Marquette Associates

May 18, 2023

Sussex County

Asset Allocation

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Table of contents

Background

Background

- We believe it is worth considering changes to the strategic asset allocation
  - The Actuarial Assumed Rate of Return was lowered from 7.00% to 6.75%
  - The outlook for fixed income has improved considerably given the rise in interest rates
  - Opportunity to diversify the equity risk within the Funds
  - The outlook for Core Real Estate is concerning

Asset class roles

Maximize Return at an Appropriate Level of Risk

Growth Engine	Insurance	
	Inflation	**Deflation**
Equities	TIPS	High-Quality Bonds
High Yield Bonds/Bank Loans	Real Estate	Cash
Private Equity/Credit	Infrastructure	
	Commodities	

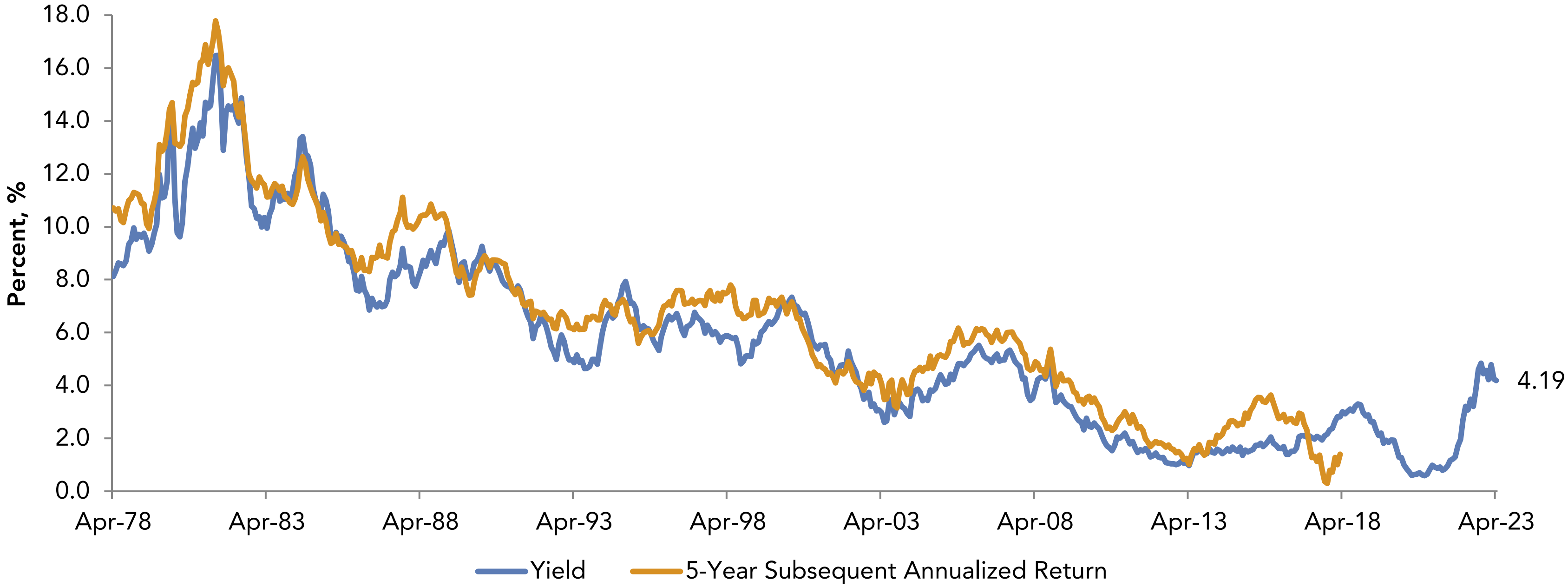
- Equities and other "growth engine" assets generate the highest real (inflation adjusted) returns over the long term
- However, equities tend to perform poorly amid an environment of price instability

