



## Finding Value in the Short- and Long-Term

#### March 2024

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## Agenda



Insurance Asset Allocation: Observations, Considerations and Framework

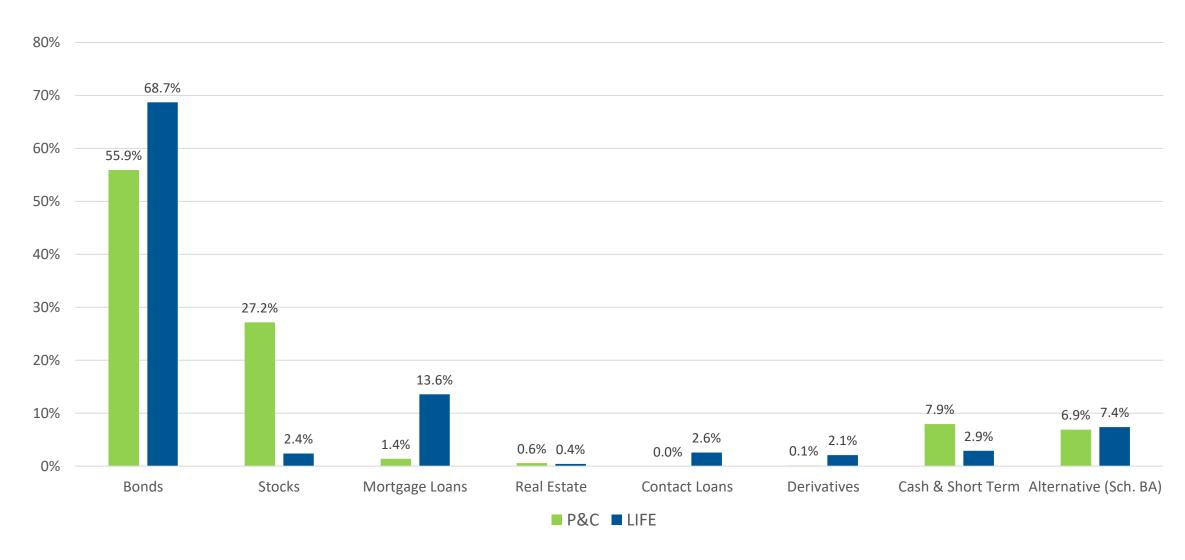
Short-Term Opportunities vs. Long-Term Enterprise Value Optimization

Takeaways

## **Insurance Asset Allocation**

## U.S. Industry Broad Asset Allocation (as of 9/30/23)





Source: S&P Market Intelligence, NEAM Analytics

#### Insurance Asset Allocation: Life vs. P&C



#### Life:

- ALM optimization addresses the cost of liability, duration management, and reinvestment risk.
- Long-dated (and sticky) liabilities allow a potential appetite for illiquid asset classes (risk).
- High investment leverage limits the undertaking of risk assets.

#### • P&C:

- Tax situations influence the allocations of tax-exempt municipal bonds and preferred securities.
- Underwriting risk frames the insurer's asset risk capacity and tolerance.
- A conventional barbell risk-taking strategy might result in sub-optimal risk-adjusted returns.
- > A holistic approach to address insurance enterprise goals and objectives

#### A Holistic Asset Allocation Framework



## Insurance Focus



Consider insurance products profile and liability cash flows characteristics

## **Enterprise Framework**

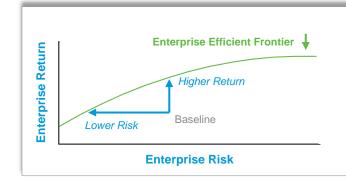


Enable holistic economic, rating agency and regulatory impact assessment

## Stress / Scenario Testing



Assess and understand the consequence of being wrong



#### **Enhancing Risk-adjusted Return Expectations**

- Asset allocations tailored to your enterprise risk budget
- Investment guideline recommendations
- Customized benchmark recommendations

#### **Insurance Asset Allocation Under An Enterprise Context**

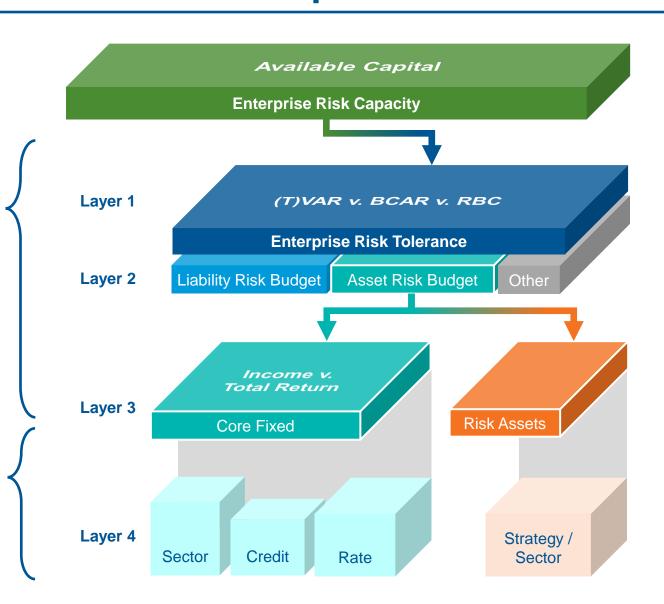


**Long-Term: Enterprise Based Asset Allocation facilitates** an understanding of the firm's risk capacity utilization, including:

- · Risk tolerances and risk budgeting between assets and liabilities
- How asset risk can be allocated into core and risk asset buckets
- Strategic, long-term expectations of asset risk and return
- Benchmarks, guidelines

Short-Term: Portfolio Optimization analysis builds on EBAA™; assesses specific Core Fixed portfolio attributes at current market conditions, including:

- Granular sector positions
- Specific *credit* quality profile
- Interest *rate* sensitivity, cash flows and liquidity specifications



# **Short-Term Opportunities:** Relative Value Framework

#### **Z-Score: Fixed Income Relative Value Metric**







Source: ICE Index, NEAM Analytics

## Z-Score: YE 2019 vs. March 2020 vs. February 2024



			12/31/2019			
		Mty				ZScr
Asset Class	Sector	Sect	ZScr 1yr	ZScr 3yr	ZScr 5yr	Incp
MUNI	Muni 2Yr	2YR	(0.62)	(0.77)	(1.05)	(0.75)
MUNI	Muni 5Yr	5YR	(1.53)	(1.76)	(1.68)	(1.09)
MUNI	Muni 10Yr	10YR	(1.08)	(1.66)	(1.66)	(0.65)
MUNI	Muni 30Yr	30YR	(1.18)	(1.99)	(1.76)	(0.24)
MUNI	Taxable Muni	ALL	0.22	(0.10)	(0.69)	(1.19)
ABS	AUTO Fixed AAA 2Yr	2YR	1.14	0.49	(0.14)	(0.27)
ABS	CC Fixed AAA 5Yr	5YR	0.09	0.82	0.30	(0.31)
ABS FLT	CC Libor1M AAA 5Yr	5YR	(0.23)	1.16	0.88	(0.02)
CMBS	AAA CMBS 10yr	10YR	(0.34)	(0.82)	(0.88)	(0.94)
CMBS	AA CMBS 10yr	10YR	0.05	0.10	(0.58)	(0.50)
CMBS	A CMBS 10yr	10YR		(0.19)	(0.68)	(0.50)
CMBS	AAA CMBS 5yr	5YR	0.82	1.52	0.12	(0.17)
CORP	A, FINANCE, 2 YR	2YR	(1.48)	(1.93)	(1.96)	(0.60)
CORP	A, FINANCE, 5 YR	5YR	(1.86)	(1.88)	(1.81)	(0.66)
CORP	A, FINANCE, 10 YR	10YR	(2.24)	(1.44)	(1.60)	(0.61)
CORP	A, INDUSTRIAL, 2 YR	2YR	(0.84)	(1.37)	(1.72)	(0.65)
CORP	A, INDUSTRIAL, 5 YR	5YR	(1.64)	(1.13)	(1.33)	(0.74)
CORP	A, INDUSTRIAL, 10 YR	10YR	(2.33)	(0.68)	(1.01)	(0.55)
CORP	A, UTILITY, 2 YR	2YR	(0.83)	(1.54)	(1.72)	(0.69)
CORP	A, UTILITY, 5 YR	5YR	(1.36)	(1.44)	(1.41)	(0.65)
CORP	A, UTILITY, 10 YR	10YR	(2.05)	(0.54)	(0.94)	(0.32)
CORP	BBB, FINANCE, 2 YR	2YR	(1.12)	(1.46)	(1.49)	(0.62)
CORP	BBB, FINANCE, 5 YR	5YR	(1.57)	(1.51)	(1.50)	(0.64)
CORP	BBB, FINANCE, 10 YR	10YR	(1.94)	(1.25)	(1.41)	(0.58)
CORP	BBB, INDUSTRIAL, 2 YR	2YR	(1.00)	(1.49)	(1.39)	(0.62)
CORP	BBB, INDUSTRIAL, 5 YR	5YR	(1.68)	(1.01)	(1.09)	(0.57)
CORP	BBB, INDUSTRIAL, 10 YR	10YR	(2.24)	(0.54)	(0.84)	(0.34)
CORP	BBB, UTILITY, 2 YR	2YR	(0.68)	(1.24)	(1.43)	(0.63)
CORP	BBB, UTILITY, 5 YR	5YR	(1.05)	(0.73)	(1.05)	(0.62)
CORP	BBB, UTILITY, 10 YR	10YR	(1.61)	(0.31)	(0.72)	(0.44)
HIYLD	BB Rtd	5YR	(1.46)	(1.38)	(1.18)	(0.89)
HIYLD	B Rtd	5YR	(2.17)	(0.91)	(1.01)	(0.74)



