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# **US High Yield Market Update**

Mike Graham

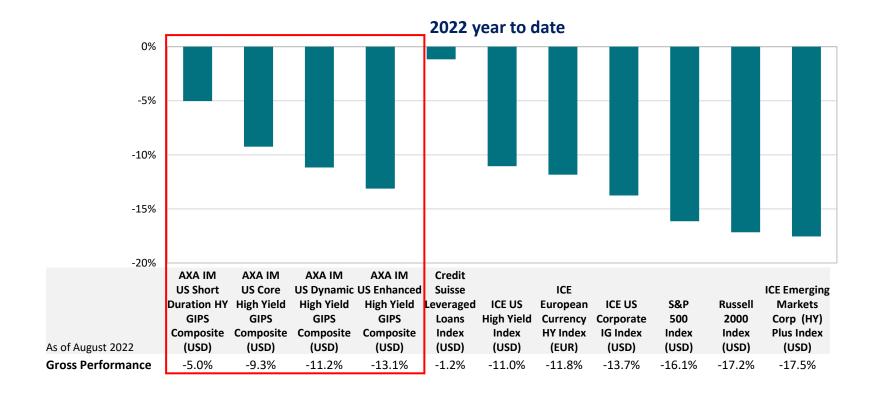
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September 22<sup>nd</sup> 2022



# **Market Returns vs AXA IM US High Yield Strategies**

#### Year to date

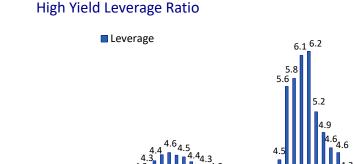




## **High Yield Market Fundamentals**

### Leverage and Interest Coverage

1009 3009 1010 3010 1011 3011

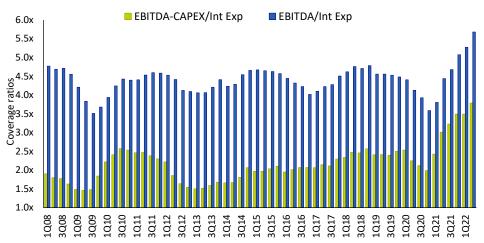


1Q15 3Q15 1Q16 3Q16 1Q17

3Q17 1Q18 3Q18 1Q19 3Q19 1Q20 1Q21

#### High Yield Coverage Ratio

3Q12 1Q13 3Q13 1Q14 3Q14



- Meaningful disparity in leverage trends at the sector level, with 12 out of 19 sectors experiencing a year-over-year decline in leverage.
- Large declines in leverage are coming from commodity driven sectors (Energy, Metals&Mining), and sectors still rebounding from Covid (Gaming, Leisure, Transportation).
- Sectors experiencing an increase in leverage include Media, Paper&Packaging, and Cable.
- Notable sector-specific observations:
  - Packaging Strong Recovery from Q1 earnings, highlighting resilience of industry and contractual pricing power
  - Consumer Goods the most challenged sector, facing inflation headwinds and potentially a weakening consumer
  - Leisure robust results, higher pricing more than offsetting inflation. Specific companies experiencing higher pricing and higher margins than 2019 levels.
  - Healthcare labor cost inflation and weaker non-covid volume trends have weighed on results for some companies
  - **Software** Outperforming other sectors, but starting to see pressure on labor cost inflation
- Interest Coverage increased to 5.7x, the highest level since JPM started tracking the data in early 2008.