Investors typically hold "insurance" against these types of environments

Core fixed income yields and returns

Yields have risen, improving the outlook for investment-grade fixed income

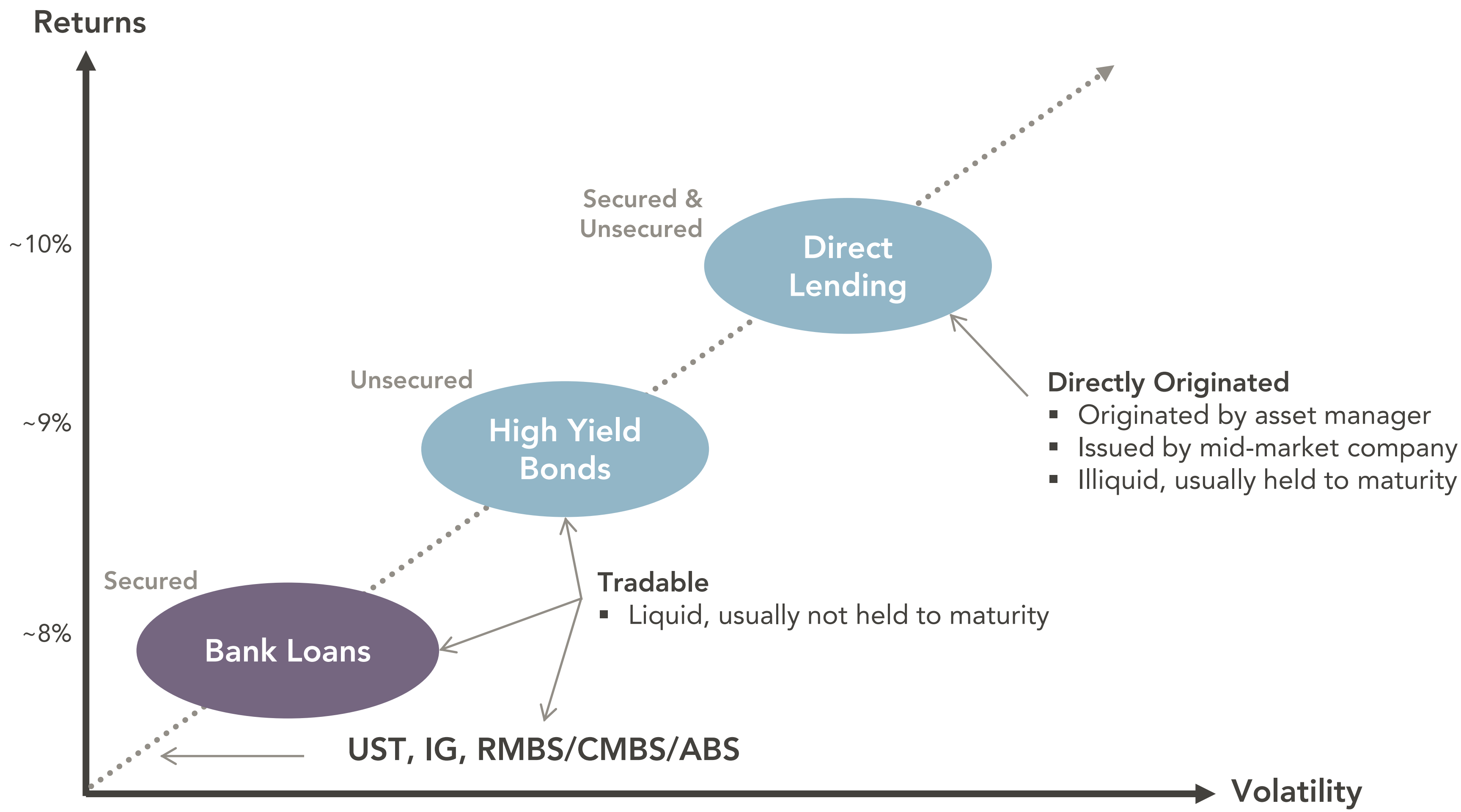
Yields and Subsequent Returns for Bloomberg Intermediate G/C Index



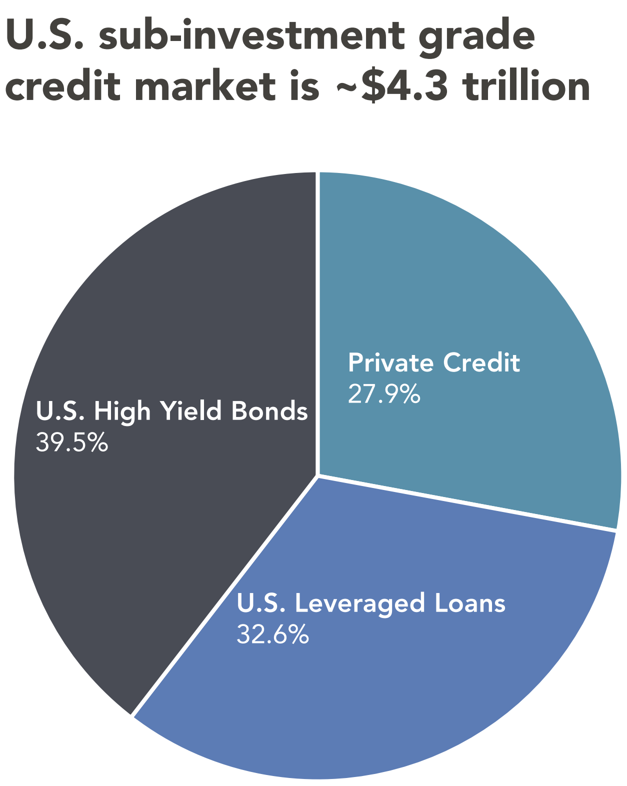
Source: Refinitiv

Asset Class Overviews

Fixed income risk spectrum



U.S. sub-investment grade credit market



Source: Pitchbook

Sub-investment grade characteristics

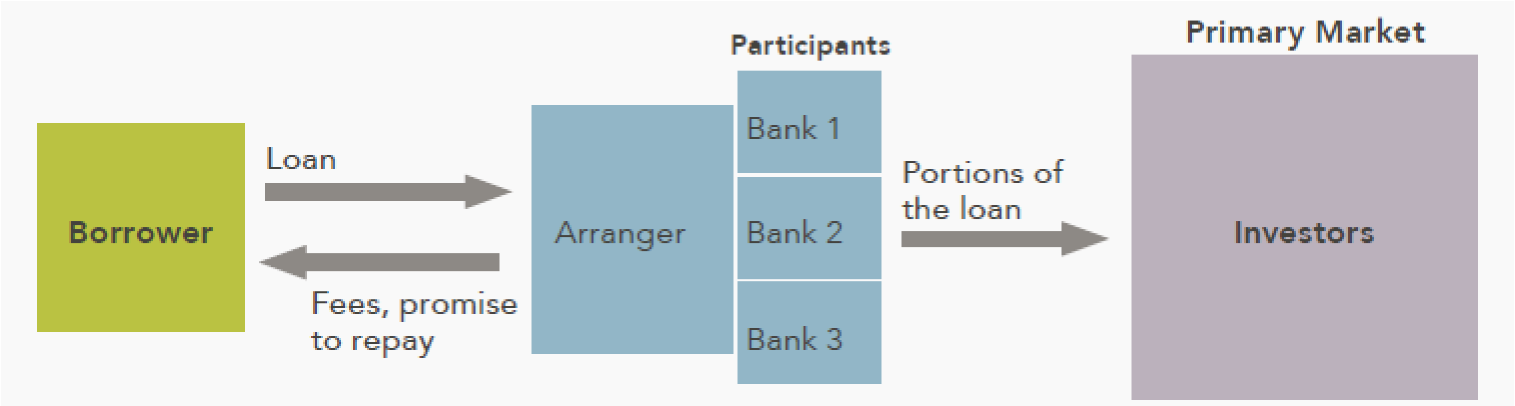
	Leveraged Loans	High Yield Bonds	Private Debt
Maturity	5–6 Years	5–10+ Years	5–6 Years
Seniority	Senior	Subordinate	Senior & Subordinate
Securitization	Secured	Unsecured	Secured & Unsecured
Rate Structure	Floating Rate	Fixed Rate	Floating Rate
Target Company Size	\$300M–\$2B EBITDA[1]	\$300M–\$2B EBITDA[1]	\$5M–\$100M EBITDA[1]
Typical Default Rate	2-3%	3-4%	2-3%
Typical Recovery Rate	65%	45%	65%

