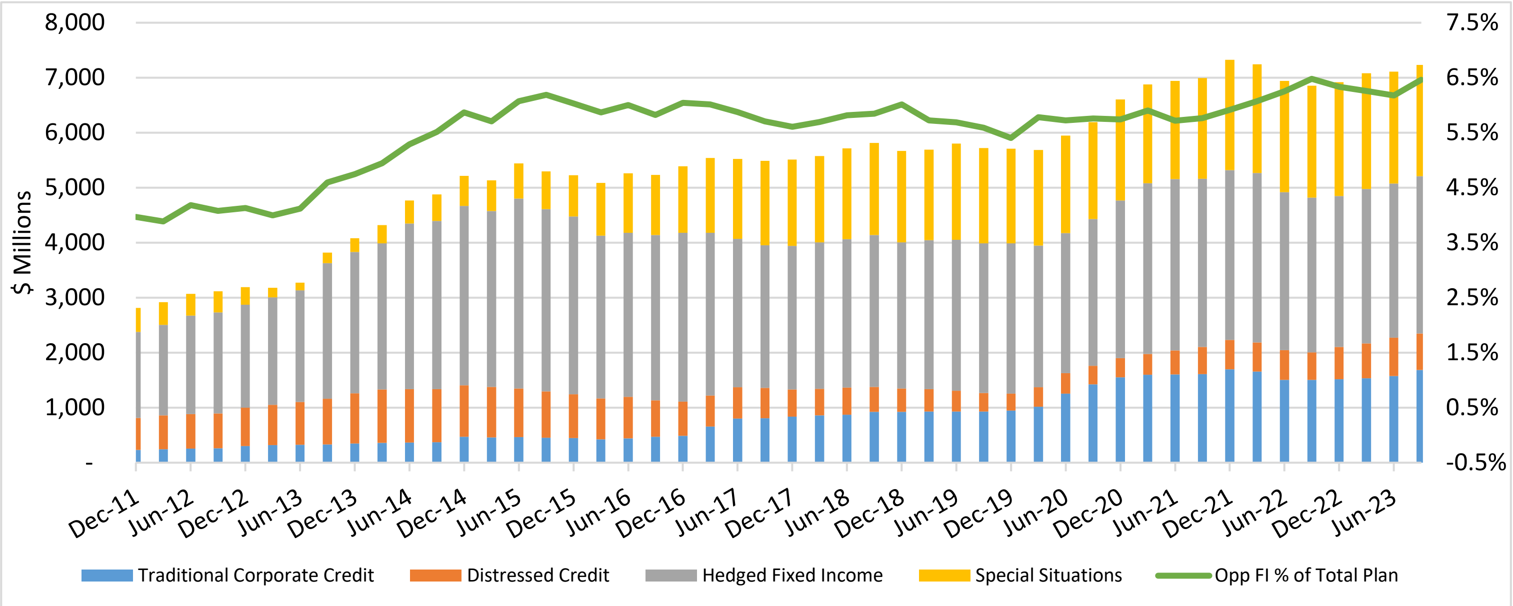
- Currently under-weight vs. target by .50%
- Additional capacity for more than $550MM to achieve target weight
- Current environment provides an attractive risk/reward to go beyond the target

	Market Value ($000)	%	Target	Range Minimum	Range Maximum	Relative %	Relative $ ($000)
Growth	**$55,949,238**	**50.05%**	**55.0%**	**37.0%**	**68.0%**	**-4.95%**	**($5,538,350)**
Public Equity	40,232,359	35.99%	38.0%	33.0%	43.0%	-2.01%	(2,249,975)
Private Equity	6,234,309	5.58%	7.0%	0.0%	8.80%	-1.42%	(1,591,384)
Non Core Real Estate	2,213,174	1.98%	3.0%	0.0%	8.0%	-1.02%	(1,140,694)
Opportunistic Fixed Income	7,269,396	6.50%	7.0%	0.0%	7.5%	-0.50%	(556,297)
Rates & Liquidity	**41,894,732**	**37.47%**	**33.0%**	**23.0%**	**48.0%**	**4.47%**	**5,002,179**
IG Fixed Income & Cash	31,277,096	27.98%	28.0%	23.0%	33.0%	-0.02%	(25,676)
Pension Cash	10,617,636	9.50%	5.0%	0.0%	10.0%	4.50%	5,027,855
Inflation Sensitive & Diversifiers	**11,595,493**	**10.37%**	**11.0%**	**4.0%**	**16.0%**	**-0.63%**	**(702,025)**
Inflation Sensitive	5,542,386	4.96%	6.0%	2.0%	7.5%	-1.04%	(1,165,351)
Core Real Estate	6,053,107	5.41%	5.0%	2.0%	10.0%	0.41%	463,326
Multi-Strategy	**2,356,152**	**2.11%**	**1.0%**	**0.0%**	**4.0%**	**1.11%**	**1,238,196**
Grand Total	**111,795,614**	**100.00%**					