6.5x

6.0x

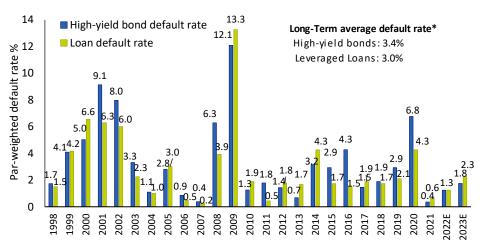
5.5x FBITDA 5.0x 4.5x 4.5x

4.0x

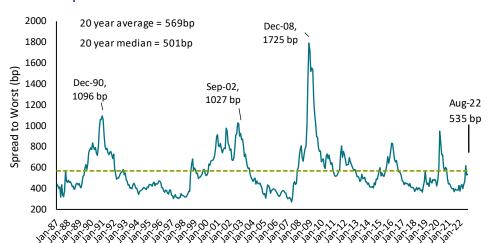
# **High Yield Market Fundamentals**

## Defaults and spread to worst

## High-yield bond and loan default rates



### Spread to Worst <sup>2</sup>



- Spreads have remained relatively range-bound due to default expectations remaining at manageable levels
- Despite the increased risk of recession, we do not see a spike in default rates for the US High Yield market to levels previously experienced in recessions.
  - No large, "problem" sector today to lead the default rate meaningfully higher
  - Higher credit quality in today's US High Yield market
    - BB-rated securities 53% of market, CCC-rated securities 11% of market
  - Corporate Liquidity still adequate, even in more stressed issuers
- Investors under-appreciating the lower coupon / lower dollar price characteristic of today's market and the impact that has on current spreads relative to historical spreads



# **Breakdown of the Riskiest Segments of the US High Yield Market**

## Attractive opportunities and risks to avoid

## **ICE US High Yield Index (H0A0)**

Custom Market	Weight
Segment/ Sector	%
Shortest Duration	6.04
Short Duration	9.59
0-5% Yield	0.47
5-6% Yield	5.92
6-7% Yield	22.70
7-8% Yield	19.47
8-9% Yield	9.15
9+% Yield	24.53
Automotive	0.66
Banking	0.09
Basic Industry	1.79
Capital Goods	1.49
Consumer Goods	0.75
Energy	2.23
Financial Services	1.75
Healthcare	2.61
Insurance	0.45
Leisure	2.21
Media	2.25
Real Estate	0.89
Retail	1.57
Services	1.76
Techn. & Electr.	1.03
Telecom	2.57
Transportation	0.32
Utility	0.10

Custom Market Segment / Ticker	Weight %
<b>Shortest Duration</b>	6.04
Short Duration	9.59
0-5% Yield	0.47
5-6% Yield	5.92
6-7% Yield	22.71
7-8% Yield	19.47
8-9% Yield	9.15
9+% Yield	24.53
СҮН	0.76
DISH	0.73
BHCCN	0.73
SFRFP	0.69
CCL	0.65
RCL	0.41
LUMN	0.39
CSCHLD	0.38
CVNA	0.34
SVC	0.33
Long Duration	2.13

<b>Custom Market</b>	Weight
Segment / Quality	%
Shortest Duration	6.04
Short Duration	9.59
0-5% Yield	0.47
5-6% Yield	5.92
6-7% Yield	22.70
7-8% Yield	19.47
8-9% Yield	9.15
9+% Yield	24.53
BB	1.90
D.	12.00
В	12.68
CCC or Lower	9.95
Long Duration	2.12

Quality / Sector	Weight %
ВВ	52.57
В	36.30
CCC or Lower	11.13
Automotive	0.42
<b>Basic Industry</b>	0.65
<b>Capital Goods</b>	1.09
<b>Consumer Goods</b>	0.48
Energy	0.78
Financial Services	0.33
Healthcare	1.49
Insurance	0.78
Leisure	1.06
Media	0.65
Real Estate	0.18
Retail	0.81
Services	1.17
Techn. & Electr.	0.67
Telecom	0.49
Transportation	0.10

Quality / Ticker	Weight %
BB	52.57
В	36.30
CCC or Lower	11.13
BHCCN	0.43
CVNA	0.34
RIG	0.33
COMM	0.26
CZR	0.21
NCLH	0.21
СҮН	0.20
NEWLSQ	0.19
SFRFP	0.18

Quality / Custom Market Segment	Weight %
BB	52.57
В	36.30
CCC or Lower	11.13
SD1	0.25
SD2	0.21
7-8% Yield	0.25
8-9% Yield	0.47
9+% Yield	9.95