Sources: Preqin; [1] The Annual Manual; U.S. Leveraged Finance Primer

What are bank loans?

- Bank loans are a source of financing for corporate borrowers with a wide range of purposes
  - Companies utilize bank loans for new project investment, acquisitions or restructurings
  - Private equity investment firms utilize bank loans as a means to finance leveraged buy-outs (LBOs)
    - They do this by issuing the bank loan through the target company they are buying out
    - The loans are underwritten and syndicated by large commercial and investment banks

Loan syndication



Risks

- **Volatility** – the return distribution of bank loans is non-normal
- **Credit Risk** – sub-investment grade debt has the potential to default
- **Reinvestment Risk** – because loans are floating rate investments, they are exposed to reinvestment risk if rates fall causing income to be reinvested at a lower rate

What are high yield bonds?

- High yield bonds are a source of capital for below-investment grade issuers
- Securities are fixed rate
- Bonds must be rated high yield by two out of three ratings agencies
  - If only two agencies rate the bond, then the lower rating is used

Risks

- **Volatility** – the return distribution of high yield is non-normal
- **Credit Risk** – sub-investment grade debt has the potential to default
- **Interest-Rate Risk** – as fixed coupon bonds, high yield bonds are exposed to interest risk, which can lead to lower returns as interest rates rise

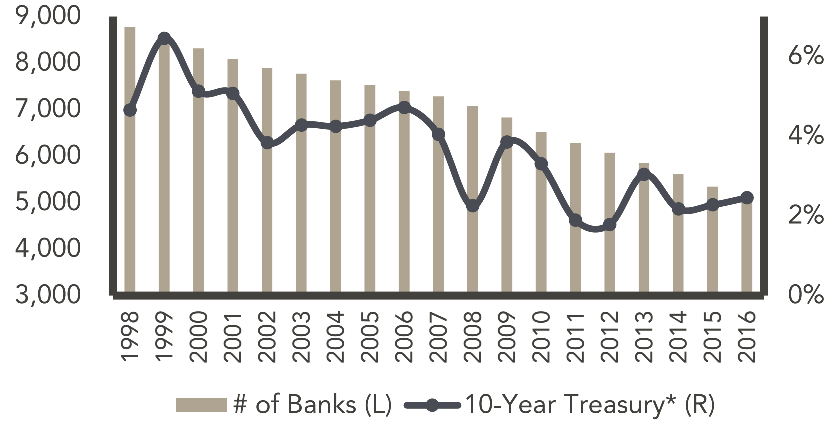
What is private debt?

- Private debt has existed for decades — often provided by national and regional banks — as financing to support private businesses as well as private equity leveraged buyouts
    - Private debt is simply loans to private companies
- Over the past decade private debt has yielded more than 8%, higher than high yield bonds and bank loans
- Most private debt features a floating rate yield and a 5–6 year duration

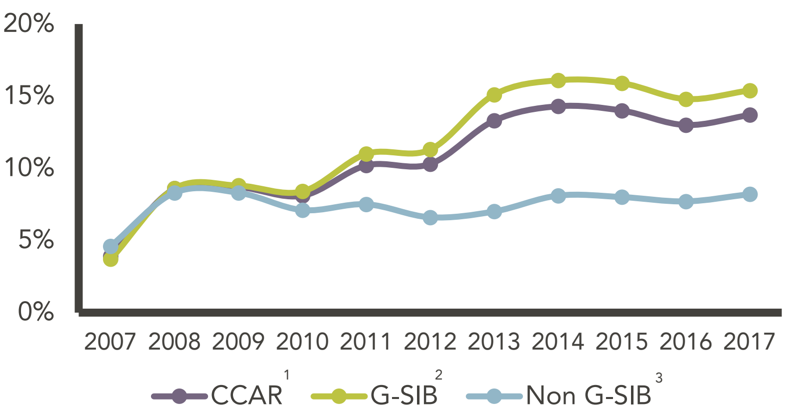
Market shift creating opportunity

- The U.S. market has experienced a ~40% decrease in the total number of banks since 1998
- Following the Global Financial Crisis, Congress passed the Dodd-Frank Wall Street Reform and Consumer Protection Act; banks now face higher regulatory capital requirements & decreased capacity to lend
- Today, there are more than 200 private debt managers managing ~$760B versus 31 managers managing ~$330B in 2010