			03/25/2020			
Asset Class	Sector	Mty Sect	ZScr 1vr	ZScr 3vr	ZScr 5yr	ZScr Incp
MUNI	Muni 2Yr	2YR	6.46	11.23	14.12	18.64
MUNI	Muni 5Yr	5YR	6.67	11.61	14.84	24,46
MUNI	Muni 10Yr	10YR	5.94	10.32	12.77	18,13
MUNI	Muni 30Yr	30YR		8.88	10.53	8,44
MUNI	Taxable Muni	ALL	3.17	5.31	2.95	1.03
ABS	AUTO Fixed AAA 2Yr	2YR	5.61	9.59	11.85	2.17
ABS	CC Fixed AAA 5Yr	5YR	7.05	11.34	13.98	1.90
ABS FLT	CC Libor1M AAA 5Yr	5YR	7.20	11.13	13.84	2.43
CMBS	AAA CMBS 10yr	10YR	6.82	11.28	9.17	8.72
CMBS	AA CMBS 10yr	10YR	6.92	11.55	8.48	0.97
CMBS	A CMBS 10yr	10YR	6.85	11.15	5.36	0.60
CMBS	AAA CMBS 5yr	5YR	6.90	11.66	13.03	12.08
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CORP	A, FINANCE, 2 YR	2YR	5.88	9.70	10.37	1.39
CORP	A, FINANCE, 5 YR	5YR	5.65	9.04	8.87	1.14
CORP	A, FINANCE, 10 YR	10YR	4.94	7.54	7.55	1.44
CORP	A, INDUSTRIAL, 2 YR	2YR	5.86	9.79	11.37	2.75
CORP	A, INDUSTRIAL, 5 YR	5YR	5.63	8.90	8.95	2.30
CORP	A, INDUSTRIAL, 10 YR	10YR	4.86	6.75	6.78	3.66
CORP	A, UTILITY, 2 YR	2YR	6.19	9.29	8.82	2.07
CORP	A, UTILITY, 5 YR	5YR	6.02	9.66	8.82	2.08
CORP	A, UTILITY, 10 YR	10YR	5.33	7.91	8.41	3.89
CORP	BBB, FINANCE, 2 YR	2YR	6.42	10.29	9.20	1.04
CORP	BBB, FINANCE, 5 YR	5YR	6.16	9.33	7.65	0.95
CORP	BBB, FINANCE, 10 YR	10YR	5.51	7.79	6.70	1.29
CORP	BBB, INDUSTRIAL, 2 YR	2YR	6.28	10.37	9.27	2.34
CORP	BBB, INDUSTRIAL, 5 YR	5YR	5.92	9.19	7.20	2.20
CORP	BBB, INDUSTRIAL, 10 YR	10YR	5.20	7.12	5.79	3.00
CORP	BBB, UTILITY, 2 YR	2YR	6.74	10.39	9.69	1.76
CORP	BBB, UTILITY, 5 YR	5YR	6.41	9.59	8.57	1.74
CORP	BBB, UTILITY, 10 YR	10YR	5.72	7.89	7.84	2.64
HIYLD	BB Rtd	5YR	5.09	8.22	5.42	2.10
HIYLD	B Rtd	5YR	5.00	7.71	4.94	2.21