# **Opportunities in High Yield Credit**

# **Examples**

Issuer (anonymous)	Industry	Quality	Public / Private	Leverage	Loan-to- Value at Market Price	Duration- to-Worst	Yield-to- worst
Company A	Packaging	Caa2/CCC+	Private	6.4x	62%	3.6	12.7%
Company B	Support Services	Caa2/CCC+	Private	6.6x	60%	3.7	12.4%
Company C	Chemicals	Caa1/B-	Private	7.3x	53%	4.2	12.0%
Company D	Packaging	Caa2/CCC	Private	5.6x	49%	2.2	11.3%
Company E	Packaging	Caa2/CCC+	Private	6.5x	64%	5.1	10.9%
Company F	Chemicals	Caa1/B-	Private	3.1x	61%	5.2	9.7%
Company G	Chemicals	B3/CCC+	Private	6.6x	45%	5.4	9.6%
Company H	Energy	B3/B	Public	3.0x	31%	2.9	9.0%
Company I	Data Services	Caa1/CCC+	Public	4.6x	37%	5.4	8.5%
Company J	Cable	B1/BB-	Public	4.5x	50%	5.5	7.5%
Company K	Media	B2/B+	Public	3.4x	48%	5.1	6.9%
Company L	Lodging	Ba2/BB+	Public	4.1x	21%	4.6	6.2%
Company M	Healthcare Services	Ba1/BB+	Public	3.5x	18%	3.5	6.0%





# **AXA IM US High Yield - Performance Comparison**

As of August 31, 2022

Strategy GIPS Composite Returns	2021	2022	2022	2022		Annua	lized %			
(gross of fees)	FY	1Q	2Q	YTD	1 year	3 year	5 year	Since inception	Strategy AUM (\$mil)	Inception Date
AXA IM US Short Duration HY	3.80	-1.39	-6.34	-5.03	-4.26	1.48	2.71	5.21	\$6,254	30-Sep-01
Strategy GIPS Composite Returns	2021	2022	2022	2022		Annua	lized %			
(gross of fees)	FY	1Q	2Q	YTD	1 year	3 year	5 year	Since inception	Strategy AUM (\$mil)	Inception Date
AXA IM US Enhanced High Yield	6.46	-3.49	-15.51	-13.12	-11.82	1.09		4.52	\$202	31-Dec-18
Strategy GIPS Composite Returns	2021	2022	2022	2022	Annualized %					
(gross of fees)	FY	1Q	2Q	YTD	1 year	3 year	5 year	Since inception	Strategy AUM (\$mil)	Inception Date
AXA IM US Core High Yield	5.04	-3.58	-9.57	-9.25	-8.18	2.06	3.23	7.45	\$6,154	30-Sep-01
ICE BoA US High Yield Index	5.36	-4.51	-9.97	-11.04	-10.43	0.80	2.43	7.00		
Alpha	-0.32	0.93	0.41	1.79	2.25	1.26	0.80	0.44		
Strategy GIPS Composite Returns	2021	2022	2022	2022	Annualized %					
(gross of fees)	FY	1Q	2Q	YTD	1 year	3 year	5 year	Since inception	Strategy AUM (\$mil)	Inception Date
AXA IM US Dynamic High Yield	7.41	-3.77	-13.50	-11.16	-9.71	4.91	4.93	5.75	\$992	28-Feb-14
ICE BoA US High Yield Index	5.36	-4.51	-9.97	-11.04	-10.43	0.80	2.43	3.47		
Alpha	2.05	0.74	-3.53	-0.11	0.72	4.11	2.50	2.27		



# **AXA IM Short Duration High Yield GIPS Composite**

#### **Gross Performance**

Last 12 Months	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22
Composite	0.09	0.05	(0.40)	1.07	(0.94)	(0.22)	(0.23)	(1.79)	0.18	(4.81)	4.73	(1.81)
Index	0.03	(0.18)	(1.03)	1.88	(2.75)	(0.90)	(0.93)	(3.64)	0.25	(6.81)	6.02	(2.39)
2020	Q1	Q2	Q3	Q4	FY 2020	i	2021	Q1	Q2	Q3	Q4	FY 2021
Composite	(6.07)	5.56	2.92	2.29	4.38		Composite	1.03	1.39	0.62	0.72	3.80
Index	(13.12)	9.61	4.71	6.48	6.17		Index	0.90	2.77	0.94	0.66	5.36
2022	Q1	Q2	Q3	Q4	YTD 2022							
Composite	(1.39)	(6.34)			(5.03)							
Index	(4.51)	(9.97)			(11.04)							