Decreasing # of Banks & Declining Interest Rates



Increasing Bank Capital Requirements



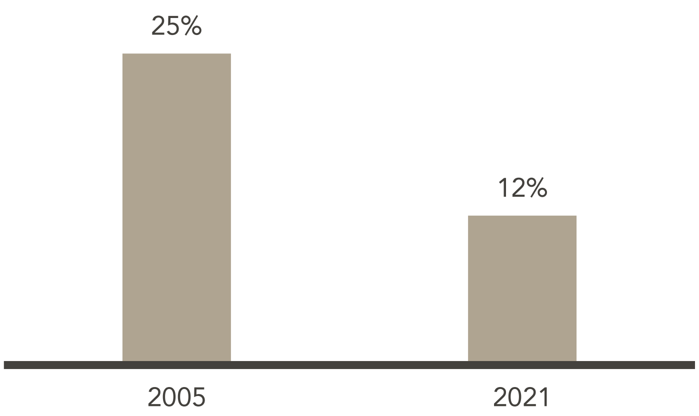
*End of year, constant maturity; Source: Federal Reserve Economic Data and Fortress
[1] CCAR : Comprehensive Capital Analysis and Review is a stress-test regime for large U.S. banks. It aims to establish whether lenders have enough capital to cope with a severe economic shock, and assesses their risk modelling practices;
[2] G-SIB: Financial Stability Board's (FSB) labeled global systemically important banks;
[3] Non G-Sib: non global systemically important banks

Bank participation in credit markets

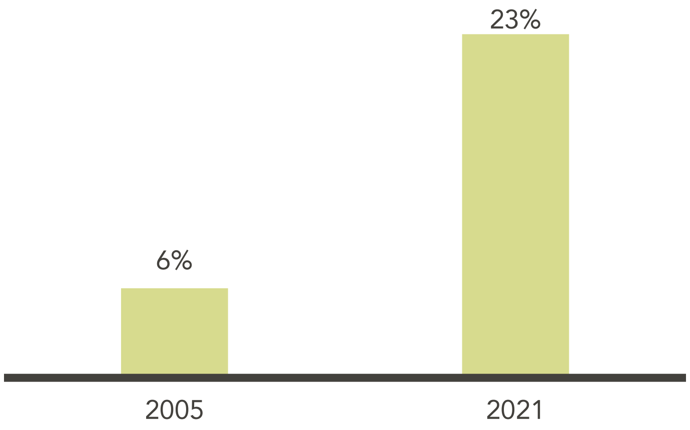
Demand for direct lending has increased as U.S. banks have withdrawn from the market

- As a result of the shifting market, today banks only participate in 8% of the leveraged loan market as compared to 73% in 1995
- Institutional investors, mainly through private debt funds, have become the most important source of capital

Bank Participation in U.S. Loans as of December 31, 2021



Private Credit as a Percentage of the Credit Markets as of September 30, 2021

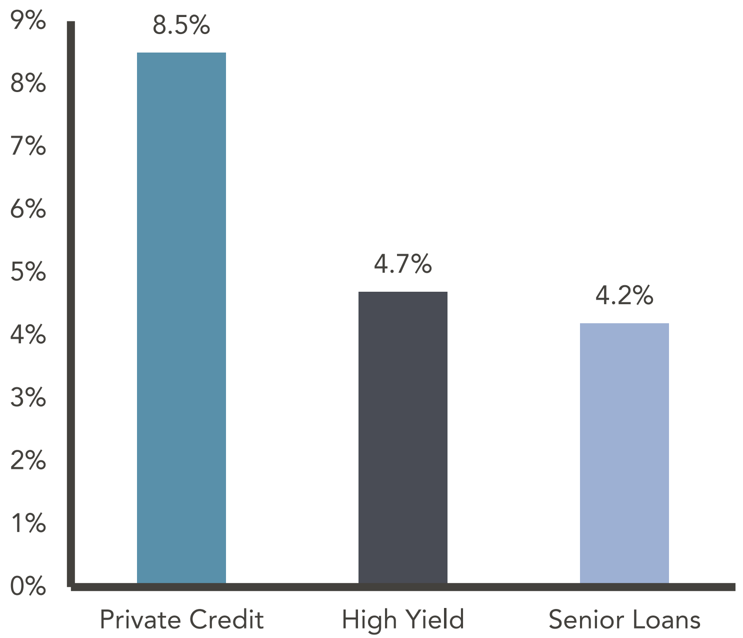


Sources: Blackstone, S&P Global Market Intelligence, Preqin, Credit Suisse

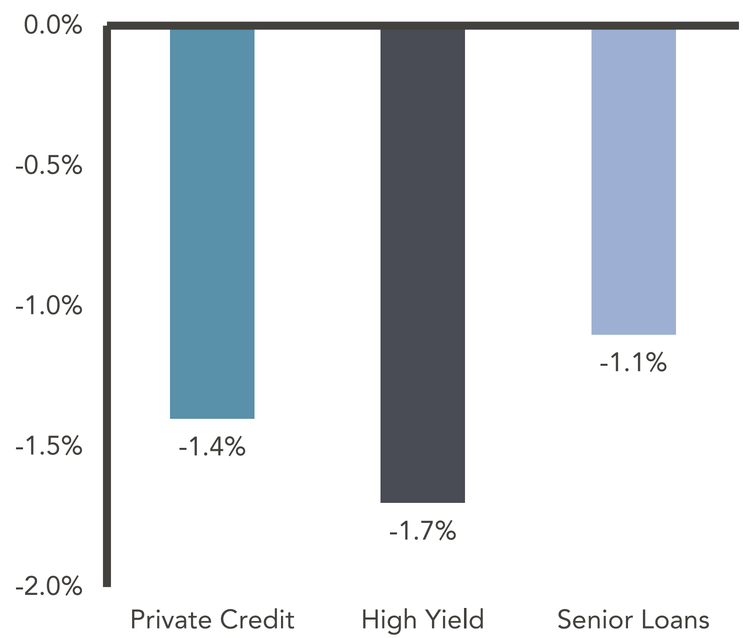
Yield premium relative to loss rates

Private credit has demonstrated attractive yield premiums and loss rates comparable to public markets