Asset Class   Sector   Sect   1yr   3yr   2Scr   2Scr   Incp				02/07/2024			
MUNI         Muni 2Yr         2YR         (0.57)         (0.45)         (0.44)         (0.68)           MUNI         Muni 5Yr         5YR         (0.98)         (0.49)         (0.40)         (0.78)           MUNI         Muni 10Yr         10YR         (1.62)         (1.62)         (0.84)         (1.41)           MUNI         Muni 30Yr         30YR         (1.37)         (0.74)         (0.73)         (0.59)           MUNI         Taxable Muni         ALL         (2.17)         (1.45)         (1.14)         (1.59)           ABS         AUTO Fixed AAA 2Yr         2YR         0.36         1.07         1.31         0.43           ABS         CC Fixed AAA 5Yr         5YR         (0.29)         0.99         0.72         (0.00)           ABS FLT         CC Libor1M AAA 5Yr         5YR         (0.29)         0.99         0.72         (0.00)           ABS FLT         CC Libor1M AAA 5Yr         5YR         (0.29)         0.99         0.72         (0.00)           ABS FLT         CC Libor1M AAA 5Yr         5YR         (0.29)         0.99         0.72         (0.00)           ABS FLT         CC Libor1M AAA 5Yr         10YR         (1.29)         (0.91         (0.91				ZScr			ZScr
MUNI         Muni 5Yr         5YR         (0.98)         (0.49)         (0.40)         (0.78)           MUNI         Muni 10Yr         10YR         (1.62)         (1.62)         (0.84)         (1.41)           MUNI         Muni 30Yr         30YR         (1.37)         (0.74)         (0.73)         (0.59)           MUNI         Taxable Muni         ALL         (2.17)         (1.45)         (1.14)         (1.59)           ABS         AUTO Fixed AAA 2Yr         2YR         0.36         1.07         1.31         0.43           ABS         CC Fixed AAA 5Yr         5YR         (0.29)         0.99         0.72         (0.00)           ABS FLT         CC Libor1M AAA 5Yr         5YR         (0.29)         1.09         0.72         (0.00)           ABS FLT         CC Libor1M AAA 5Yr         5YR         (0.29)         1.09         0.72         (0.00)           ABS FLT         CC Libor1M AAA 5Yr         5YR         (0.29)         1.09         0.72         (0.00)           ABS FLT         CC Libor1M AAA 5Yr         10YR         (1.80)         (0.30)         (0.11)         (0.38)           CMBS         AA CMBS 10yr         10YR         (1.90         (0.30)         (0.11) <td>Class</td> <td>Sector</td> <td>Sect</td> <td>1yr</td> <td>3yr</td> <td>5yr</td> <td>Incp</td>	Class	Sector	Sect	1yr	3yr	5yr	Incp
MUNI         Muni 10Yr         10YR         (1.62)         (1.62)         (0.84)         (1.41)           MUNI         Muni 30Yr         30YR         (1.37)         (0.74)         (0.73)         (0.59)           MUNI         Taxable Muni         ALL         (2.17)         (1.45)         (1.14)         (1.59)           ABS         AUTO Fixed AAA 2Yr         2YR         0.36         1.07         1.31         0.43           ABS         CC Fixed AAA 5Yr         5YR         (0.29)         0.99         0.72         (0.00)           ABS FLT         CC Libor1M AAA 5Yr         5YR         (0.29)         0.99         0.72         (0.00)           ABS FLT         CC Libor1M AAA 5Yr         5YR         0.29         1.07         0.87         0.41           CMBS         AAA CMBS 10yr         10YR         (1.80)         (0.30)         (0.12)         (0.28)           CMBS         AA CMBS 10yr         10YR         (2.12)         (0.06)         0.08         (0.16)           CMBS         AA CMBS 10yr         10YR         (0.86)         0.66         0.91         1.71           CORP         A, FINANCE, 2 YR         2YR         (0.86)         0.66         0.91         1.71	MUNI	Muni 2Yr	2YR	(0.57)	(0.45)	(0.44)	(0.68)
MUNI         Muni 30Yr         30YR         (1.37)         (0.74)         (0.73)         (0.59)           MUNI         Taxable Muni         ALL         (2.17)         (1.45)         (1.14)         (1.59)           ABS         AUTO Fixed AAA 2Yr         2YR         0.36         1.07         1.31         0.43           ABS         CC Fixed AAA 5Yr         5YR         (0.29)         0.99         0.72         (0.00)           ABS FLT         CC Libor1M AAA 5Yr         5YR         (0.29)         0.99         0.72         (0.00)           CMBS         AAA CMBS 10yr         10YR         (2.55)         (0.63)         (0.41)         (0.38)           CMBS         A CMBS 10yr         10YR         (1.80)         (0.30)         (0.12)         (0.28)           CMBS         A CMBS 10yr         10YR         (1.80)         (0.03)         (0.41)         (0.38)           CMBS         A CMBS 10yr         10YR         (1.80)         (0.06)         0.08         (0.16)           CMBS         A CMBS 10yr         10YR         (1.80)         (0.06)         0.08         (0.16)           CMBS         A CMBS 10yr         10YR         (1.80)         (0.06)         0.08         (0.	MUNI	Muni 5Yr	5YR	(0.98)	(0.49)	(0.40)	(0.78)
MUNI         Taxable Muni         ALL         (2.17)         (1.45)         (1.14)         (1.59)           ABS         AUTO Fixed AAA 2Yr         2YR         0.36         1.07         1.31         0.43           ABS         CC Fixed AAA 5Yr         5YR         (0.29)         0.99         0.72         (0.00)           ABS FLT         CC Libor1M AAA 5Yr         5YR         0.29         1.07         0.87         0.41           CMBS         AAA CMBS 10yr         10YR         (2.55)         (0.63)         (0.41)         (0.38)           CMBS         AA CMBS 10yr         10YR         (1.80)         (0.30)         (0.12)         (0.28)           CMBS         A CMBS 10yr         10YR         (2.12)         (0.06)         0.08         (0.16)           CMBS         A CMBS 5yr         5YR         (0.86)         0.66         0.91         1.71           CORP         A, FINANCE, 2 YR         2YR         (1.33)         (0.04)         0.07         (0.36)           CORP         A, FINANCE, 2 YR         2YR         (1.53)         (0.34)         (0.23)         (0.46)           CORP         A, INDUSTRIAL, 2 YR         2YR         (1.91)         (0.72)         (0.71)	MUNI	Muni 10Yr	10YR	(1.62)	(1.62)	(0.84)	(1.41)
ABS AUTO Fixed AAA 2Yr 2YR 0.36 1.07 1.31 0.43 ABS CC Fixed AAA 5Yr 5YR (0.29) 0.99 0.72 (0.00) ABS FLT CC Libor1M AAA 5Yr 5YR 0.29 1.07 0.87 0.41  CMBS AAA CMBS 10yr 10YR (2.55) (0.63) (0.41) (0.38) CMBS AA CMBS 10yr 10YR (1.80) (0.30) (0.12) (0.28) CMBS AA CMBS 10yr 10YR (1.80) (0.30) (0.12) (0.28) CMBS ACMBS 10yr 10YR (2.12) (0.06) 0.08 (0.16) CMBS AAA CMBS 5yr 5YR (0.86) 0.66 0.91 1.71  CORP A, FINANCE, 2 YR 2YR (1.33) (0.04) 0.07 (0.36) CORP A, FINANCE, 5 YR 5YR (1.53) (0.34) (0.23) (0.46) CORP A, INDUSTRIAL, 2 YR 2YR (0.94) (0.19) (0.06) (0.39) CORP A, INDUSTRIAL, 5 YR 5YR (1.30) (0.46) (0.32) (0.51) CORP A, UTILITY, 2 YR 2YR (1.39) (0.17) 0.02 (0.37) CORP A, UTILITY, 10 YR 10YR (1.91) (0.73) (0.76) (0.50) CORP A, UTILITY, 10 YR 10YR (1.91) (0.33) (0.14) (0.34) CORP BBB, FINANCE, 2 YR 2YR (1.28) 0.05 0.16 (0.23) CORP BBB, FINANCE, 10 YR 10YR (2.17) (0.58) (0.52) (0.08) CORP BBB, INDUSTRIAL, 2 YR 2YR (1.55) (0.17) (0.49) (0.35) CORP BBB, INDUSTRIAL, 2 YR 2YR (1.55) (0.17) (0.59) (0.50) CORP BBB, INDUSTRIAL, 2 YR 2YR (1.55) (0.17) (0.44) (0.50) CORP BBB, INDUSTRIAL, 3 YR 2YR (1.55) (0.17) (0.44) (0.50) CORP BBB, INDUSTRIAL, 5 YR 5YR (1.55) (0.17) (0.44) (0.50) CORP BBB, UTILITY, 5 YR 5YR (1.52) (0.07) (0.50) CORP BBB, UTILITY, 5 YR 5YR (1.52) (0.77) (0.59) (0.50) CORP BBB, UTILITY, 5 YR 5YR (1.52) (0.17) (0.51) (0.40) CORP BBB, UTILITY, 5 YR 5YR (1.52) (0.17) (0.51) (0.40) CORP BBB, UTILITY, 5 YR 5YR (1.52) (0.17) (0.51) (0.40) CORP BBB, UTILITY, 5 YR 5YR (1.52) (0.17) (0.51) (0.40) CORP BBB, UTILITY, 5 YR 5YR (1.52) (0.17) (0.50) (0.50) CORP BBB, UTILITY, 5 YR 5YR (1.52) (0.17) (0.50) (0.50) CORP BBB, UTILITY, 5 YR 5YR (1.52) (0.17) (0.50) (0.50) CORP BBB, UTILITY, 5 YR 5YR (1.52) (0.17) (0.50) (0.50)	MUNI	Muni 30Yr	30YR	(1.37)	(0.74)	(0.73)	(0.59)
ABS	MUNI	Taxable Muni	ALL	(2.17)	(1.45)	(1.14)	(1.59)
ABS							
ABS FLT CC Libor1M AAA 5Yr 5YR 0.29 1.07 0.87 0.41  CMBS AAA CMBS 10yr 10YR (2.55) (0.63) (0.41) (0.38)  CMBS AA CMBS 10yr 10YR (1.80) (0.30) (0.12) (0.28)  CMBS A CMBS 10yr 10YR (2.12) (0.06) 0.08 (0.16)  CMBS AA CMBS 5yr 5YR (0.86) 0.66 0.91 1.71  CORP A, FINANCE, 2 YR 2YR (1.33) (0.04) 0.07 (0.36)  CORP A, FINANCE, 5 YR 5YR (1.53) (0.34) (0.23) (0.46)  CORP A, FINANCE, 10 YR 10YR (1.91) (0.72) (0.71) (0.51)  CORP A, INDUSTRIAL, 2 YR 2YR (0.94) (0.19) (0.06) (0.39)  CORP A, INDUSTRIAL, 10 YR 10YR (1.70) (0.73) (0.76) (0.50)  CORP A, UTILITY, 2 YR 2YR (1.33) (0.17) (0.02) (0.37)  CORP A, UTILITY, 10 YR 10YR (1.70) (0.73) (0.76) (0.50)  CORP BBB, FINANCE, 2 YR 2YR (1.28) (0.51) (0.50)  CORP BBB, FINANCE, 5 YR 5YR (1.50) (0.43) (0.44) (0.34)  CORP BBB, FINANCE, 5 YR 5YR (1.55) (0.13) (0.08) (0.35)  CORP BBB, INDUSTRIAL, 2 YR 2YR (1.55) (0.13) (0.08) (0.35)  CORP BBB, INDUSTRIAL, 5 YR 5YR (1.90) (0.43) (0.49) (0.43)  CORP BBB, INDUSTRIAL, 5 YR 5YR (1.97) (0.47) (0.44) (0.50)  CORP BBB, INDUSTRIAL, 5 YR 5YR (1.97) (0.47) (0.44) (0.50)  CORP BBB, INDUSTRIAL, 5 YR 5YR (1.97) (0.47) (0.44) (0.50)  CORP BBB, INDUSTRIAL, 5 YR 5YR (1.97) (0.47) (0.44) (0.50)  CORP BBB, UTILITY, 5 YR 5YR (1.97) (0.47) (0.44) (0.50)  CORP BBB, UTILITY, 5 YR 5YR (1.97) (0.47) (0.44) (0.50)  CORP BBB, UTILITY, 5 YR 5YR (1.97) (0.47) (0.44) (0.50)  CORP BBB, UTILITY, 5 YR 5YR (1.97) (0.47) (0.44) (0.50)  CORP BBB, UTILITY, 5 YR 5YR (1.97) (0.47) (0.44) (0.50)  CORP BBB, UTILITY, 5 YR 5YR (1.82) (0.77) (0.08) (0.40)  CORP BBB, UTILITY, 5 YR 5YR (1.82) (0.77) (0.08) (0.40)	ABS	AUTO Fixed AAA 2Yr	2YR	0.36	1.07	1.31	0.43