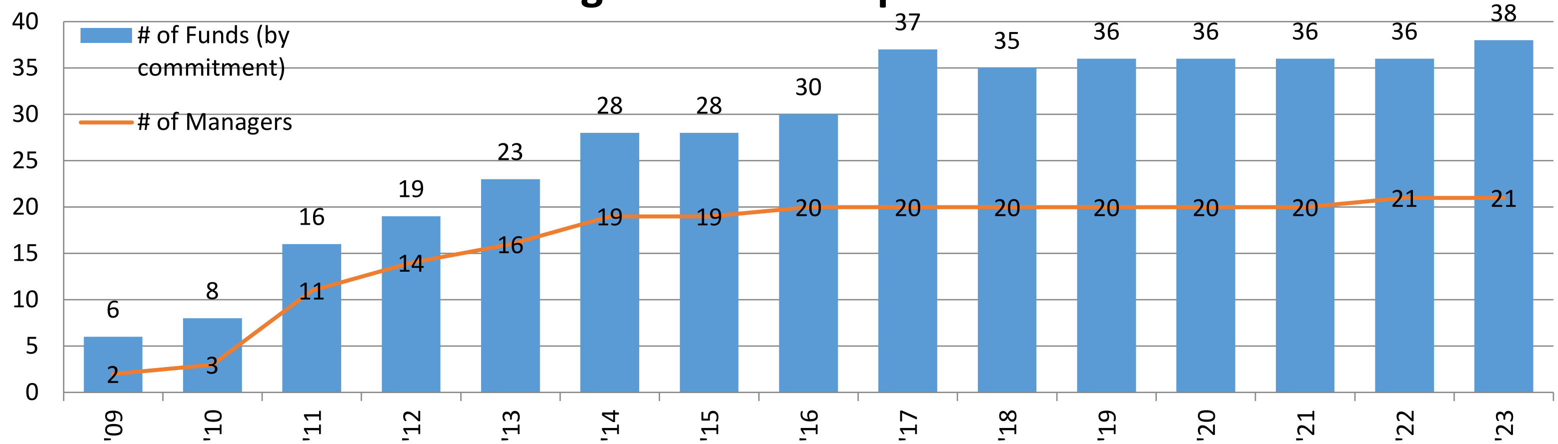
As of 9/30/23

Portfolio History

Portfolio Market Value Timeline by Component

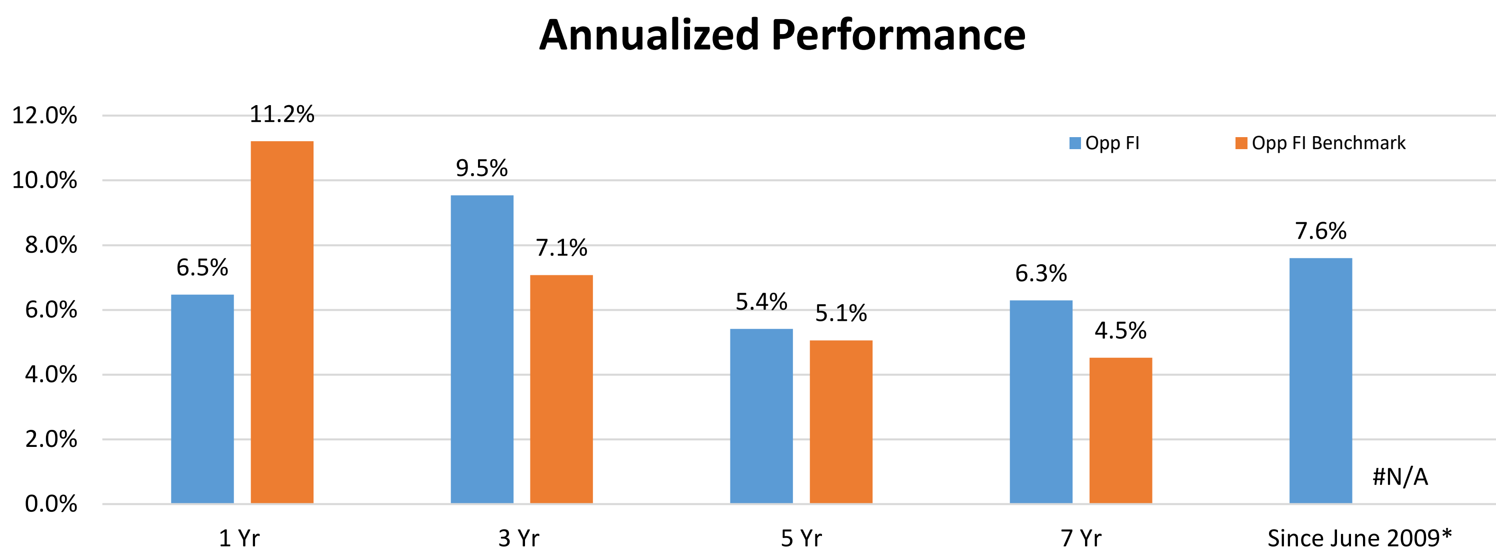


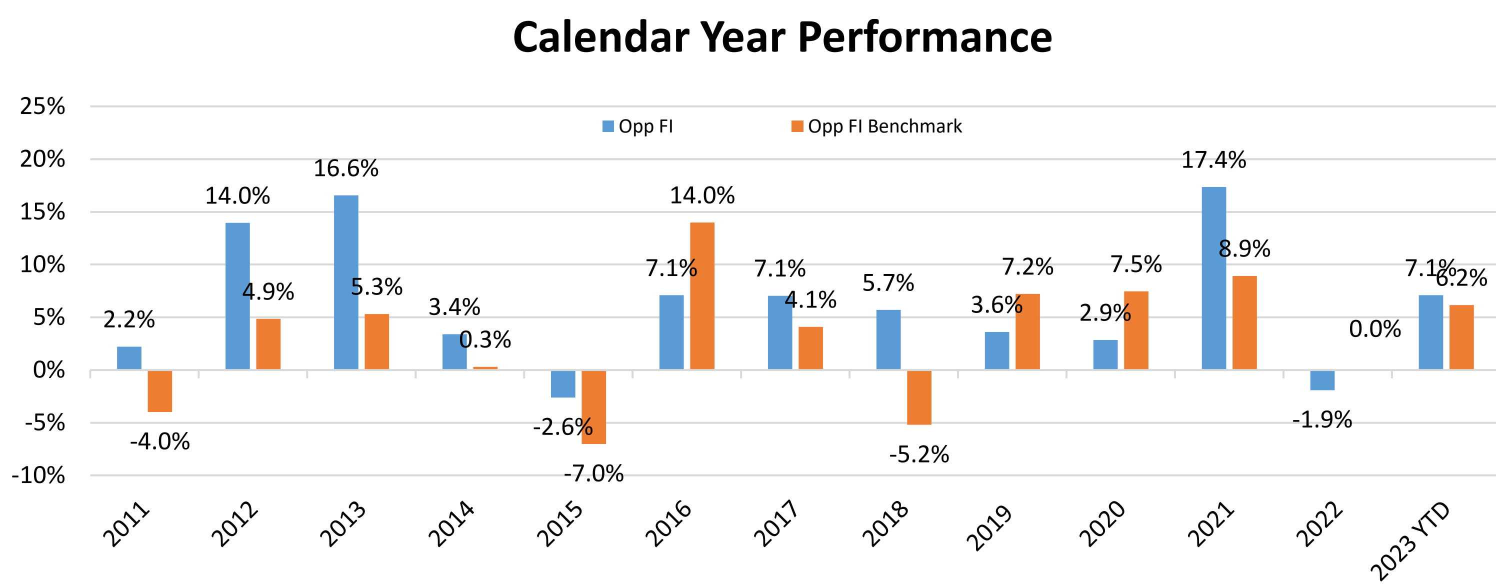
Growth of Manager Relationships and Number of Funds



Note: Fund count excludes liquidated investments.

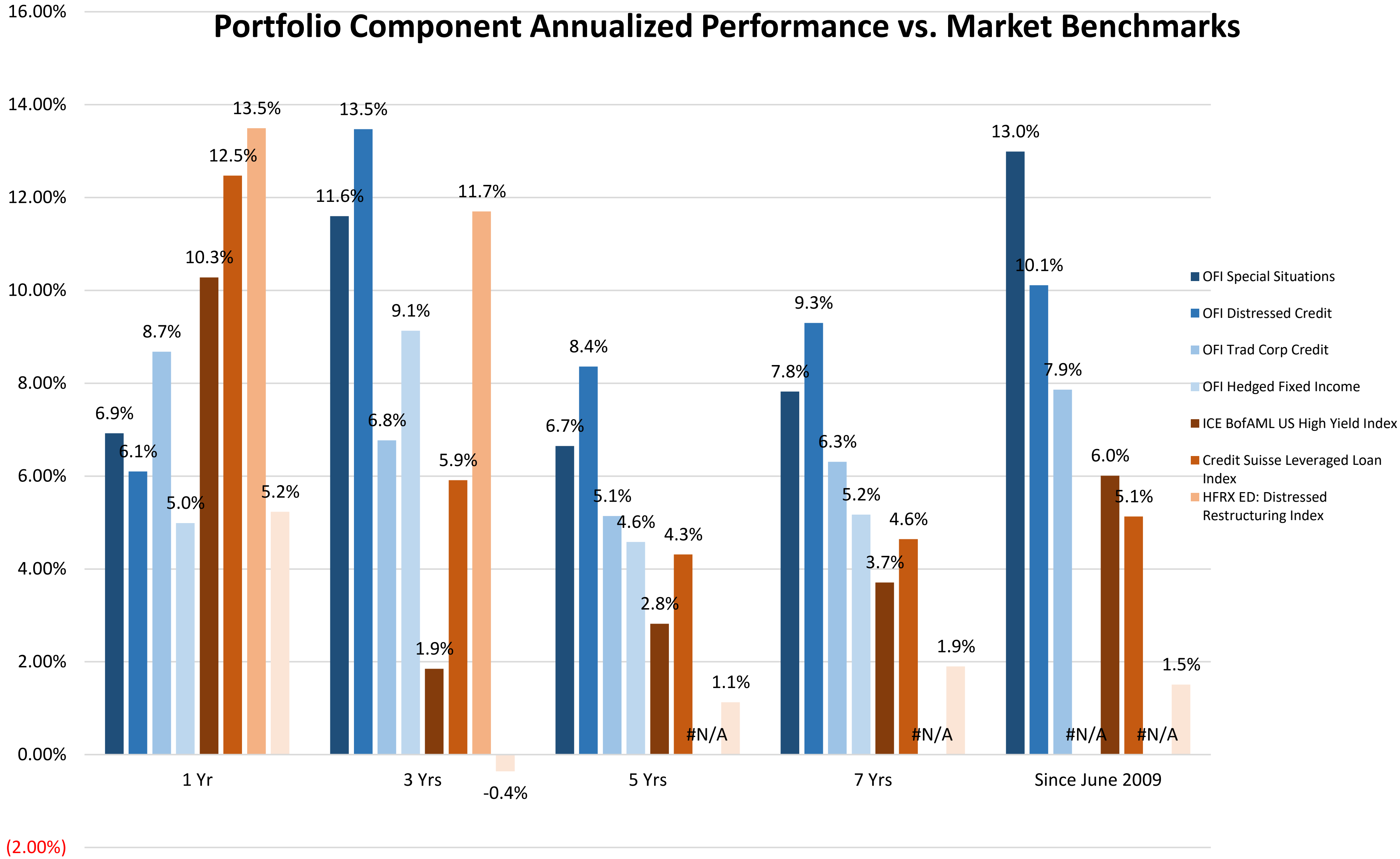
Portfolio Performance





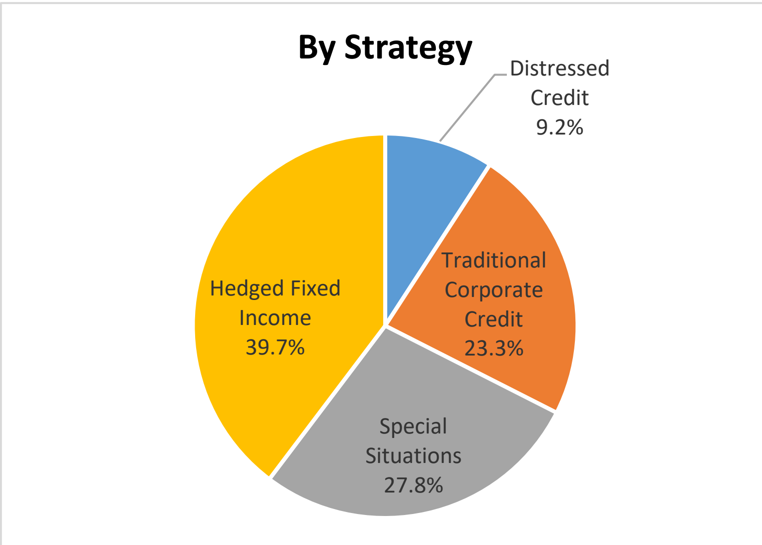
Note: Performance through Sept 30, 2023; See slide 25 for details on the composition of the Opportunistic Fixed Income Benchmark.

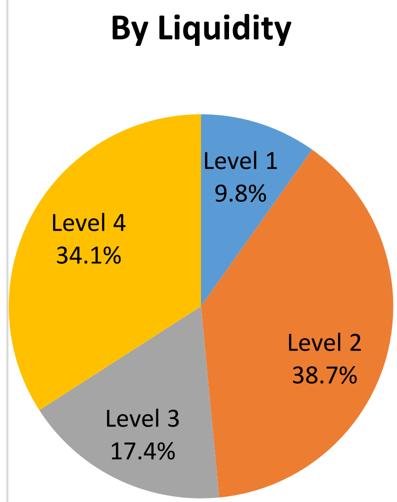
Portfolio Performance

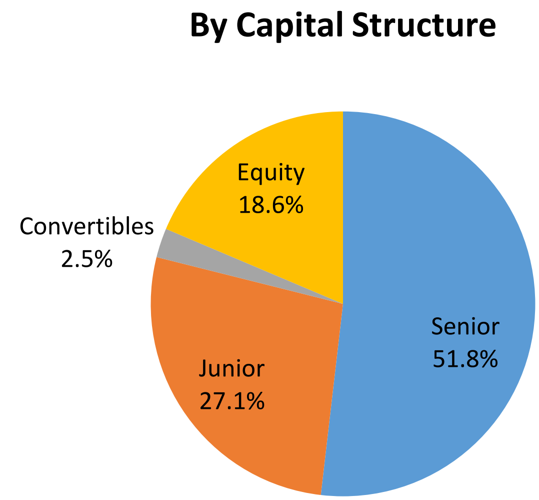


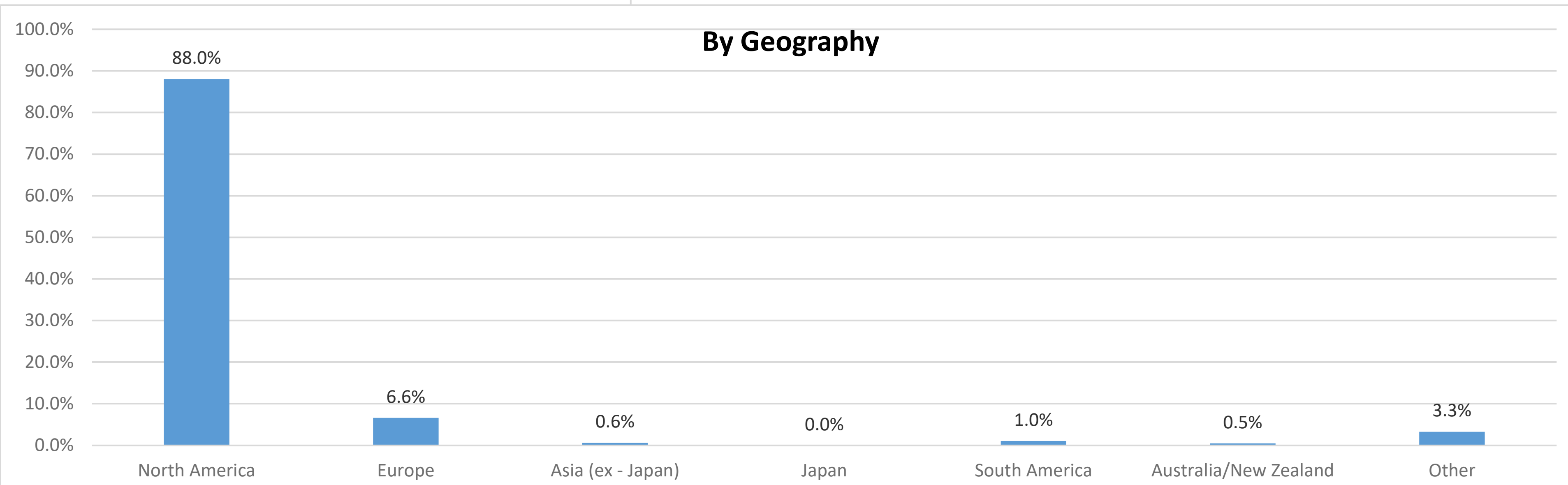
Note: Performance through Sept 30, 2023; See slide 25 for details on the composition of the Opportunistic Fixed Income Benchmark.