↘ Annualized 12-Month Yield (2006 – 2021)



↘ Average Loss (2006 – 2021)

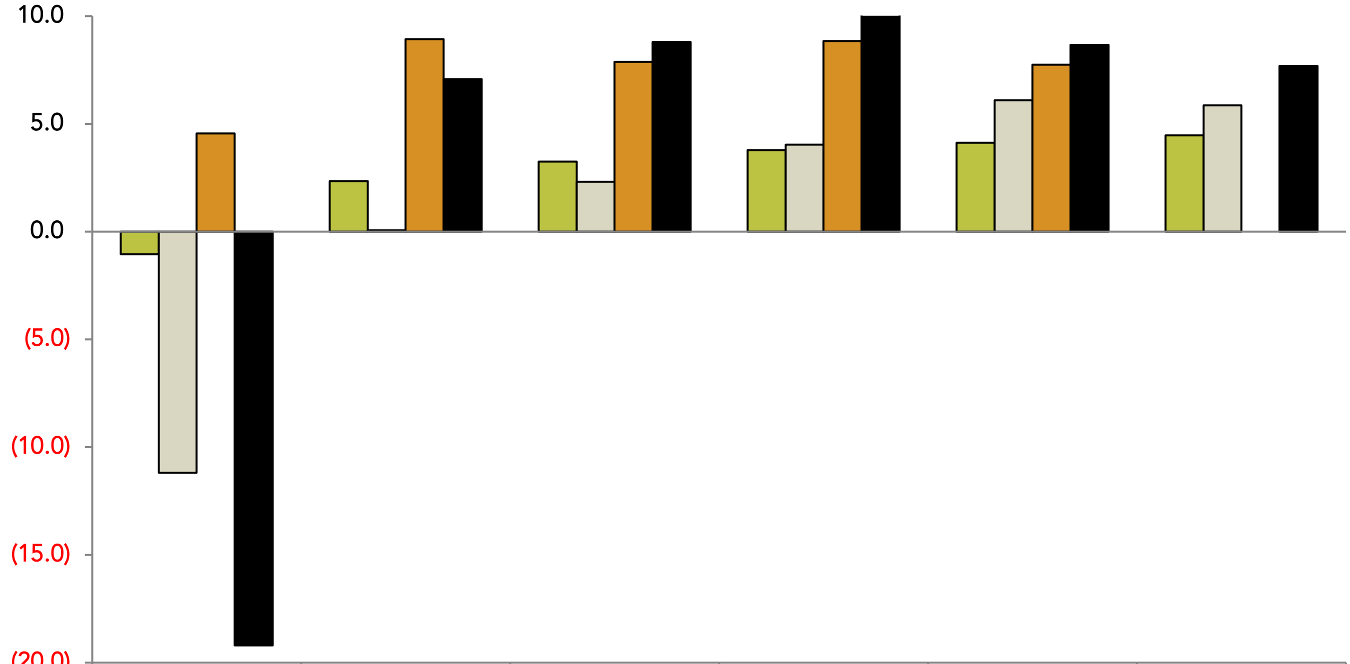


Source: Blackstone, Morningstar, Cliffwater Direct Lending Index, JPM Default Monitor, S&P/LSTA Leveraged Loan Index. Note: "Senior Loans" is represented by the S&P/LSTA Leveraged Loan Index. "High Yield" is represented by the Bloomberg Barclay's High Yield Index. As of December 31, 2021

Risks

- **Maturity** – less mature asset class as compared to public credit markets as well as other alternative markets
- **Credit Risk** – sub-investment grade debt has the potential to default
- **Reinvestment Risk** – because loans are floating rate investments, they are exposed to reinvestment risk if rates fall causing income to be reinvested at a lower rate
- **Illiquidity** – private credit investments are semi-liquid; after capital is committed, the investor may have limited terms to request redemptions

Cumulative returns annualized (%)



	1 Year	3 Year	5 Year	10 Year	15 Year	25 Year
Bank Loans	-1.1	2.3	3.2	3.8	4.1	4.5
High Yield	-11.2	0.1	2.3	4.0	6.1	5.9
Private Debt	4.6	8.9	7.9	8.8	7.8	
Russell 3000	-19.2	7.1	8.8	12.1	8.7	7.7

Returns are through December 31, 2022.

Risk Statistics

Last 15 Years

	Bank Loans	High Yield	Private Debt	Russell 3000
Annualized Standard Deviation, %	7.4	10.1	9.5	16.8
Sharpe Ratio	0.46	0.53	0.74	0.47
Max Drawdown Return, %	(28.8)	(32.5)	(29.3)	(48.6)

Last 25 Years

	Bank Loans	High Yield	Private Debt	Russell 3000
Annualized Standard Deviation, %	5.9	9.1	-	16.1
Sharpe Ratio	0.42	0.43	-	0.36
Max Drawdown Return, %	(29.9)	(33.1)	-	(51.2)

Returns are through December 31, 2022.