CMBS AAA CMBS 10yr 10YR (2.55) (0.63) (0.41) (0.38) CMBS AA CMBS 10yr 10YR (1.80) (0.30) (0.12) (0.28) CMBS A CMBS 10yr 10YR (2.12) (0.06) 0.08 (0.16) CMBS A CMBS 5yr 5YR (0.86) 0.66 0.91 1.71 CORP A, FINANCE, 2 YR 2YR (1.33) (0.04) 0.07 (0.36) CORP A, FINANCE, 5 YR 5YR (1.53) (0.34) (0.23) (0.46) CORP A, FINANCE, 10 YR 10YR (1.91) (0.72) (0.71) (0.51) CORP A, INDUSTRIAL, 2 YR 2YR (0.94) (0.19) (0.06) (0.39) CORP A, INDUSTRIAL, 5 YR 5YR (1.30) (0.46) (0.32) (0.51) CORP A, INDUSTRIAL, 10 YR 10YR (1.70) (0.73) (0.76) (0.50) CORP A, UTILITY, 2 YR 2YR (1.39) (0.17) 0.02 (0.37) CORP A, UTILITY, 10 YR 10YR (1.70) (0.73) (0.76) (0.50) CORP A, UTILITY, 10 YR 10YR (2.17) (0.58) (0.52) (0.08) CORP BBB, FINANCE, 2 YR 2YR (1.28) 0.05 0.16 (0.23) CORP BBB, FINANCE, 5 YR 5YR (1.55) (0.13) (0.08) (0.35) CORP BBB, FINANCE, 10 YR 10YR (2.00) (0.43) (0.49) (0.43) CORP BBB, INDUSTRIAL, 2 YR 2YR (1.55) (0.17) (0.11) (0.42) CORP BBB, INDUSTRIAL, 5 YR 5YR (1.55) (0.17) (0.11) (0.42) CORP BBB, INDUSTRIAL, 5 YR 5YR (1.55) (0.17) (0.11) (0.42) CORP BBB, INDUSTRIAL, 5 YR 5YR (1.55) (0.17) (0.11) (0.42) CORP BBB, UTILITY, 2 YR 2YR (1.25) 0.08 0.15 (0.37) CORP BBB, UTILITY, 5 YR 5YR (1.55) (0.17) (0.44) (0.50) CORP BBB, UTILITY, 5 YR 5YR (1.55) (0.17) (0.44) (0.50) CORP BBB, UTILITY, 5 YR 5YR (1.55) (0.17) (0.44) (0.50) CORP BBB, UTILITY, 5 YR 5YR (1.52) (0.17) (0.44) (0.50) CORP BBB, UTILITY, 5 YR 5YR (1.55) (0.17) (0.44) (0.50) CORP BBB, UTILITY, 5 YR 5YR (1.55) (0.17) (0.44) (0.50) CORP BBB, UTILITY, 5 YR 5YR (1.55) (0.17) (0.44) (0.50) CORP BBB, UTILITY, 5 YR 5YR (1.55) (0.17) (0.44) (0.50) CORP BBB, UTILITY, 5 YR 5YR (1.55) (0.17) (0.44) (0.50) CORP BBB, UTILITY, 5 YR 5YR (1.55) (0.17) (0.44) (0.50) CORP BBB, UTILITY, 5 YR 5YR (1.55) (0.17) (0.44) (0.50) CORP BBB, UTILITY, 5 YR 5YR (1.55) (0.51) (0.49) (0.33)	ABS	CC Fixed AAA 5Yr	5YR	(0.29)	0.99	0.72	(0.00)
CMBS         AA CMBS 10yr         10YR         (1.80)         (0.30)         (0.12)         (0.28)           CMBS         A CMBS 10yr         10YR         (2.12)         (0.06)         0.08         (0.16)           CMBS         AAA CMBS 5yr         5YR         (0.86)         0.66         0.91         1.71           CORP         A, FINANCE, 2 YR         2YR         (1.33)         (0.04)         0.07         (0.36)           CORP         A, FINANCE, 5 YR         5YR         15YR         (1.53)         (0.34)         (0.23)         (0.46)           CORP         A, FINANCE, 10 YR         10YR         (1.91)         (0.72)         (0.71)         (0.51)           CORP         A, INDUSTRIAL, 2 YR         2YR         (0.94)         (0.19)         (0.06)         (0.39)           CORP         A, INDUSTRIAL, 10 YR         10YR         (1.70)         (0.73)         (0.76)         (0.50)           CORP         A, UTILITY, 2 YR         2YR         (1.39)         (0.17)         (0.02)         (0.37)           CORP         A, UTILITY, 5 YR         5YR         (1.90)         (0.33)         (0.14)         (0.34)           CORP         BBB, FINANCE, 2 YR         2YR         (1.28)	ABS FLT	CC Libor1M AAA 5Yr	5YR	0.29	1.07	0.87	0.41
CMBS         AA CMBS 10yr         10YR         (1.80)         (0.30)         (0.12)         (0.28)           CMBS         A CMBS 10yr         10YR         (2.12)         (0.06)         0.08         (0.16)           CMBS         AAA CMBS 5yr         5YR         (0.86)         0.66         0.91         1.71           CORP         A, FINANCE, 2 YR         2YR         (1.33)         (0.04)         0.07         (0.36)           CORP         A, FINANCE, 5 YR         5YR         15YR         (1.53)         (0.34)         (0.23)         (0.46)           CORP         A, FINANCE, 10 YR         10YR         (1.91)         (0.72)         (0.71)         (0.51)           CORP         A, INDUSTRIAL, 2 YR         2YR         (0.94)         (0.19)         (0.06)         (0.39)           CORP         A, INDUSTRIAL, 10 YR         10YR         (1.70)         (0.73)         (0.76)         (0.50)           CORP         A, UTILITY, 2 YR         2YR         (1.39)         (0.17)         (0.02)         (0.37)           CORP         A, UTILITY, 5 YR         5YR         (1.90)         (0.33)         (0.14)         (0.34)           CORP         BBB, FINANCE, 2 YR         2YR         (1.28)							
CMBS         A CMBS 10yr         10YR         (2.12)         (0.06)         0.08         (0.16)           CMBS         AAA CMBS 5yr         5YR         (0.86)         0.66         0.91         1.71           CORP         A, FINANCE, 2 YR         2YR         (1.33)         (0.04)         0.07         (0.36)           CORP         A, FINANCE, 2 YR         2YR         (1.53)         (0.04)         0.07         (0.30)           CORP         A, FINANCE, 10 YR         10YR         (1.91)         (0.72)         (0.71)         (0.51)           CORP         A, INDUSTRIAL, 2 YR         2YR         (0.94)         (0.19)         (0.06)         (0.39)           CORP         A, INDUSTRIAL, 5 YR         5YR         (1.30)         (0.46)         (0.32)         (0.51)           CORP         A, INDUSTRIAL, 10 YR         10YR         (1.70)         (0.73)         (0.76)         (0.50)           CORP         A, UTILITY, 2 YR         2YR         (1.39)         (0.17)         (0.02         (0.50)           CORP         A, UTILITY, 10 YR         10YR         (1.71)         (0.02)         (0.37)           CORP         A, UTILITY, 10 YR         10YR         (1.21)         (0.58)         (0.52)	CMBS	AAA CMBS 10yr	10YR	(2.55)	(0.63)	(0.41)	(0.38)
CMBS AAA CMBS 5yr 5YR (0.86) 0.66 0.91 1.71  CORP A, FINANCE, 2 YR 2YR (1.33) (0.04) 0.07 (0.36)  CORP A, FINANCE, 5 YR 5YR (1.53) (0.34) (0.23) (0.46)  CORP A, FINANCE, 10 YR 10YR (1.91) (0.72) (0.71) (0.51)  CORP A, INDUSTRIAL, 2 YR 2YR (0.94) (0.19) (0.06) (0.39)  CORP A, INDUSTRIAL, 5 YR 5YR (1.30) (0.46) (0.32) (0.51)  CORP A, INDUSTRIAL, 10 YR 10YR (1.70) (0.73) (0.76) (0.50)  CORP A, UTILITY, 2 YR 2YR (1.39) (0.17) (0.02) (0.37)  CORP A, UTILITY, 5 YR 5YR (1.90) (0.33) (0.14) (0.34)  CORP A, UTILITY, 10 YR 10YR (2.17) (0.58) (0.52) (0.08)  CORP BBB, FINANCE, 2 YR 2YR (1.28) 0.05 0.16 (0.23)  CORP BBB, FINANCE, 5 YR 5YR (1.55) (0.13) (0.08) (0.35)  CORP BBB, INDUSTRIAL, 2 YR 2YR (1.55) (0.13) (0.08) (0.35)  CORP BBB, INDUSTRIAL, 5 YR 5YR (1.97) (0.47) (0.44) (0.50)  CORP BBB, UTILITY, 2 YR 2YR (1.25) (0.72) (0.79) (0.50)  CORP BBB, UTILITY, 5 YR 5YR (1.97) (0.47) (0.44) (0.50)  CORP BBB, UTILITY, 5 YR 5YR (1.82) (0.77) (0.08) (0.40)  CORP BBB, UTILITY, 5 YR 5YR (1.82) (0.17) (0.08) (0.40)  CORP BBB, UTILITY, 5 YR 5YR (1.82) (0.17) (0.08) (0.40)  CORP BBB, UTILITY, 10 YR 10YR (2.16) (0.51) (0.49) (0.33)  HIYLD BB Rtd 5YR (1.80) (1.44) (0.96) (0.84)	CMBS	AA CMBS 10yr	10YR	(1.80)	(0.30)	(0.12)	(0.28)
CORP A, FINANCE, 2 YR 2YR (1.33) (0.04) (0.07 (0.36) (0.07 (0.36) (0.07 (0.36) (0.07 (0.36) (0.07 (0.36) (0.07 (0.36) (0.07 (0.007 (0.07 (	CMBS	A CMBS 10yr	10YR	(2.12)	(0.06)	0.08	(0.16)
CORP A, FINANCE, 5 YR 5YR (1.53) (0.34) (0.23) (0.46) CORP A, FINANCE, 10 YR 10YR (1.91) (0.72) (0.71) (0.51) CORP A, INDUSTRIAL, 2 YR 2YR (0.94) (0.19) (0.06) (0.39) CORP A, INDUSTRIAL, 5 YR 5YR (1.30) (0.46) (0.32) (0.51) CORP A, INDUSTRIAL, 10 YR 10YR (1.70) (0.73) (0.76) (0.50) CORP A, UTILITY, 2 YR 2YR (1.39) (0.17) (0.02) (0.37) CORP A, UTILITY, 5 YR 5YR (1.90) (0.33) (0.14) (0.34) CORP A, UTILITY, 10 YR 10YR (2.17) (0.58) (0.52) (0.08) CORP BBB, FINANCE, 2 YR 2YR (1.28) 0.05 0.16 (0.23) CORP BBB, FINANCE, 5 YR 5YR (1.55) (0.13) (0.08) (0.35) CORP BBB, FINANCE, 10 YR 10YR (2.00) (0.43) (0.49) (0.43) CORP BBB, INDUSTRIAL, 2 YR 2YR (1.55) (0.17) (0.11) (0.42) CORP BBB, INDUSTRIAL, 5 YR 5YR (1.97) (0.47) (0.44) (0.50) CORP BBB, UTILITY, 2 YR 2YR (1.25) 0.08 0.15 (0.37) CORP BBB, UTILITY, 5 YR 5YR (1.82) (0.17) (0.08) (0.40) CORP BBB, UTILITY, 5 YR 5YR (1.82) (0.17) (0.49) (0.33)	CMBS	AAA CMBS 5yr	5YR	(0.86)	0.66	0.91	1.71
CORP A, FINANCE, 5 YR 5YR (1.53) (0.34) (0.23) (0.46) CORP A, FINANCE, 10 YR 10YR (1.91) (0.72) (0.71) (0.51) CORP A, INDUSTRIAL, 2 YR 2YR (0.94) (0.19) (0.06) (0.39) CORP A, INDUSTRIAL, 5 YR 5YR (1.30) (0.46) (0.32) (0.51) CORP A, INDUSTRIAL, 10 YR 10YR (1.70) (0.73) (0.76) (0.50) CORP A, UTILITY, 2 YR 2YR (1.39) (0.17) (0.02) (0.37) CORP A, UTILITY, 5 YR 5YR (1.90) (0.33) (0.14) (0.34) CORP A, UTILITY, 10 YR 10YR (2.17) (0.58) (0.52) (0.08) CORP BBB, FINANCE, 2 YR 2YR (1.28) 0.05 0.16 (0.23) CORP BBB, FINANCE, 5 YR 5YR (1.55) (0.13) (0.08) (0.35) CORP BBB, FINANCE, 10 YR 10YR (2.00) (0.43) (0.49) (0.43) CORP BBB, INDUSTRIAL, 2 YR 2YR (1.55) (0.17) (0.11) (0.42) CORP BBB, INDUSTRIAL, 5 YR 5YR (1.97) (0.47) (0.44) (0.50) CORP BBB, UTILITY, 2 YR 2YR (1.25) 0.08 0.15 (0.37) CORP BBB, UTILITY, 5 YR 5YR (1.82) (0.17) (0.08) (0.40) CORP BBB, UTILITY, 5 YR 5YR (1.82) (0.17) (0.49) (0.33)							
CORP A, FINANCE, 10 YR 10YR (1.91) (0.72) (0.71) (0.51) (0.50) (0.72) (0.71) (0.51) (0.51) (0.72) (0.71) (0.51) (0.51) (0.72) (0.71) (0.51) (0.51) (0.72) (0.72) (0.73) (0.60) (0.39) (0.72) (0.73) (0.76) (0.50) (0.51) (0.72) (0.73) (0.76) (0.50) (0.73) (0.76) (0.50) (0.73) (0.76) (0.50) (0.77) (0.73) (0.76) (0.50) (0.77) (0.73) (0.76) (0.50) (0.77) (0.73) (0.76) (0.50) (0.77) (0.73) (0.76) (0.50) (0.77) (0.77) (0.77) (0.77) (0.77) (0.77) (0.78) (0.77) (0.78) (0.77) (0.78) (0.77) (0.78) (0	CORP	A, FINANCE, 2 YR	2YR	(1.33)	(0.04)	0.07	(0.36)
CORP A, INDUSTRIAL, 2 YR 2YR (0.94) (0.19) (0.06) (0.39) (0.07) (	CORP	A, FINANCE, 5 YR	5YR	(1.53)	(0.34)	(0.23)	(0.46)
CORP A, INDUSTRIAL, 5 YR 5YR (1.30) (0.46) (0.32) (0.51) (CORP A, INDUSTRIAL, 10 YR 10YR (1.70) (0.73) (0.76) (0.50) (CORP A, UTILITY, 2 YR 2YR (1.39) (0.17) (0.02) (0.37) (CORP A, UTILITY, 5 YR 5YR (1.90) (0.33) (0.14) (0.34) (CORP A, UTILITY, 10 YR 10YR (2.17) (0.58) (0.52) (0.08) (CORP BBB, FINANCE, 2 YR 2YR (1.28) (0.55) (0.16) (0.23) (CORP BBB, FINANCE, 5 YR 5YR (1.55) (0.13) (0.08) (0.35) (CORP BBB, FINANCE, 10 YR 10YR (2.00) (0.43) (0.49) (0.43) (CORP BBB, INDUSTRIAL, 2 YR 2YR (1.55) (0.17) (0.11) (0.42) (CORP BBB, INDUSTRIAL, 5 YR 5YR (1.57) (0.72) (0.79) (0.50) (CORP BBB, UTILITY, 2 YR 2YR (1.55) (0.17) (0.11) (0.42) (CORP BBB, UTILITY, 2 YR 2YR (1.55) (0.17) (0.79) (0.50) (CORP BBB, UTILITY, 5 YR 5YR (1.82) (0.17) (0.08) (0.37) (CORP BBB, UTILITY, 10 YR 10YR (2.16) (0.51) (0.49) (0.33) (CORP BBB, UTILITY, 10 YR 10YR (2.16) (0.51) (0.49) (0.33) (CORP BBB, UTILITY, 10 YR 10YR (2.16) (0.51) (0.49) (0.33) (CORP BBB, UTILITY, 10 YR 10YR (2.16) (0.51) (0.49) (0.33) (CORP BBB, UTILITY, 10 YR 10YR (2.16) (0.51) (0.49) (0.33)	CORP	A, FINANCE, 10 YR	10YR	(1.91)	(0.72)	(0.71)	(0.51)