Portfolio Characteristics



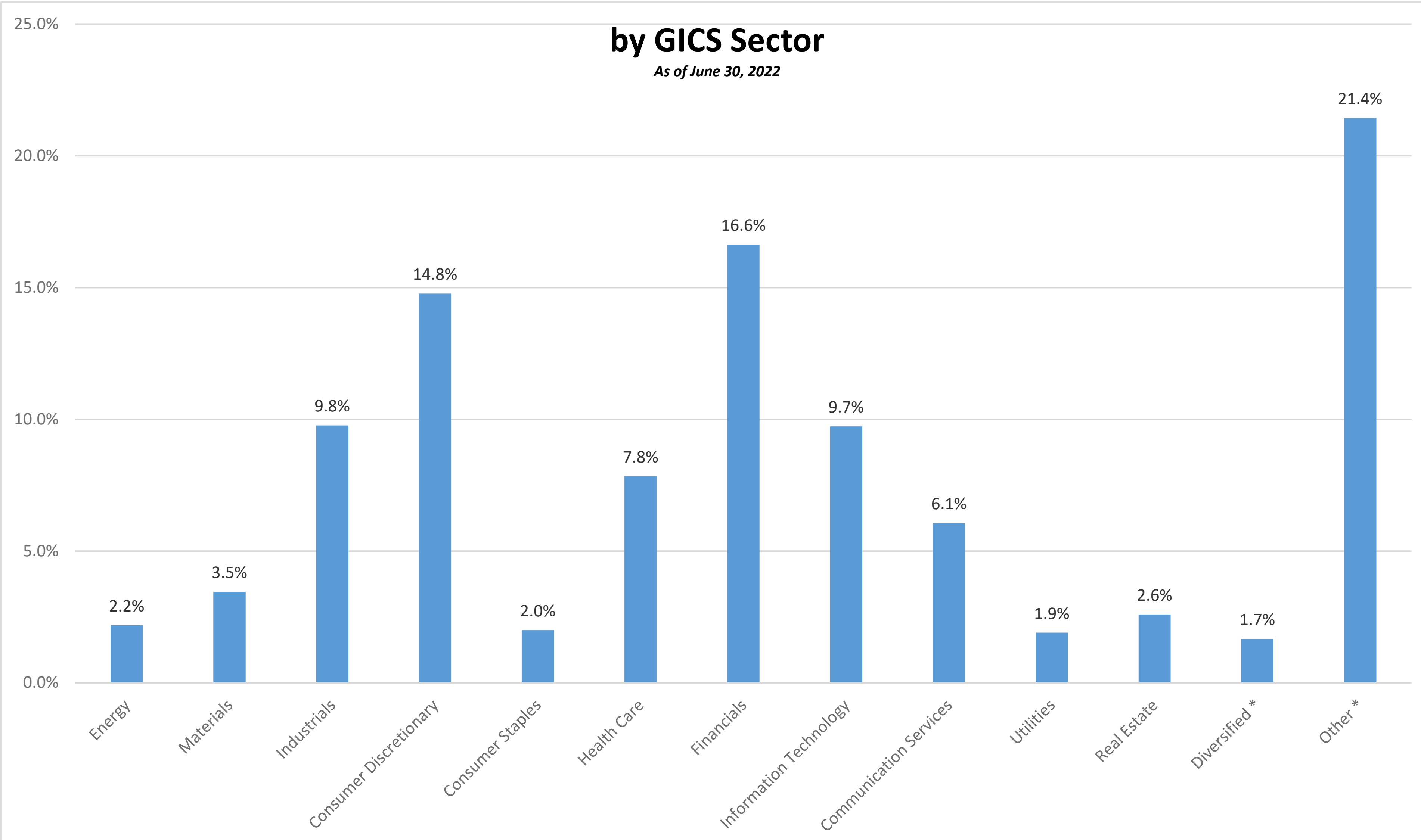






Note: Capital Structure, Geography, Liquidity, and Strategy are based on market values as of 9/30/2023
*Level 1 Liquidity = T+3; Level 2 = T+3 to 12 Months; Level 3 = 12 to 24 Months; Level 4 = Greater than 24 Months

Portfolio Characteristics



*Holdings that cannot be classified into any one particular sector, as self-reported by the investment manager, may include CMBS, RMBS, ABS, or CLOs

Credit Market Update

Private Credit

- Allocations to senior, secured private loans provided steady, increasing cash yields
- Offers incremental yield in exchange for liquidity and has outperformed leveraged loans since 2007
- Able to drive financing terms as banks and traditional lenders retreat

Structured Credit

- RMBS, CMBS, and ABS currently provide attractive yields relative to underlying risk
- Higher quality CLO tranches offer meaningful excess spread compared to similar rated high yield issuers
- Higher volatility is expected for lower rated CLOs as the quality of loans they back has deteriorated steadily since 2017

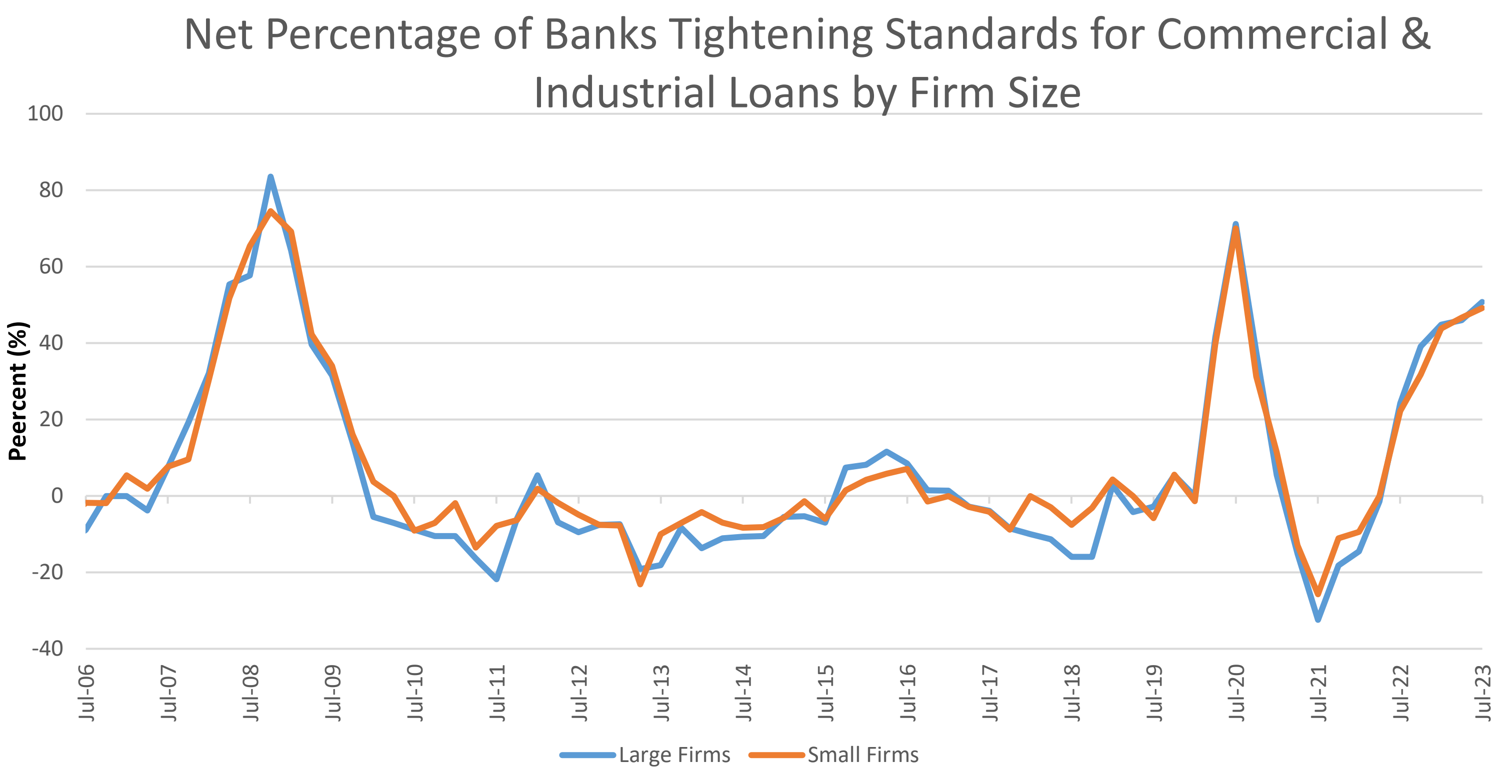
Bonds

- All qualities are offering elevated spreads and yields
- Current yields remain attractive and at levels rarely seen in the past decade
- We expect default rates to increase, but reasonable debt/EV levels provide cushion vs. lofty yet decreasing valuations and potential weaker economic cycle

Loans

- Floating rate features provide natural hedge against higher rate environment
- Anticipate increasing default rates and lower recoveries, but a wealth of opportunities for selective investors with reasonable return expectations