Historical correlations – Last 15 Years

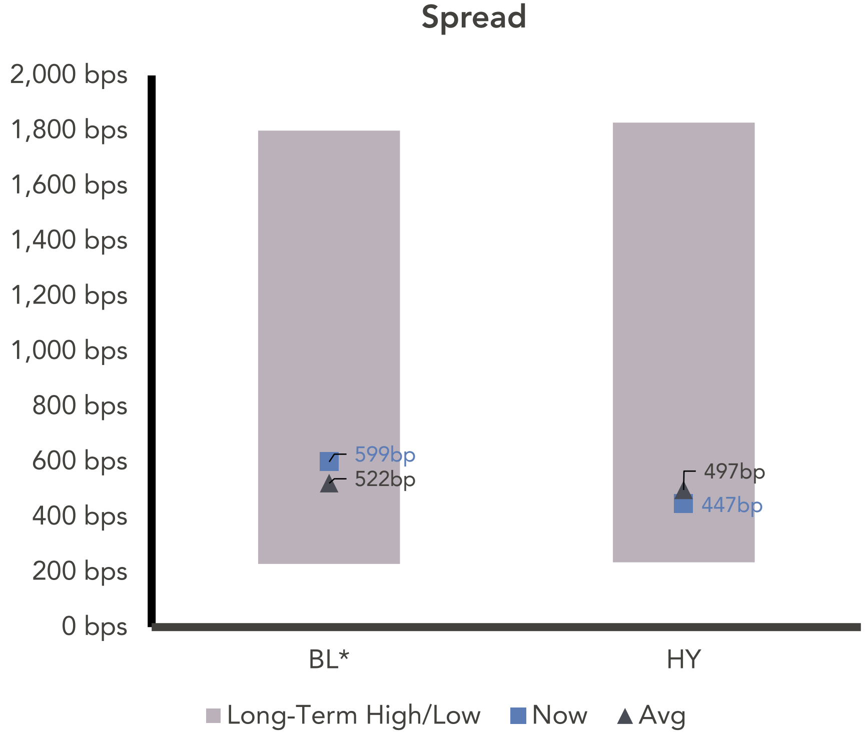
	Bank Loans	High Yield	Private Debt	Core Fixed Income	U.S. Equities	Int'l Equities	Real Estate	Infra.
Bank Loans	1.00							
High Yield	0.84	1.00						
Private Debt	0.35	0.14	1.00					
Core Fixed Income	0.04	0.31	(0.15)	1.00				
U.S. Equities	0.62	0.76	0.18	0.15	1.00			
Int'l Equities	0.65	0.81	0.18	0.23	0.88	1.00		
Real Estate	(0.06)	(0.21)	0.26	(0.26)	(0.08)	(0.10)	1.00	
Infra.	0.26	0.07	0.80	(0.12)	0.12	0.16	0.53	1.00

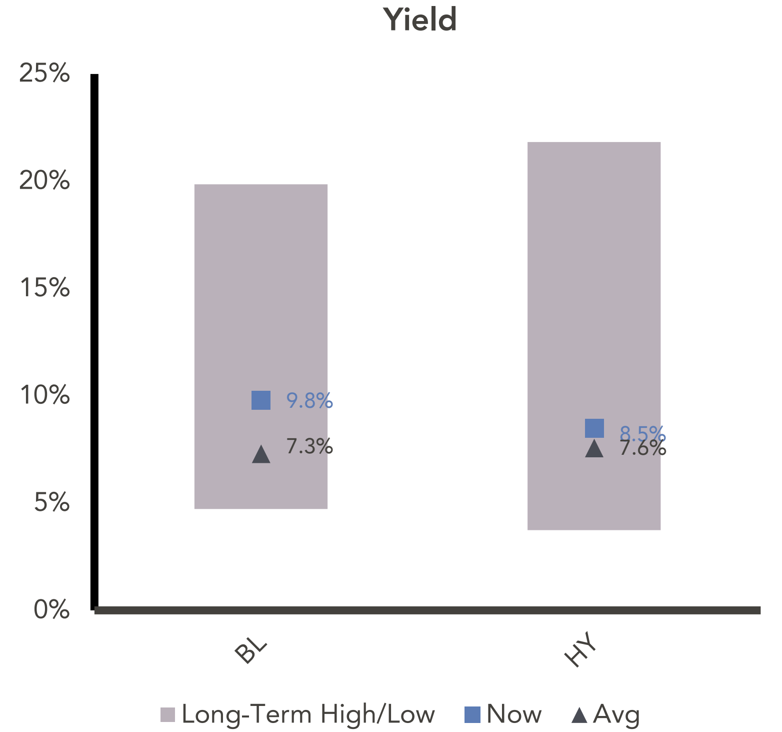
Returns are through December 31, 2022.

Asset Allocation Analysis

Fixed income spreads and yields

Spreads and yields were little changed during April as markets stabilized after volatility in March





*BL spread over LIBOR, not over Treasuries.
Source: Bloomberg, Credit Suisse, Deutsche, JPMorgan as of April 30, 2023. Long-term high, low, and average based on longest available data for each index.