CORP         A, INDUSTRIAL, 10 YR         10YR         (1.70)         (0.73)         (0.76)         (0.50)           CORP         A, UTILITY, 2 YR         2YR         (1.39)         (0.17)         0.02         (0.37)           CORP         A, UTILITY, 5 YR         5YR         (1.90)         (0.33)         (0.14)         (0.34)           CORP         A, UTILITY, 10 YR         10YR         (2.17)         (0.58)         (0.52)         (0.08)           CORP         BBB, FINANCE, 2 YR         2YR         (1.28)         0.05         0.16         (0.23)           CORP         BBB, FINANCE, 5 YR         5YR         (1.55)         (0.13)         (0.08)         (0.35)           CORP         BBB, INDUSTRIAL, 2 YR         2YR         (2.00)         (0.43)         (0.49)         (0.43)           CORP         BBB, INDUSTRIAL, 5 YR         5YR         (1.97)         (0.47)         (0.44)         (0.50)           CORP         BBB, UTILITY, 2 YR         2YR         (1.25)         (0.072)         (0.79)         (0.50)           CORP         BBB, UTILITY, 5 YR         5YR         (1.82)         (0.17)         (0.08)         (0.40)           CORP         BBB, UTILITY, 10 YR         10YR         (2	CORP	A, INDUSTRIAL, 2 YR	2YR	(0.94)	(0.19)	(0.06)	(0.39)
CORP         A, UTILITY, 2 YR         2YR         (1.39)         (0.17)         0.02         (0.37)           CORP         A, UTILITY, 5 YR         5YR         (1.90)         (0.33)         (0.14)         (0.34)           CORP         A, UTILITY, 10 YR         10YR         (2.17)         (0.58)         (0.52)         (0.08)           CORP         BBB, FINANCE, 2 YR         2YR         (1.28)         0.05         0.16         (0.23)           CORP         BBB, FINANCE, 5 YR         5YR         (1.55)         (0.13)         (0.08)         (0.35)           CORP         BBB, FINANCE, 10 YR         10YR         (2.00)         (0.43)         (0.49)         (0.43)           CORP         BBB, INDUSTRIAL, 2 YR         2YR         (1.55)         (0.17)         (0.11)         (0.42)           CORP         BBB, INDUSTRIAL, 5 YR         5YR         (1.97)         (0.47)         (0.44)         (0.50)           CORP         BBB, UTILITY, 2 YR         2YR         (1.25)         (0.08)         0.15         (0.37)           CORP         BBB, UTILITY, 5 YR         5YR         (1.82)         (0.17)         (0.08)         (0.40)           CORP         BBB, UTILITY, 10 YR         10YR         (2.16)	CORP	A, INDUSTRIAL, 5 YR	5YR	(1.30)	(0.46)	(0.32)	(0.51)
CORP A, UTILITY, 5 YR 5YR (1.90) (0.33) (0.14) (0.34) (0.34) (0.72) (0.79) (0.7	CORP	A, INDUSTRIAL, 10 YR	10YR	(1.70)	(0.73)	(0.76)	(0.50)
CORP         A, UTILITY, 10 YR         10YR         (2.17)         (0.58)         (0.52)         (0.08)           CORP         BBB, FINANCE, 2 YR         2YR         (1.28)         0.05         0.16         (0.23)           CORP         BBB, FINANCE, 5 YR         5YR         (1.55)         (0.13)         (0.08)         (0.35)           CORP         BBB, FINANCE, 10 YR         10YR         (2.00)         (0.43)         (0.49)         (0.43)           CORP         BBB, INDUSTRIAL, 2 YR         2YR         (1.55)         (0.17)         (0.11)         (0.42)           CORP         BBB, INDUSTRIAL, 5 YR         5YR         (1.97)         (0.47)         (0.44)         (0.50)           CORP         BBB, INDUSTRIAL, 10 YR         10YR         (2.16)         (0.72)         (0.79)         (0.50)           CORP         BBB, UTILITY, 2 YR         2YR         (1.25)         0.08         0.15         (0.37)           CORP         BBB, UTILITY, 5 YR         5YR         (1.82)         (0.17)         (0.08)         (0.49)         (0.33)           HIYLD         BB Rtd         5YR         (1.80)         (1.44)         (0.96)         (0.84)	CORP	A, UTILITY, 2 YR	2YR	(1.39)	(0.17)	0.02	(0.37)
CORP         BBB, FINANCE, 2 YR         2YR         (1.28)         0.05         0.16         (0.23)           CORP         BBB, FINANCE, 5 YR         5YR         (1.55)         (0.13)         (0.08)         (0.35)           CORP         BBB, FINANCE, 10 YR         10YR         (2.00)         (0.43)         (0.49)         (0.43)           CORP         BBB, INDUSTRIAL, 2 YR         2YR         (1.55)         (0.17)         (0.11)         (0.42)           CORP         BBB, INDUSTRIAL, 5 YR         5YR         (1.97)         (0.47)         (0.44)         (0.50)           CORP         BBB, INDUSTRIAL, 10 YR         10YR         (2.16)         (0.72)         (0.79)         (0.50)           CORP         BBB, UTILITY, 2 YR         2YR         (1.25)         0.08         0.15         (0.37)           CORP         BBB, UTILITY, 5 YR         5YR         (1.82)         (0.17)         (0.08)         (0.49)           CORP         BBB, UTILITY, 10 YR         10YR         (2.16)         (0.51)         (0.49)         (0.33)           HIYLD         BB Rtd         5YR         (1.80)         (1.44)         (0.96)         (0.84)	CORP	A, UTILITY, 5 YR	5YR	(1.90)	(0.33)	(0.14)	(0.34)
CORP         BBB, FINANCE, 5 YR         5YR         (1.55)         (0.13)         (0.08)         (0.35)           CORP         BBB, FINANCE, 10 YR         10YR         (2.00)         (0.43)         (0.49)         (0.43)           CORP         BBB, INDUSTRIAL, 2 YR         2YR         (1.55)         (0.17)         (0.11)         (0.42)           CORP         BBB, INDUSTRIAL, 5 YR         5YR         (1.97)         (0.47)         (0.44)         (0.50)           CORP         BBB, INDUSTRIAL, 10 YR         10YR         (2.16)         (0.72)         (0.79)         (0.50)           CORP         BBB, UTILITY, 2 YR         2YR         (1.25)         0.08         0.15         (0.37)           CORP         BBB, UTILITY, 5 YR         5YR         (1.82)         (0.17)         (0.08)         (0.40)           CORP         BBB, UTILITY, 10 YR         10YR         (2.16)         (0.51)         (0.49)         (0.33)           HIYLD         BB Rtd         5YR         (1.80)         (1.44)         (0.96)         (0.84)	CORP	A, UTILITY, 10 YR	10YR	(2.17)	(0.58)	(0.52)	(0.08)
CORP         BBB, FINANCE, 10 YR         10YR         (2.00)         (0.43)         (0.49)         (0.43)           CORP         BBB, INDUSTRIAL, 2 YR         2YR         (1.55)         (0.17)         (0.11)         (0.42)           CORP         BBB, INDUSTRIAL, 5 YR         5YR         (1.97)         (0.47)         (0.44)         (0.50)           CORP         BBB, INDUSTRIAL, 10 YR         10YR         (2.16)         (0.72)         (0.79)         (0.50)           CORP         BBB, UTILITY, 2 YR         2YR         (1.25)         0.08         0.15         (0.37)           CORP         BBB, UTILITY, 5 YR         5YR         (1.82)         (0.17)         (0.08)         (0.40)           CORP         BBB, UTILITY, 10 YR         10YR         (2.16)         (0.51)         (0.49)         (0.33)           HIYLD         BB Rtd         5YR         (1.80)         (1.44)         (0.96)         (0.84)	CORP	BBB, FINANCE, 2 YR	2YR	(1.28)	0.05	0.16	(0.23)
CORP         BBB, INDUSTRIAL, 2 YR         2YR         (1.55)         (0.17)         (0.11)         (0.42)           CORP         BBB, INDUSTRIAL, 5 YR         5YR         (1.97)         (0.47)         (0.44)         (0.50)           CORP         BBB, INDUSTRIAL, 10 YR         10YR         (2.16)         (0.72)         (0.79)         (0.50)           CORP         BBB, UTILITY, 2 YR         2YR         (1.25)         0.08         0.15         (0.37)           CORP         BBB, UTILITY, 5 YR         5YR         (1.82)         (0.17)         (0.08)         (0.40)           CORP         BBB, UTILITY, 10 YR         10YR         (2.16)         (0.51)         (0.49)         (0.33)           HIYLD         BB Rtd         5YR         (1.80)         (1.44)         (0.96)         (0.84)	CORP	BBB, FINANCE, 5 YR	5YR	(1.55)	(0.13)	(0.08)	(0.35)
CORP         BBB, INDUSTRIAL, 5 YR         5YR         (1.97)         (0.47)         (0.44)         (0.50)           CORP         BBB, INDUSTRIAL, 10 YR         10YR         (2.16)         (0.72)         (0.79)         (0.50)           CORP         BBB, UTILITY, 2 YR         2YR         (1.25)         0.08         0.15         (0.37)           CORP         BBB, UTILITY, 5 YR         5YR         (1.82)         (0.17)         (0.08)         (0.40)           CORP         BBB, UTILITY, 10 YR         10YR         (2.16)         (0.51)         (0.49)         (0.33)           HIYLD         BB Rtd         5YR         (1.80)         (1.44)         (0.96)         (0.84)	CORP	BBB, FINANCE, 10 YR	10YR	(2.00)	(0.43)	(0.49)	(0.43)
CORP         BBB, INDUSTRIAL, 10 YR         10 YR         (2.16)         (0.72)         (0.79)         (0.50)           CORP         BBB, UTILITY, 2 YR         2YR         (1.25)         0.08         0.15         (0.37)           CORP         BBB, UTILITY, 5 YR         5YR         (1.82)         (0.17)         (0.08)         (0.40)           CORP         BBB, UTILITY, 10 YR         10YR         (2.16)         (0.51)         (0.49)         (0.33)           HIYLD         BB Rtd         5YR         (1.80)         (1.44)         (0.96)         (0.84)	CORP	BBB, INDUSTRIAL, 2 YR	2YR	(1.55)	(0.17)	(0.11)	(0.42)
CORP         BBB, UTILITY, 2 YR         2YR         (1.25)         0.08         0.15         (0.37)           CORP         BBB, UTILITY, 5 YR         5YR         (1.82)         (0.17)         (0.08)         (0.40)           CORP         BBB, UTILITY, 10 YR         10YR         (2.16)         (0.51)         (0.49)         (0.33)           HIYLD         BB Rtd         5YR         (1.80)         (1.44)         (0.96)         (0.84)	CORP	BBB, INDUSTRIAL, 5 YR	5YR	(1.97)	(0.47)	(0.44)	(0.50)
CORP         BBB, UTILITY, 5 YR         5YR         (1.82)         (0.17)         (0.08)         (0.40)           CORP         BBB, UTILITY, 10 YR         10YR         (2.16)         (0.51)         (0.49)         (0.33)           HIYLD         BB Rtd         5YR         (1.80)         (1.44)         (0.96)         (0.84)	CORP	BBB, INDUSTRIAL, 10 YR	10YR	(2.16)	(0.72)	(0.79)	(0.50)
CORP BBB, UTILITY, 10 YR 10YR (2.16) (0.51) (0.49) (0.33)  HIYLD BB Rtd 5YR (1.80) (1.44) (0.96) (0.84)	CORP	BBB, UTILITY, 2 YR	2YR	(1.25)	0.08	0.15	(0.37)
HIYLD BB Rtd 5YR (1.80) (1.44) (0.96) (0.84)	CORP	BBB, UTILITY, 5 YR	5YR	(1.82)	(0.17)	(0.08)	(0.40)
	CORP	BBB, UTILITY, 10 YR	10YR	(2.16)	(0.51)	(0.49)	(0.33)
HIYLD B Rtd 5YR (1.81) (1.33) (1.06) (0.80)	HIYLD	BB Rtd	5YR	(1.80)	(1.44)	(0.96)	(0.84)
	HIYLD	B Rtd	5YR	(1.81)	(1.33)	(1.06)	(0.80)