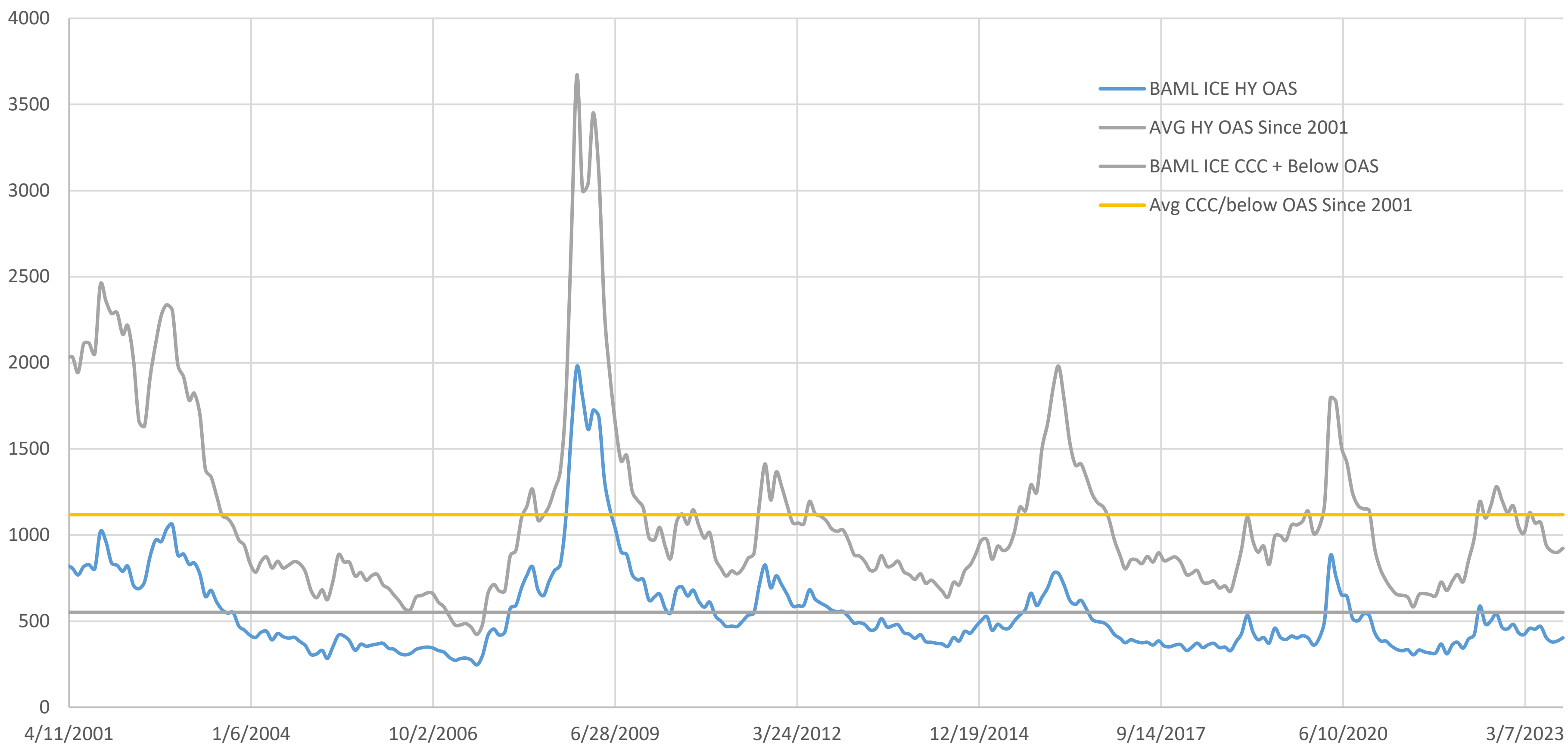
Tighter Standards



Source: St Louis Federal Reserve.

High Yield Credit

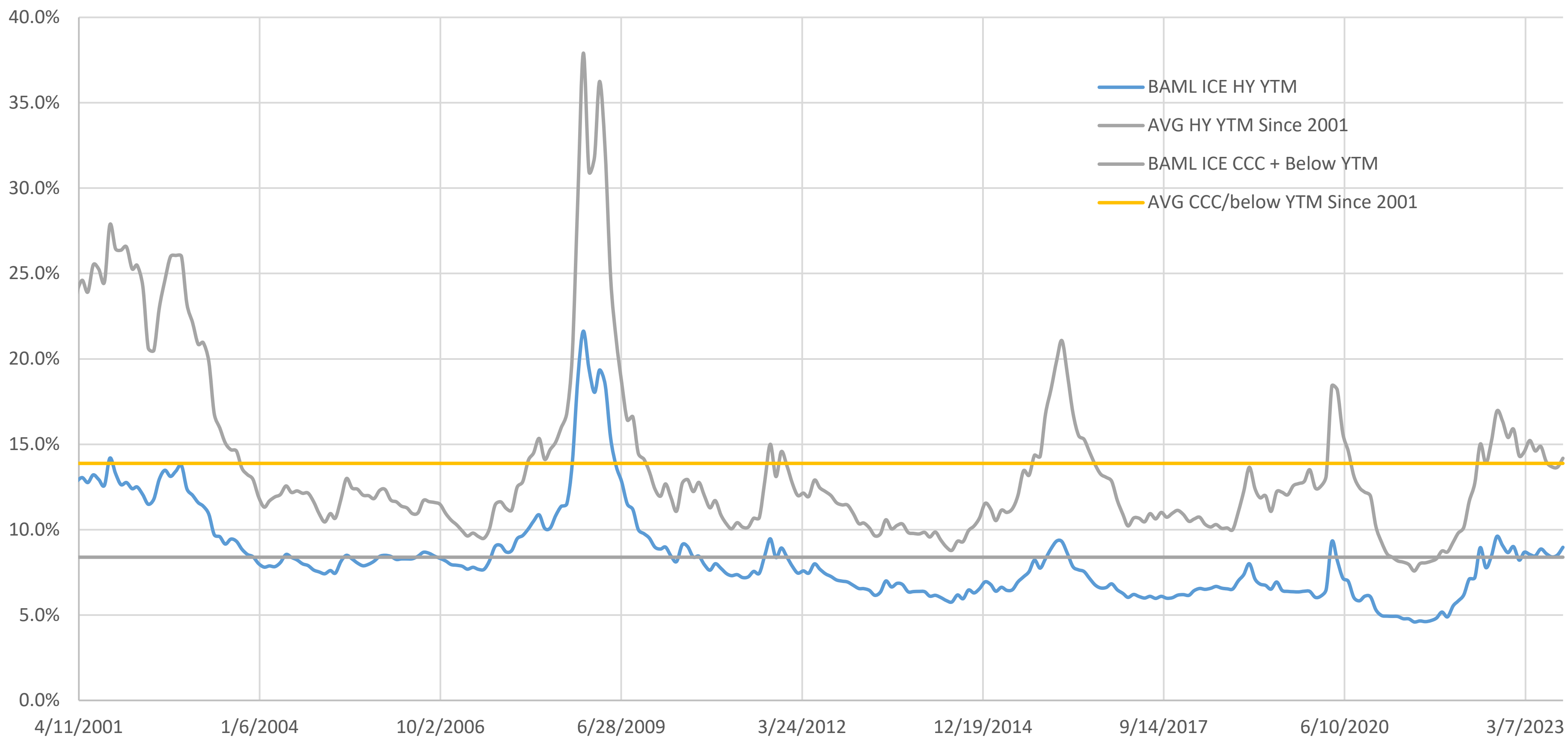
- High and low quality HY spreads are compressed due to higher base rates



Source: BofA Merrill Lynch (accessed via Bloomberg).

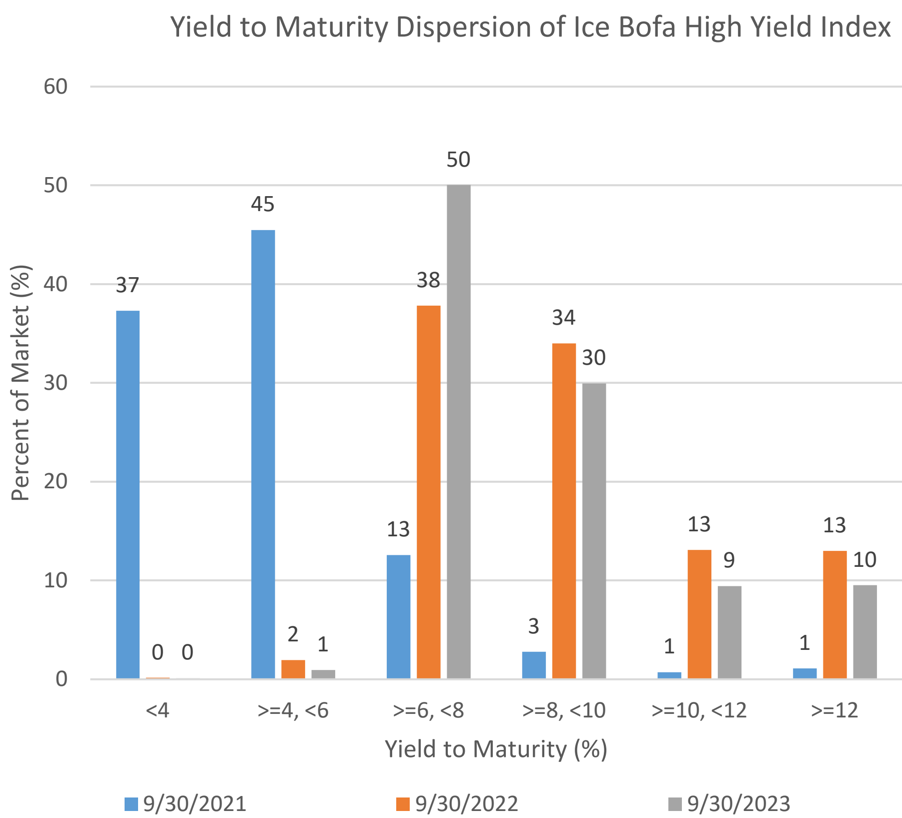
High Yield Credit

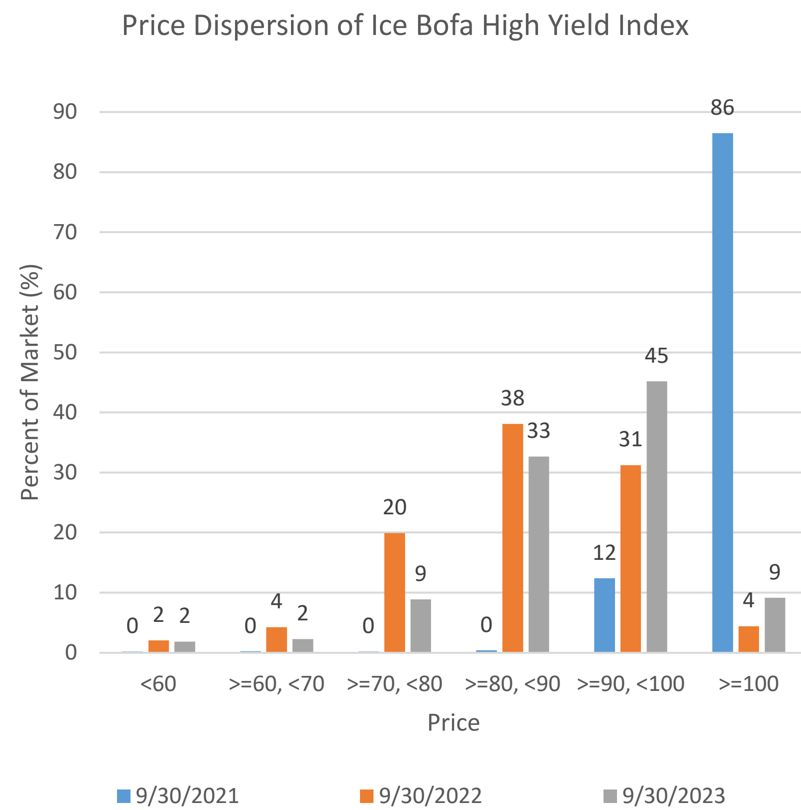
- yield-to-maturities are at the long-term average



Source: BofA Merrill Lynch (accessed via Bloomberg).