Portfolio mixes

The following pages review the relative merits of the asset allocation mixes listed below

Portfolio Options

Asset Class	Current	Option A	Option B	Option C	Option D
Int Govt/Credit	26.0%	29.0%	29.0%	29.0%	29.0%
High Yield	0.0%	0.0%	5.0%	0.0%	0.0%
91 Day T-Bills	1.0%	1.0%	1.0%	1.0%	1.0%
Bank Loans	0.0%	0.0%	0.0%	5.0%	0.0%
Total Fixed Income	27.0%	30.0%	35.0%	35.0%	30.0%
Broad U.S. Equity	48.0%	45.0%	40.0%	40.0%	40.0%
Total U.S. Equity	48.0%	45.0%	40.0%	40.0%	40.0%
Broad Non-US Equity	15.0%	15.0%	15.0%	15.0%	15.0%
Total Non-U.S. Equity	15.0%	15.0%	15.0%	15.0%	15.0%
Real Estate - Core	5.0%	3.0%	3.0%	3.0%	3.0%
Global Infrastructure	5.0%	7.0%	7.0%	7.0%	7.0%
Total Real Assets	10.0%	10.0%	10.0%	10.0%	10.0%
Private Debt	0.0%	0.0%	0.0%	0.0%	5.0%
Total Private Assets	0.0%	0.0%	0.0%	0.0%	5.0%

Summary of portfolio characteristics

Additional diversification will likely lower risk, while leaving the base-case return in line with the ARR

	Current	Option A	Option B	Option C	Option D
Avg. Annualized 10 Yr. Return	6.70%	6.63%	6.72%	6.75%	6.82%
Avg. Annualized 10 Yr. Volatility	11.17%	10.80%	10.22%	10.20%	9.89%
Avg. Return/Avg. Volatility	0.60	0.61	0.66	0.66	0.69

Source: Marquette Associates Asset Allocation Software – March 31, 2023.

Distribution of returns

Additional diversification will likely narrow the range of outcomes, providing more certainty

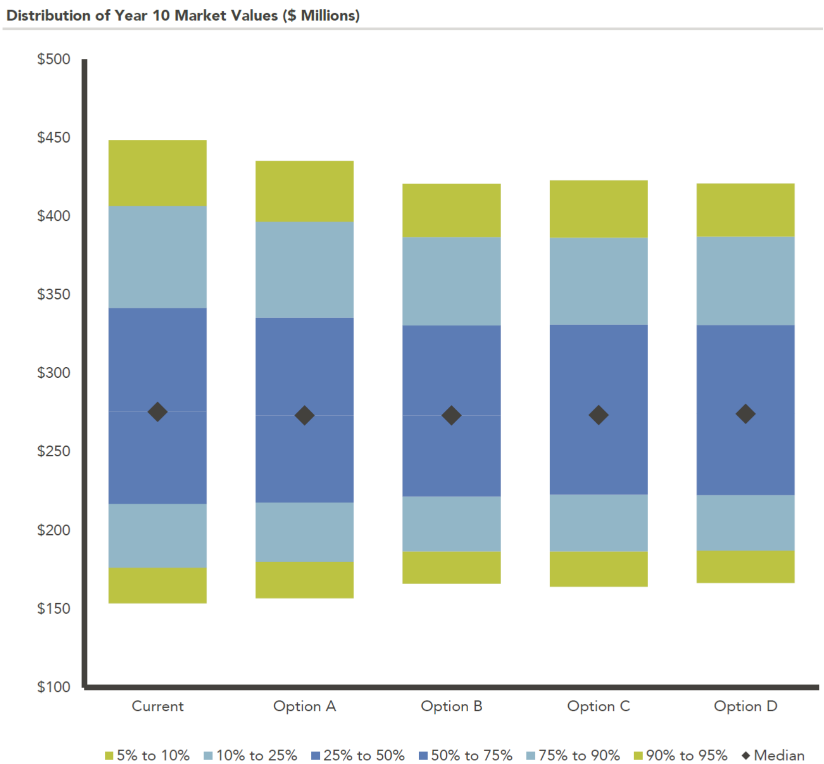
Distribution of Average Annualized 10 Year Returns

Percentile	Current	Option A	Option B	Option C	Option D
Average (Mean)	6.7%	6.6%	6.7%	6.8%	6.8%
5%	0.9%	1.1%	1.7%	1.6%	1.8%
25%	4.5%	4.5%	4.7%	4.7%	4.7%
50%	6.8%	6.7%	6.8%	6.9%	6.9%
75%	9.3%	9.1%	9.0%	9.0%	9.0%
95%	12.3%	12.0%	11.7%	11.7%	11.8%

Source: Marquette Associates Asset Allocation Software – March 31, 2023.

Distribution of market values

The distribution of market values shows similar outcomes

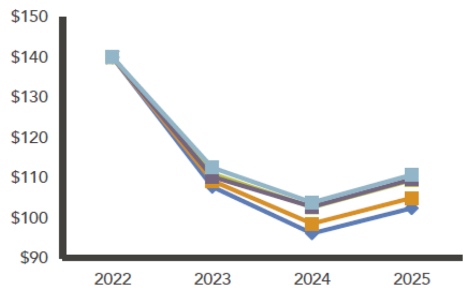


Source: Marquette Associates Asset Allocation Software – March 31, 2023.

Stress test – historical events (equity-driven)

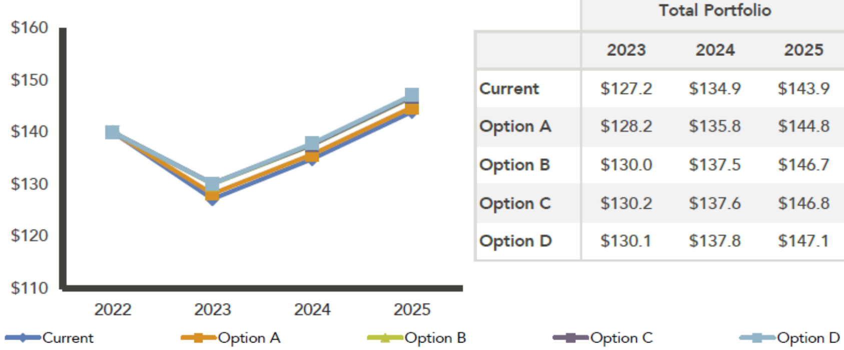
More diversification would likely lead to better outcomes amid an equity bear market