Expensive

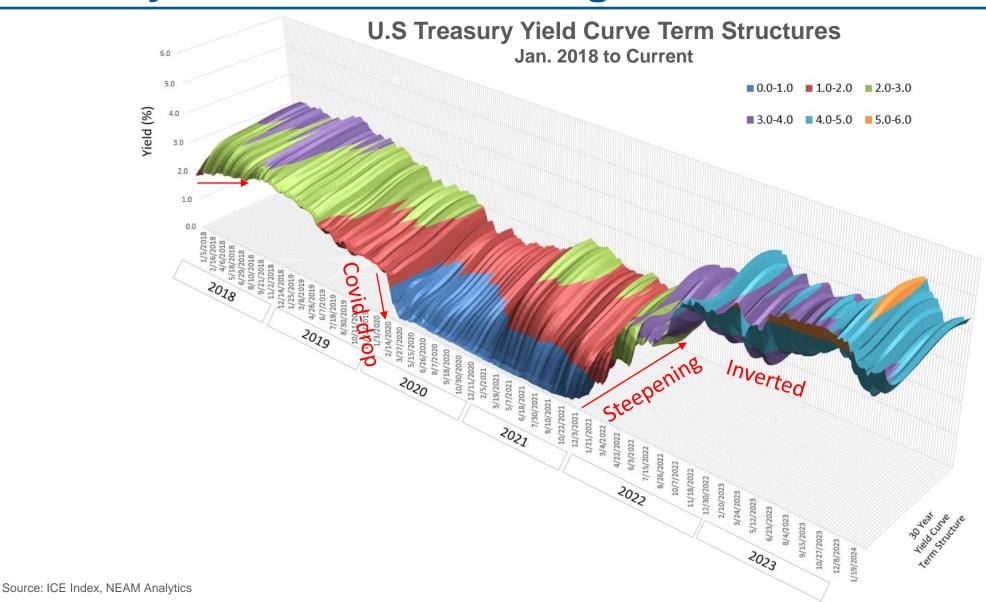
Cheap

Expensive?