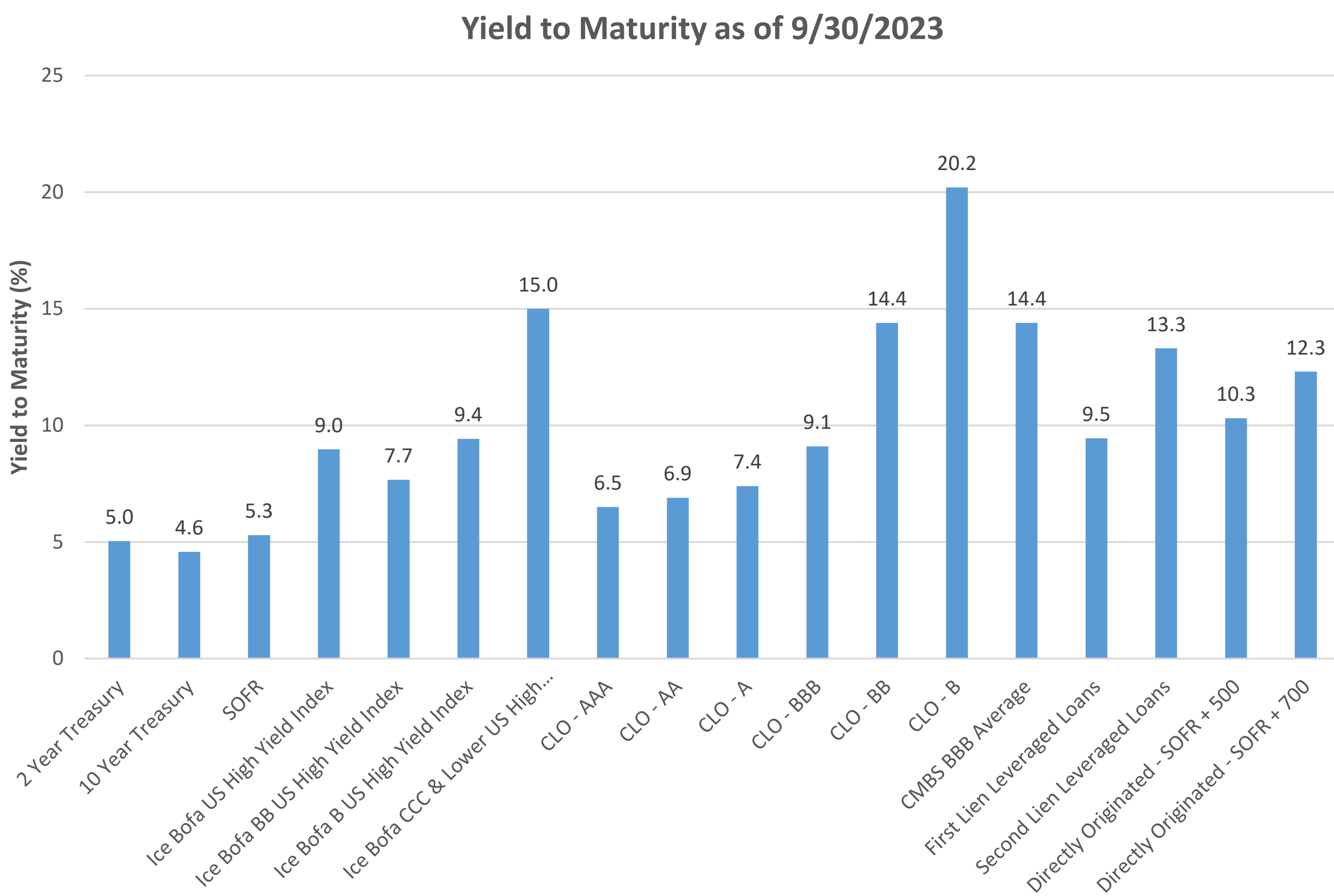
Current Environment is Attractive





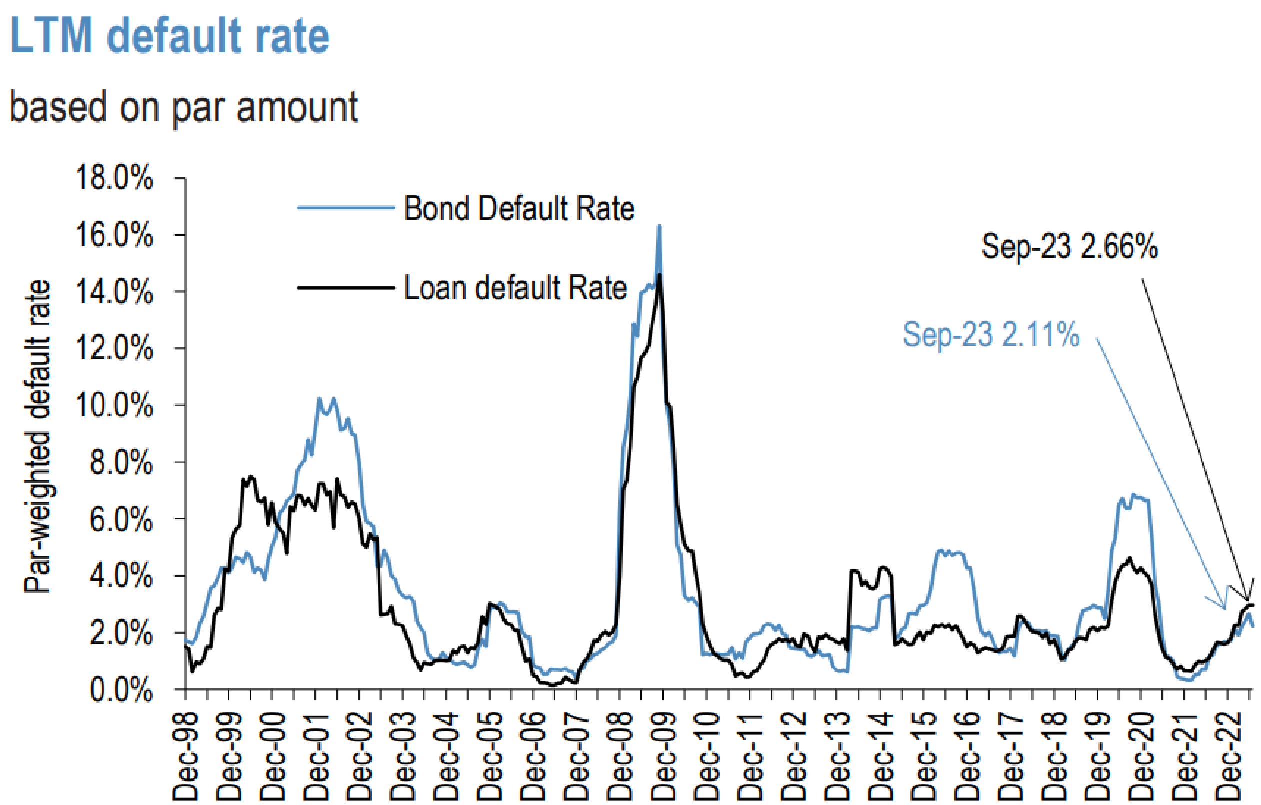
Source: Bloomberg

Yield to Maturity across the Credit Spectrum



Source: Bloomberg, JP Morgan

High Yield Bond and Loan Default Rates

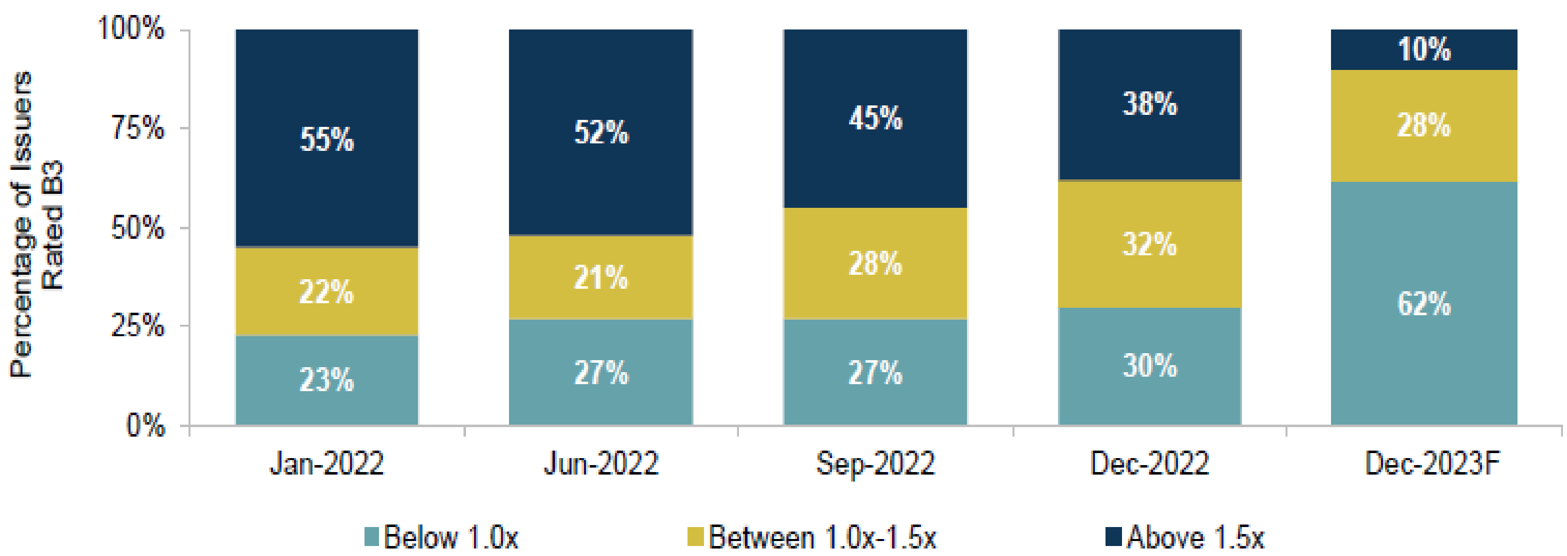


Source: J.P. Morgan; PitchBook Data, Inc.; Bloomberg Finance L.P.; S&P/IHSMarkit.
Note: Includes distressed exchanges

Note: Data as of 9/30/2023

How long can businesses deal with higher rates?