2008 Financial Crisis



	Total Portfolio		
	2023	2024	2025
Current	$107.8	$96.2	$102.5
Option A	$109.3	$98.6	$105.0
Option B	$111.0	$102.7	$109.5
Option C	$110.3	$102.8	$109.7
Option D	$112.6	$103.9	$110.8

Black Monday



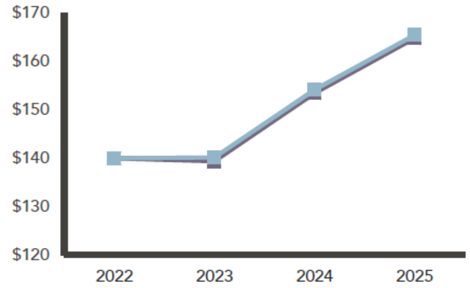
	Total Portfolio		
	2023	2024	2025
Current	$127.2	$134.9	$143.9
Option A	$128.2	$135.8	$144.8
Option B	$130.0	$137.5	$146.7
Option C	$130.2	$137.6	$146.8
Option D	$130.1	$137.8	$147.1

Source: Marquette Associates Asset Allocation Software – March 31, 2023.

Stress test – historical events (rate-driven)

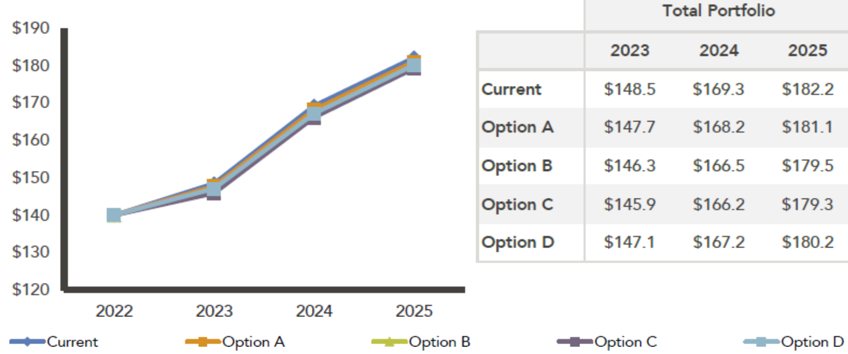
Having more allocated to fixed income shows mixed outcomes amid rising rates

1994 Interest Rate Spike



	Total Portfolio		
	2023	2024	2025
Current	$139.9	$154.1	$165.2
Option A	$139.8	$153.8	$165.0
Option B	$139.6	$153.6	$164.9
Option C	$139.4	$153.4	$164.8
Option D	$140.2	$154.1	$165.5

1981 Interest Rate Spike



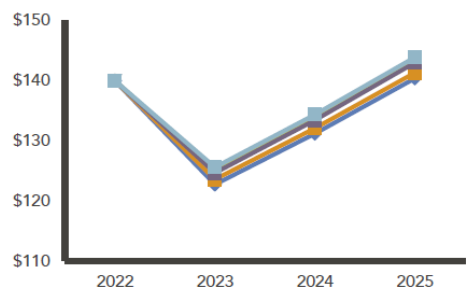
	Total Portfolio		
	2023	2024	2025
Current	$148.5	$169.3	$182.2
Option A	$147.7	$168.2	$181.1
Option B	$146.3	$166.5	$179.5
Option C	$145.9	$166.2	$179.3
Option D	$147.1	$167.2	$180.2

Source: Marquette Associates Asset Allocation Software – March 31, 2023.

Stress test – simulated (equity- and rate-driven)

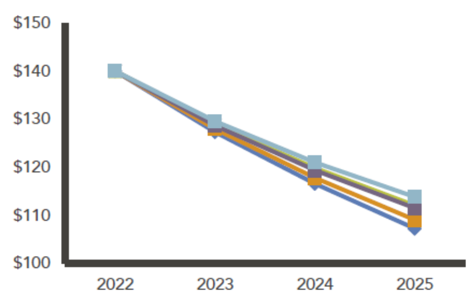
Since equities are the most volatile, reducing exposure would likely lead to better outcomes amid poor equity and fixed income markets

Perfect Storm for 1 Year



	Total Portfolio		
	2023	2024	2025
Current	$122.7	$131.2	$140.4
Option A	$123.6	$132.1	$141.3
Option B	$125.0	$133.7	$143.2
Option C	$124.7	$133.4	$143.0
Option D	$125.6	$134.4	$143.9

Perfect Storm for 3 Years



	Total Portfolio		
	2023	2024	2025
Current	$127.3	$116.6	$107.2
Option A	$128.0	$117.8	$109.1
Option B	$129.0	$119.8	$112.0
Option C	$128.7	$119.4	$111.5
Option D	$129.6	$121.0	$113.8

Current Option A Option B Option C Option D

Source: Marquette Associates Asset Allocation Software – March 31, 2023.

Pros & cons

	Pros	Cons
Bank Loans	▪ Liquidity ▪ Lower fees ▪ Attractive valuations ▪ Floating rate	▪ Volatility ▪ Higher correlations w/ equities
High Yield	▪ Liquidity ▪ Lower fees	▪ Fixed rate ▪ Volatility ▪ Highest correlation w/ equities
Private Debt	▪ Highest return expectations ▪ Lowest correlation w/ equities ▪ Volatility ▪ Floating rate	▪ Higher fees ▪ Illiquidity

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