Source: ICE Index, NEAM Analytics

## **Treasury Yields at Relative Higher Levels**

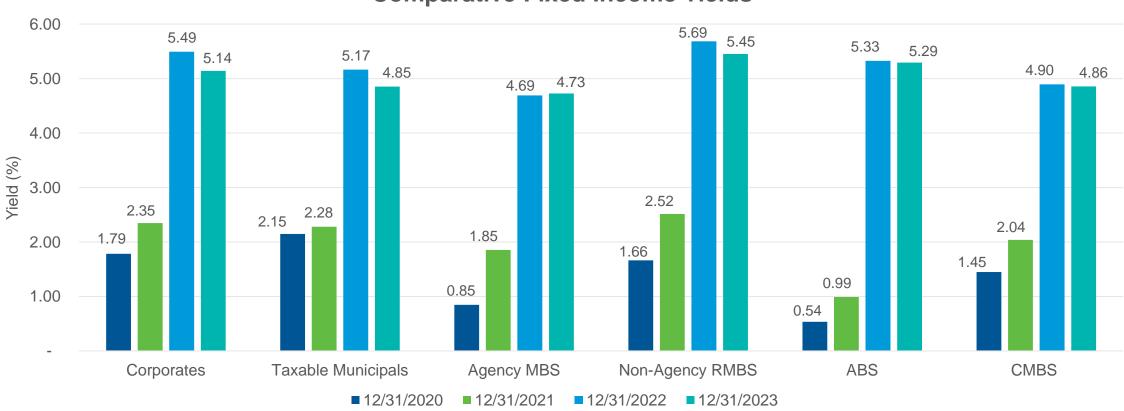




#### **Attractive Opportunities in Fixed Income**





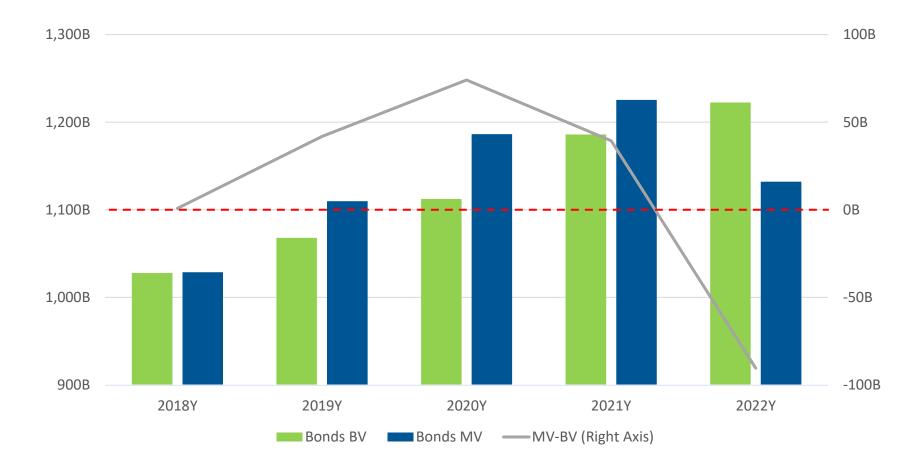


The current interest rate environment allows insurance companies to rebuild book yield, increase investment income, and grow surplus.

Source: Bloomberg, ICE BofA, NEAM.

## **Higher Rates Lead to Bond Market Value Decline**





Multiple rate increases depreciated the market value of industry-wide bond holdings, bringing it below statutory book value as of year-end 2022

Source: S&P Market Intelligence, NEAM Analytics

# Long-Term Enterprise Value Optimization: Return and Risk Trade-Off Analysis

## **Efficient Frontier – Enterprise Return / Risk Tradeoff**





## Asset optimization evaluated under an enterprise context

# Return and risk metrics driven by company objectives

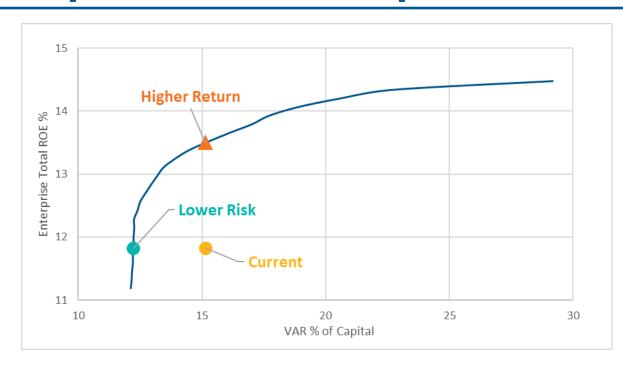
Source: NEAM Analytics

Figures are for illustrative purposes only.

Results	Current	Lower Risk	Higher Return
Enterprise Statistics			
Total Return on Equity	11.8	11.8	13.5
Earnings Risk (Std Dev)	8.8	7.6	9.1
99.0 VAR (% of Capital)	15.2	12.2	15.2
99.0 T-VAR (% of Capital)	17.6	14.3	17.6
Total Return on Assets	3.4	3.4	4.1
Investment Leverage	2.5	2.5	2.5
Product Leverage	0.9	0.9	0.9
Product Margin	4.1	4.1	4.1

## **Enterprise Holistic Impact Assessment**





- Asset allocation assessed under multiple macro and micro return and risk metrics
- Directional guidepost for core vs. risk asset allocations
- > Enhanced enterprise decision making

Source: NEAM Analytics

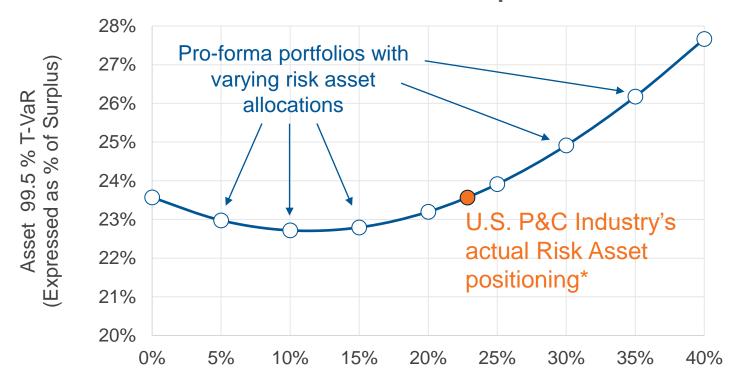
Figures are for illustrative purposes only.

Results	Current	Lower	Higher	
results	Garrent	Risk	Return	
<b>Enterprise Statistics</b>				
Total Return on Equity	11.8	11.8	13.5	
Total Return on Assets	3.37	3.37	4.05	
Add. Return/Risk Metrics				
Duration (OAD)	2.5	2.7	2.7	
Book Yield (FI)	4.18	4.12	4.89	
Market Yield (OAY FI)	5.14	5.06	5.74	
Default Loss (\$)	10.4	8.6	16.1	
NAIC RBC (\$)	56.3	42.2	84.7	
AMB CAR (\$)	113.3	119.8	222.6	
Average Rating	AA	AA	AA-	
BBB (%)	7.4	4.6	7.5	
<bbb (%)<="" td=""><td>5.3</td><td>2.1</td><td>12.1</td></bbb>	5.3	2.1	12.1	
Non-FI (%)	2.0	3.7	6.0	
Sector Distribution				
Short Term	25.2	9.6	7.1	
Govt_Agncy	5.2	18.0	3.7	
Municipal	0.2	2.4	0.1	
Muni-Tax	3.5	12.7	8.8	
Inv Grade Corp	33.9	25.9	29.4	
Structured Sec.	24.8	27.8	34.9	
Core Fixed Income	92.8	96.3	84.0	
High Yield / Bank Loans	5.2	-	10.0	
Equity	2.0	3.7	6.0	
Risk Assets	7.2	3.7	16.0	
Total	100.0	100.0	100.0	

#### Risk Asset's Role in Portfolio Diversification



#### **Risk Asset Allocation and Impact to Asset Risk**



Risk Assets (High Yield, Equities and Alternatives) as % of Portfolio

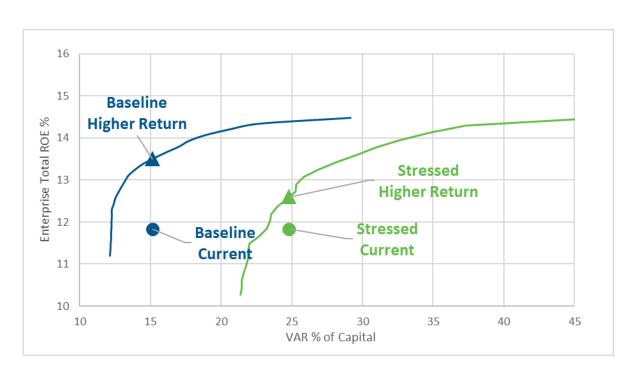
Source: NEAM Analytics Figures are for illustrative purposes only.

- Risk Assets are a source for diversification
- Reducing Risk Assets may not reduce Enterprise risk necessarily depending upon a portfolio's positioning relative to its Risk Asset "inflection" point
- Risk Assets may be evaluated for their contribution to income return versus anticipated price appreciation

\*excl. Berkshire Hathaway

#### **Stress Test – Understand the Consequence of Being Wrong**





- Enterprise risk metrics changed significantly
- Diversifications affect core vs. risk asset allocations

Source: NEAM Analytics

Figures are for illustrative purposes only.