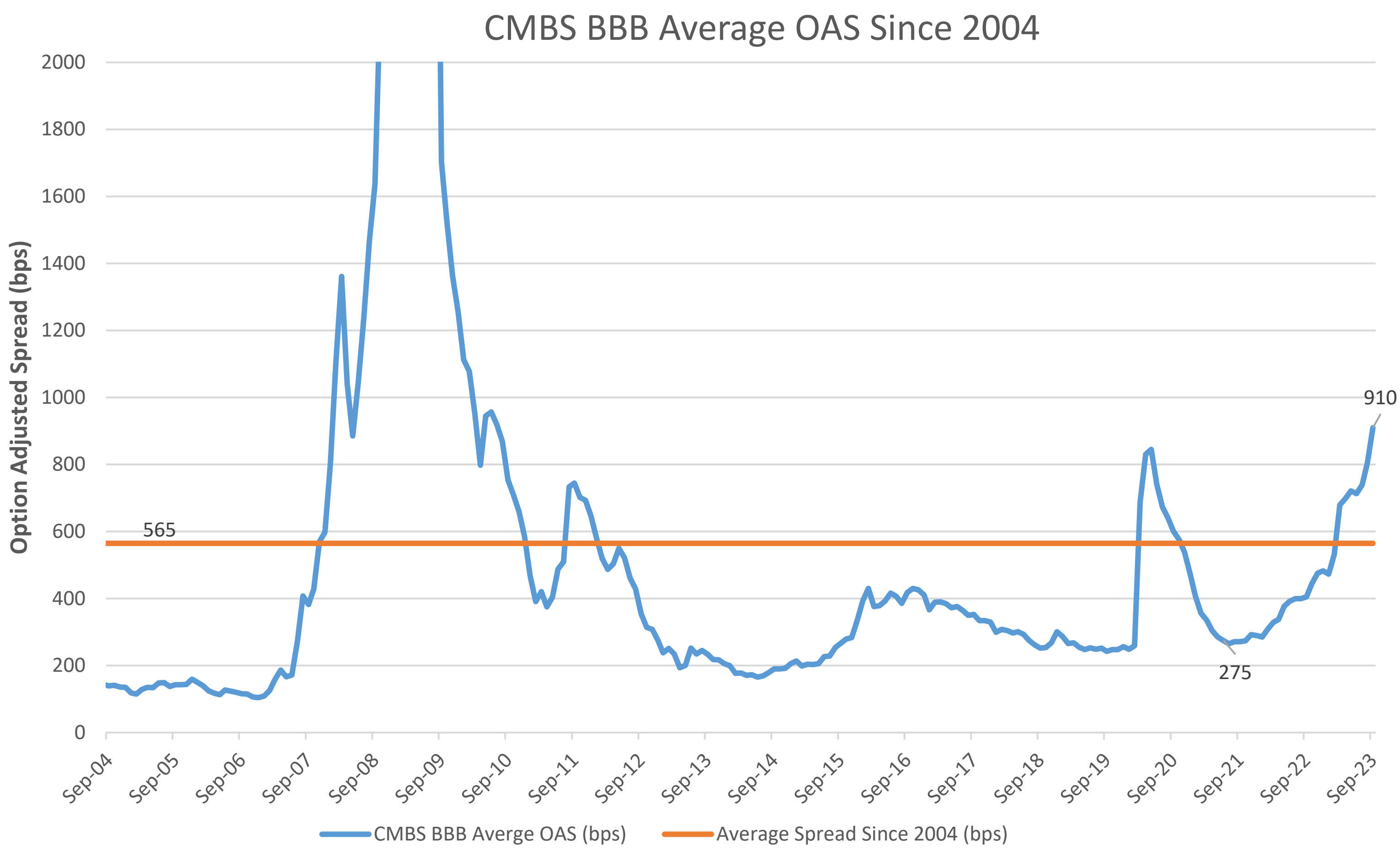
Figure 2: Rising Interest Rates Are Eroding Interest Coverage Ratios in the U.S. Loan Market



Source: Moody's Investor Services; ratings as of April 2023; forecasts as of July 2023

Source: Oaktree Capital Management (Moody's Investor Service).

Spreads in CMBS – Contagion or Opportunity?



Source: Bloomberg.

Potential Headwinds

1. Global conflict
2. Deteriorating economic environment
3. “Higher for longer” interest rate environment
4. Increasing default rates
5. Lower recovery rates for defaulting issuers
6. Commercial Real Estate (i.e., Office, Regional Banks)

Potential Tailwinds

1. Capital constrained regional banks, traditional lenders, and LPs
2. Ability to originate loans with higher interest and improved financial covenants
3. Strong manager lineup that can pivot as opportunities evolve

Portfolio Priorities

1. Cautiously take advantage of elevated yield environment with best-in-class managers

2. Maintain meaningful exposure to senior, secured debt

3. Continue to focus on SMAs and Special Situations with our co-investment partners

4. Re-visit dislocation mandate

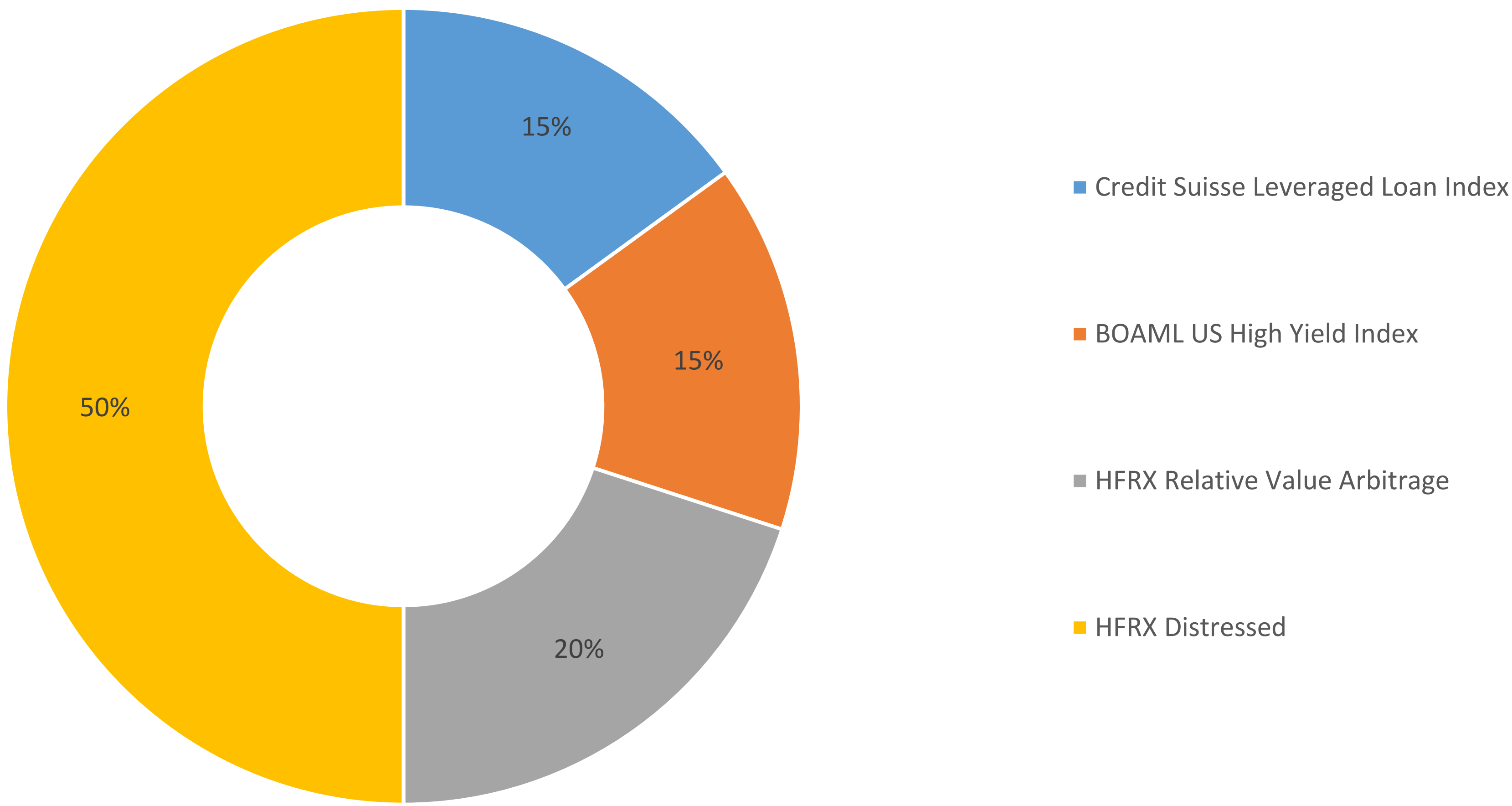
Appendix

Portfolio Components

Portfolio Component*	Target*	9/30/23	+/-	Maximum*
Traditional Corporate Credit	15%	23%	+8%	50%
Distressed Credit	25%	9%	-16%	50%
Hedged Fixed Income	45%	40%	-5%	75%
Special Situations	15%	28%	+13%	75%