Deculto	Baseline	Higher	Stressed	Higher
Results	Current	Return	Current	Return
Enterprise Statistics				
Total Return on Equity	11.8	13.5	11.8	12.6
Earnings Risk (Std Dev)	8.8	9.1	12.3	12.5
99.0 VAR (% of Capital)	15.2	15.2	24.8	24.8
Total Return on Assets	3.37	4.05	3.37	3.69
Add. Return/Risk Metrics				
Duration (OAD)	2.5	2.7	2.5	2.7
Book Yield (FI)	4.18	4.89	4.18	4.50
Market Yield (OAY FI)	5.14	5.74	5.14	5.32
Default Loss (\$)	10.4	16.1	10.4	10.1
NAIC RBC (\$)	56.3	84.7	56.3	55.7
AMB CAR (\$)	113.3	222.6	113.3	120.9
Average Rating	AA	AA-	AA	AA-
BBB (%)	7.4	7.5	7.4	7.8
<bbb (%)<="" td=""><td>5.3</td><td>12.1</td><td>5.3</td><td>5.8</td></bbb>	5.3	12.1	5.3	5.8
Non-FI (%)	2.0	6.0	2.0	2.7
Sector Distribution				
Short Term	25.2	7.1	25.2	7.1
Govt_Agncy	5.2	3.7	5.2	3.7
Municipal	0.2	0.1	0.2	0.1
Muni-Tax	3.5	8.8	3.5	10.5
Inv Grade Corp	33.9	29.4	33.9	32.1
Structured Sec.	24.8	34.9	24.8	<u>39.1</u>
Core Fixed Income	92.8	84.0	92.8	92.5
High Yield / Bank Loans	5.2	10.0	5.2	4.8
<u>Equity</u>	2.0	6.0	2.0	2.7
Risk Assets	7.2	16.0	7.2	7.5
Total	100.0	100.0	100.0	100.0

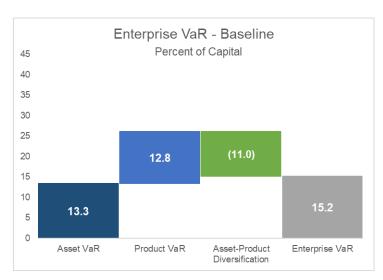
#### Stress Test – Understand the Consequence of Being Wrong

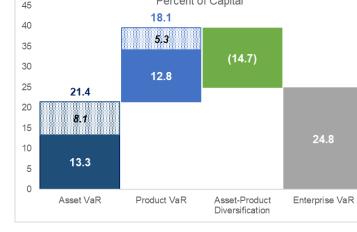


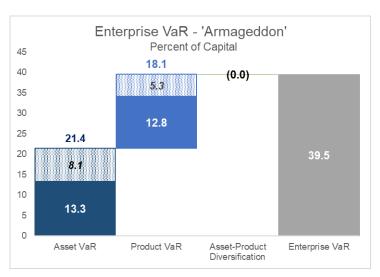
- Assess the consequences of being wrong.
- Stress testing assumptions to validate the integrity of enterprise risk models and their estimates.
- Example stress testing correlation assumptions, risk dependencies and the sensitivity to enterprise risk estimates of assumed diversification are key analytics for enterprise risk intelligence.

Enterprise VaR - 'Black Swan'

Percent of Capital







#### **Baseline Assumption:**

- Observed or expected correlations used as a baseline consideration.
- Enterprise risk estimates are developed.
- Enterprise diversification benefits are assessed.

#### Figures are for illustrative purposes only.

#### 'Black Swan':

- Separate correlation stresses for assets and for liabilities.
- Implied diversification benefits between assets and liabilities are preserved.
- Sensitivity of enterprise risk estimates is explored.

#### 'Armageddon':

- All enterprise diversification benefits are removed.
- Implications from correlation assumptions to capital-at-risk modelling for the enterprise are better understood.

#### Highlights from Recent NEAM's EBAA Studies



#### **Case Studies:**

- Restrictive (2023) versus accommodative (2021) monetary policy what's the impact to EBAA?
- 10 U.S. P&C insurers with regular and ongoing EBAA updates by NEAM were considered for an anecdotal perspective.

Company	Product Line Focus*	2023 Invested Asset Size Range (\$mm)
1	Commercial	>1000
2	Commercial	500-1000
3	Commercial	500-1000
4	Personal	500-1000
5	Commercial	100-500
6	Personal	100-500
7	Multiline	100-500
8	Commercial	100-500
9	Commercial	<100
10	Commercial	<100

Baseline Medians (of the 10)	2023	2021	Difference
ROE	6.7%	6.4%	0.3%
ROA	3.2%	2.7%	0.6%
Book Yields	3.5%	2.7%	0.8%
Market Yields	5.2%	1.4%	3.9%
Embedded Gain / Loss % of Assets	-6.0%	4.8%	-10.8%
Core FI Allocation	83%	84%	-1.0%
Duration	4.2	4.3	-0.09
Average Credit Quality	AA-	AA-	N/C
Investment Leverage	1.7x	1.8x	-0.1x
T-VaR of Capital (99.5%)	26%	30%	-4.3%

<sup>\*</sup> These were subjective classifications. For example, some predominately commercial focused carriers in the study had small personal lines exposure as well. Source: NEAM

Figures are for illustrative purposes only.

## Highlights from Recent NEAM's EBAA Studies



#### 2023

#### 2021

#### SECTOR **ROTATION**

- (4) Rotate the core FI allocation; more weight to structured securities.
- (3) Add more to core FI, reduce risk assets / non-core.
- (3) Add more to non-core / risk assets.

- (9) Add more to non-core / risk assets.
- (1) Little change in sector target ranges.

#### **DURATION**

- (9) Little change in duration targets.
- (1) Shorten duration.

- (8) Some degree of duration extension.
- (2) Little change in duration targets.

#### CREDIT **QUALITY**

- (10) No change in average credit quality.
- (1) Add more to non-traditional 'BBB'.

- (6) No change in average credit quality.
- (4) Average credit quality target **lowered** by one notch.

#### **NET INCOME TAXES**

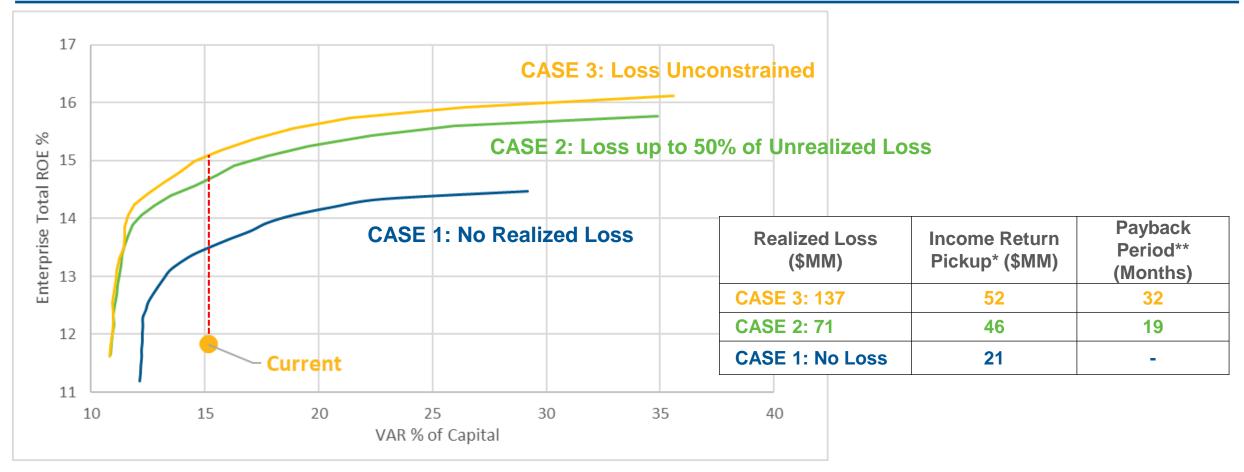
- (5) Limited losses realized, concerned about impact to net income / surplus.
- (3) No net realized losses allowed.
- (2) At a gain, limited gains realized, tempered with tax implications.

- (9) At a gain, **realizing gains** and tax impact not an issue.
- (1) At a gain, limited gains realized, tempered with tax implications.

Figures are for illustrative purposes only. Actual results will vary by insurance company.

## Loss Realization "Bookend" Analysis





- Allowing for loss realization in optimization impacts the respective efficient frontiers and opportunities for risk-adjusted return.
- As more realized loss is allowed, marginal return pickup decreases, making payback period longer.

Comparison between the current and Similar T-VAR points / \*\* Realized loss divided by Income Return Pickup (Yearly) Figures are for illustrative purposes only.



## **Takeaways**



- 1. Insurance Asset Strategy: Balancing insurance product/liability characteristics with enterprise goals.
- 2. Fixed Income Prospects: Current conditions favor boosting yield, income, and surplus via quality bonds.
- 3. Risk Assets: Key for diversification and potential return enhancement.
- 4. Stress and Scenario Testing: Essential for understanding potential impacts, aiding planning and risk management.
- 5. Tradeoff Analysis: High interest rates may lead to unrealized losses for the bond portfolio. Evaluating opportunities using tradeoff analysis is crucial.