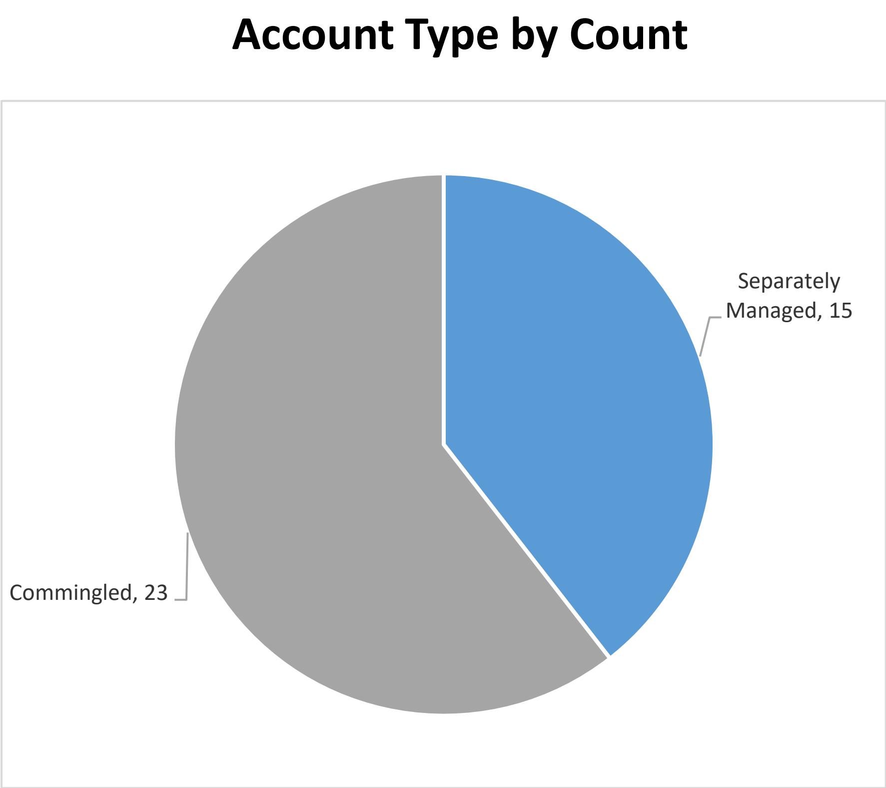
Note: See slide 24 & 30 for details on the composition of the Opportunistic Fixed Income Benchmark.

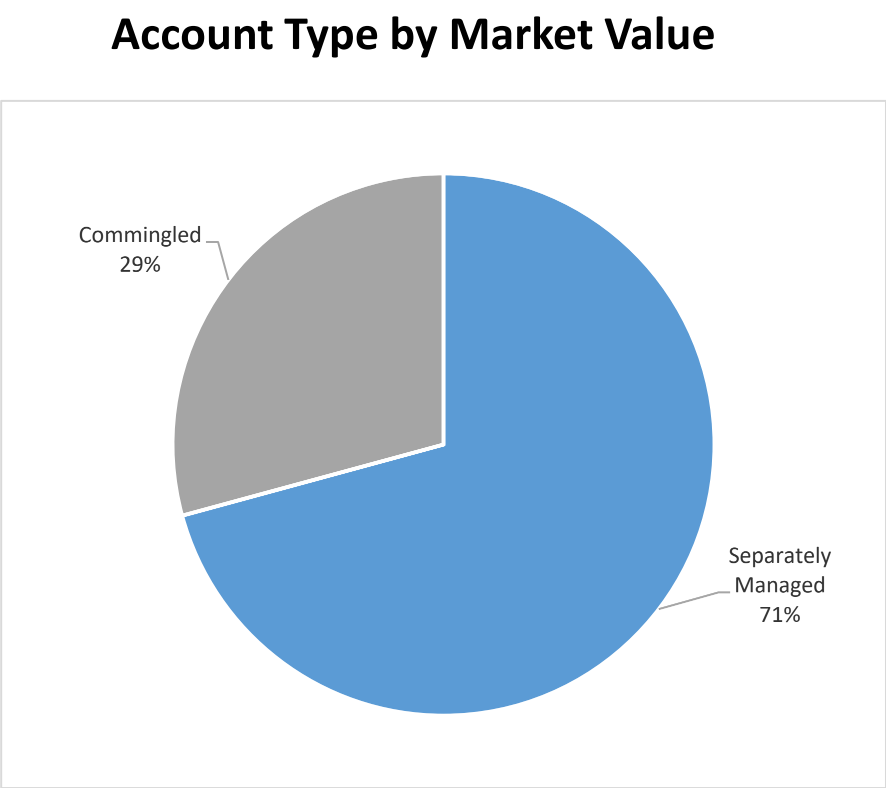
Portfolio Benchmark



Note: The BOAML US High Yield Index is from BofA Merrill Lynch and is used with permission. See disclaimer on slide 31.

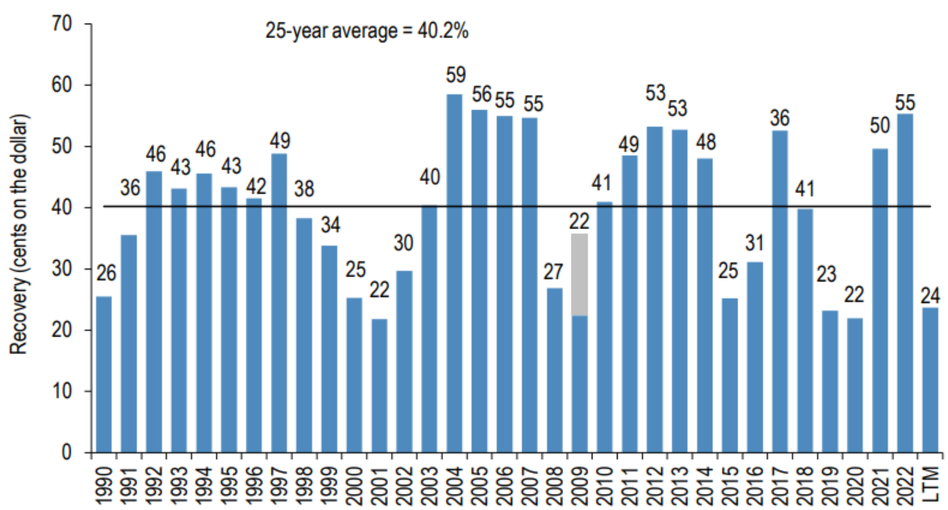
Portfolio Characteristics





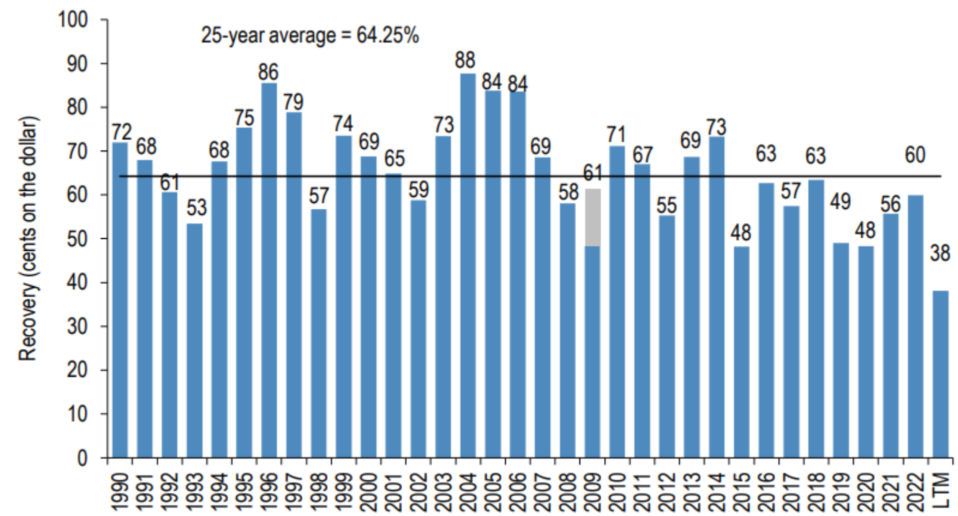
High Yield Bond and Loan Recovery Rates

Bond issuer-weighted recovery rates



Source: J.P. Morgan; PitchBook Data, Inc.; Bloomberg Finance L.P.; Moody's Investors Service.

Loan issuer-weighted recovery rates

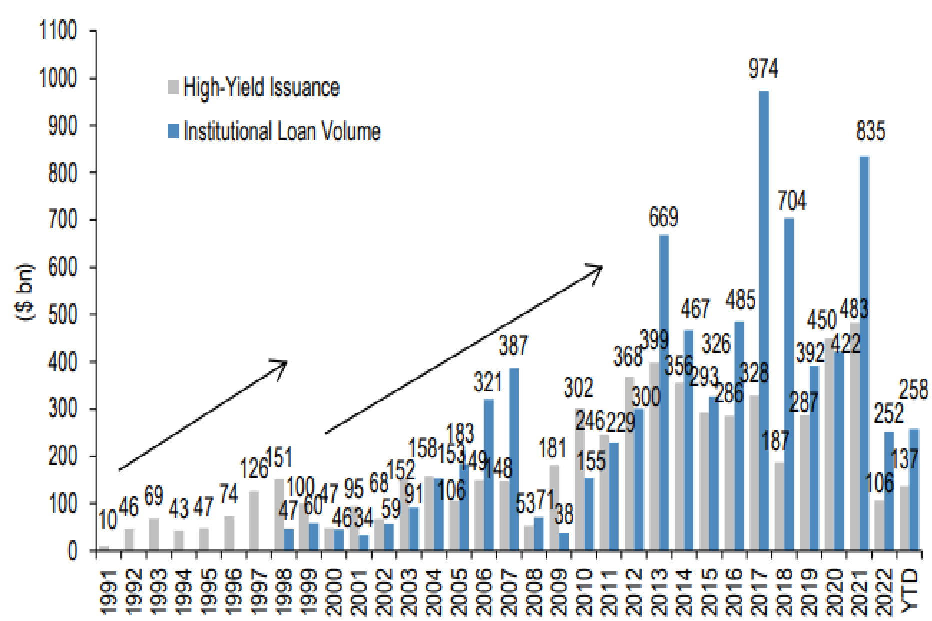


Source: J.P. Morgan; PitchBook Data, Inc.; Bloomberg Finance L.P.; Moody's Investors Service.

Note: Data as of 9/30/2023

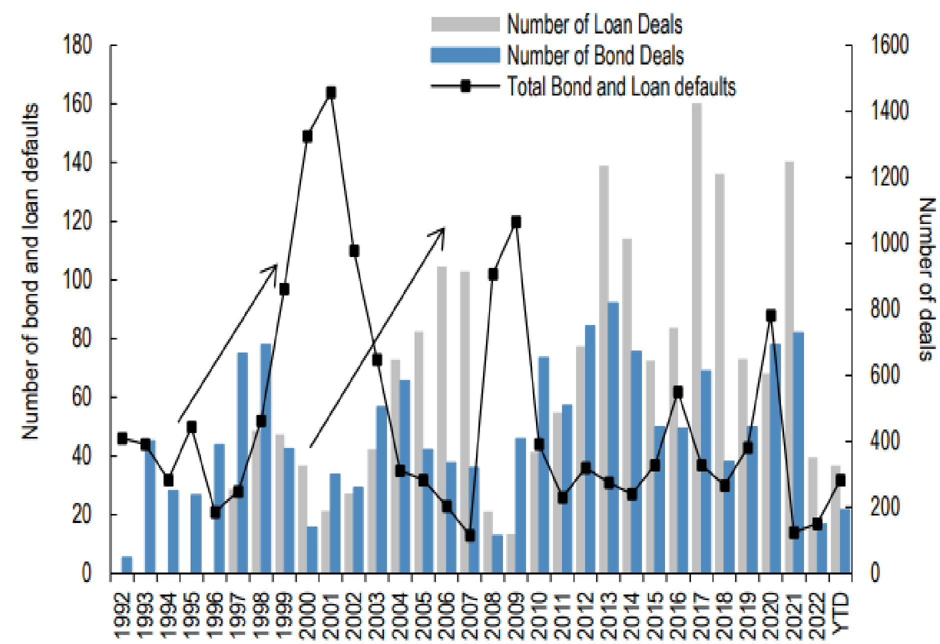
High Yield Bond and Loan Issuance

Ramp up in loan issuance reminiscent of late 90s bond market



Source: J.P. Morgan; PitchBook Data, Inc.

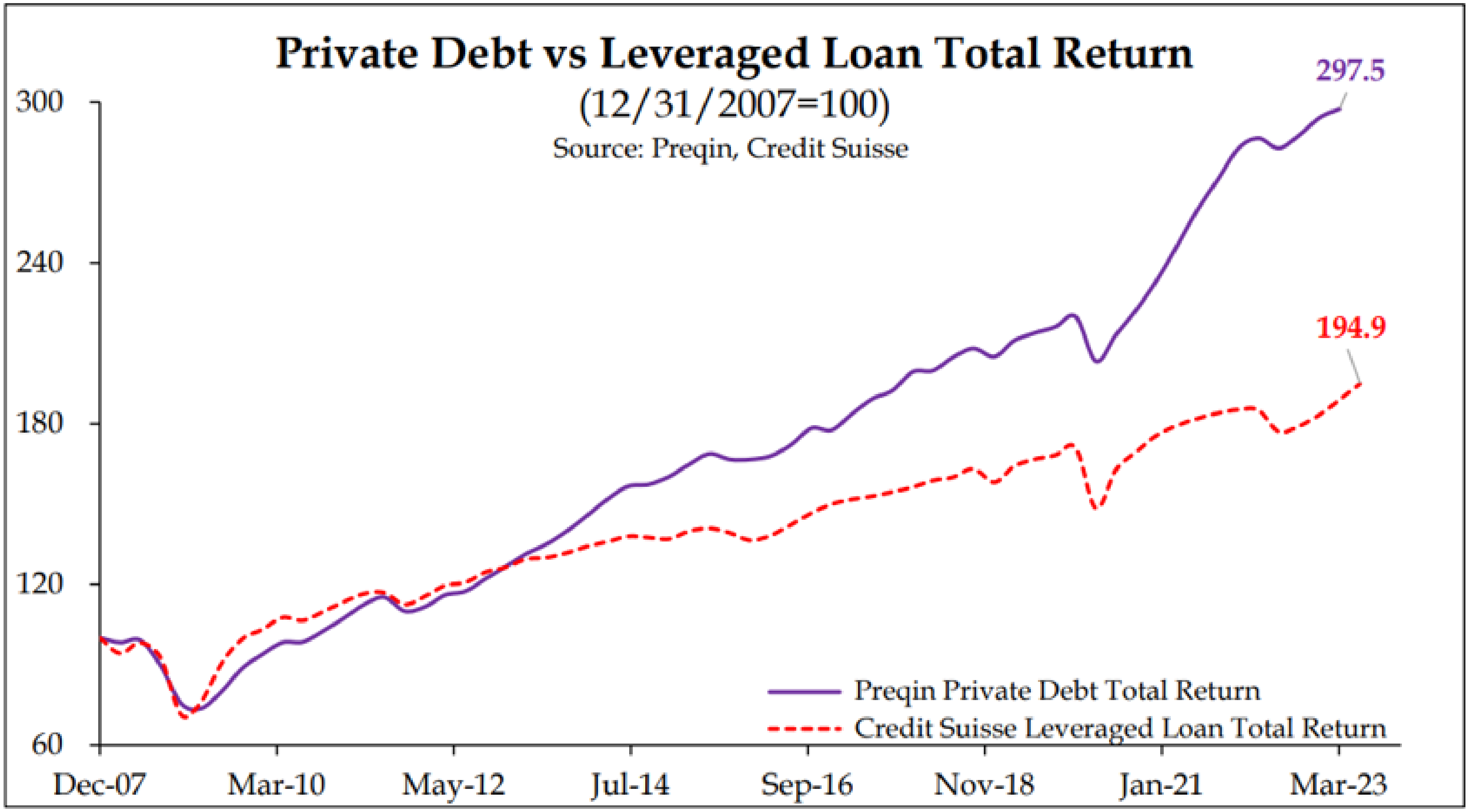
Easy credit availability leads to an increase in defaults



Source: J.P. Morgan; PitchBook Data, Inc.

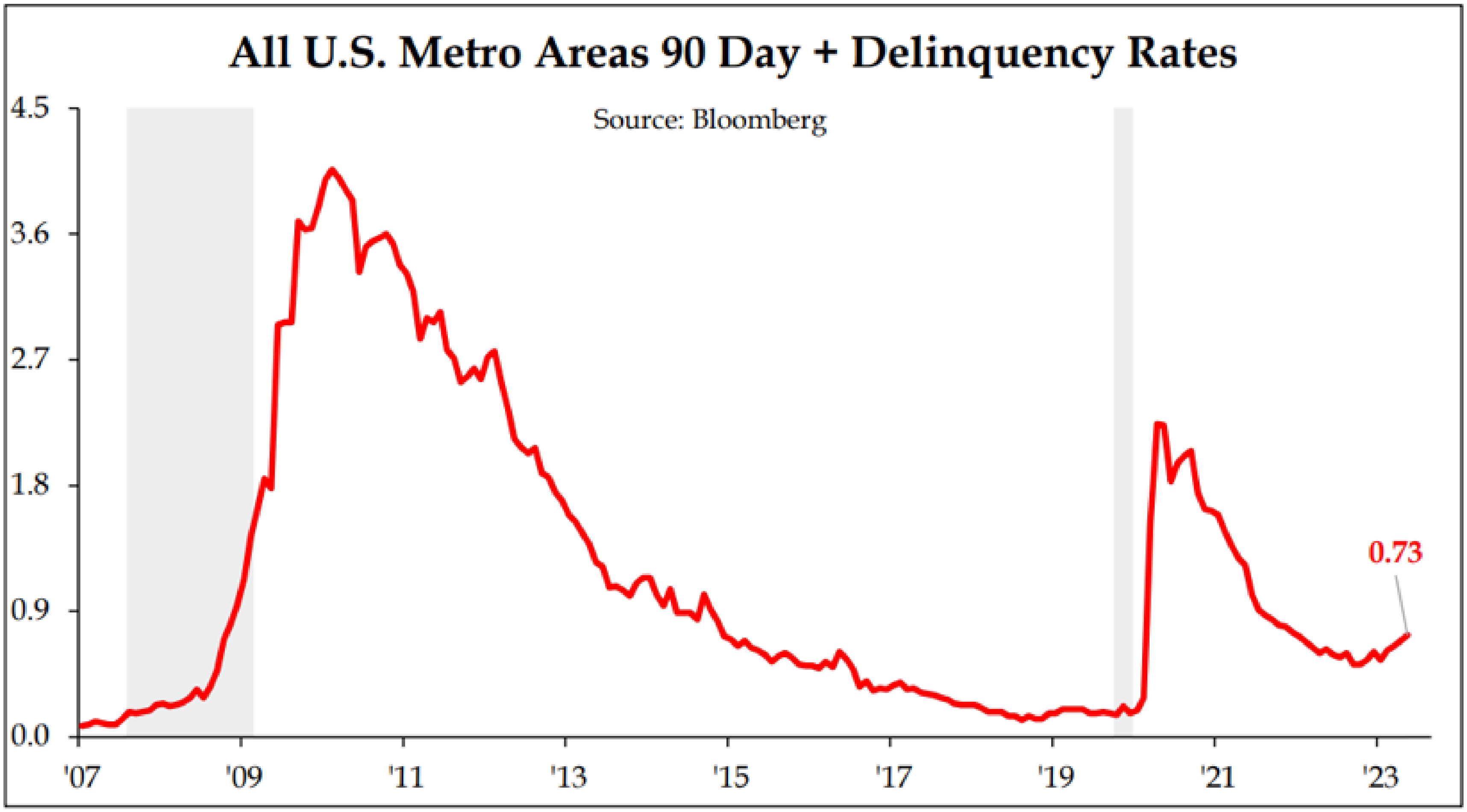
Note: Data as of 9/30/2023

Private Credit has Outperformed Leveraged Loans



Source: Strategas (Prequin, Credit Suisse Data).

90 Day + Delinquency Rates



Source: Strategas (Bloomberg Data).

Notes:

All data presented are based on currently available information at time of publication and may be revised subsequently.

The Opportunistic Fixed Income Benchmark is comprised of 50% HFRX Distressed Securities Index; 20% HFRX Relative Value Index; 15% Credit Suisse Leveraged Loan Index; and 15% BOAML US High Yield Index. The BOAML US High Yield Index is from BofA Merrill Lynch and is used with permission. See disclaimer on slide 31.

The Opportunistic Fixed Income asset class (N.C.G.S. § 147-69.2(b)(6c)) was created by the General Assembly in June 2009. It included some investments that were previously authorized under other provisions of G.S. § 147-69.2.

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