- During 2018, our US Short Duration High Yield strategy was able to produce a positive total return despite the negative return generated by the US High Yield Index. Our strategy also outperformed most other asset classes in what was a particularly difficult year.
- During 2019, we posted a return of 8.5%, compared to the 5-7% expectation that we gave to investors at the beginning of the year. SDHY returns continue to be more stable and predictable than most other asset classes.
- During 2020, the strategy posted a total return of 4.4%, which was at the higher end of the 3-5% forecast that we gave at the beginning of 2020. This was achieved despite all the Covid-related disruption in the market.
- During 2021, the strategy returned +3.8%, right in-line with our +3-5% expectation, and captured a little over 70% of the market return, in-line with our historical average.



# **Resiliency following down markets**

SDHY has historically bounced-back following periods of negative returns

# **Forward Performance after Negative Quarters AXA IM US Short Duration High Yield GIPS Composite**

Quarter ending	Quarterly return %	Yield-to-worst <sup>1</sup> at end of quarter	Average price <sup>1</sup> at end of quarter	1M forward Return	3M forward return	6M forward return	12M forward return
31-Mar-05	-0.356	7.08	107	-0.31	1.60	2.84	6.31
30-Sep-08	-1.603	11.35	96	-7.68	-7.98	-5.59	9.36
31-Dec-08	-7.975	15.48	85	3.24	2.60	11.76	22.64
30-Sep-11	-2.531	7.99	101	3.23	4.22	7.26	10.79
30-Jun-13	-0.759	4.77	105	1.59	2.55	4.62	6.81
30-Sep-14	-0.881	4.85	105	1.07	0.31	2.24	1.47
30-Sep-15	-1.666	5.91	100	1.78	0.08	1.62	5.87
31-Dec-18	-1.146	6.06	99	2.53	4.22	5.79	8.52
31-Mar-20	-6.066	7.65	94	2.70	5.56	8.63	12.26
31-Mar-22	-1.388	5.05	100	-1.79	-6.34		
30-Jun-22	-6.343	8.07	92	4.73			???



# **Summary Statistics**

ASSETS UNDER MANAGEMENT (\$millions)

## AXA IM Short Duration HY Strategy – August 31, 2022

		/
Representative Portfolio	\$3,656	
US SD High Yld Strategy	\$6,254	
CHARACTERISTICS	AXA IM	Index
Ave Years to Maturity	3.5	5.8
Yield to Maturity	7.51%	8.48%
Yield To Worst	7.48%	8.45%
Current Yield	6.06%	6.55%
Duration To Worst	2.8	4.5
Average Coupon	5.73%	5.73%
Option Adjusted Spread	386	503
Duration Times Spread	10.1	19.9
Average Price	94	88
Cash Position	2.7%	N/A
Number of Issuers	135	922
Number of Positions	182	1964
Average ML Rating	B1	B1

DATA AS OF	8/31/2022						
INDEX ICE Bofa M	IL US HY Index	(					
ICE Bof A ML RATING	AXA IM	Index					
AAA Holdings	0.0%	0.0%					
BBB Holdings	1.5%	0.0%					
BB Holdings	45.7%	52.6%					
B Holdings	40.5%	36.3%					
CCC or Under	10.3%	11.1%					
Not Rated	1.9%	0.0%					
YEARS TO MATURITY	AXA IM	Index					
Less than 1 Year	0.8%	0.0%					
1-3 Years	38.3%	14.6%					
3-5 Years	56.1%	27.8%					

5-7 Years

7-10 Years

Over 10 Years

-			
ICE BofA ML SECTOR	AXA IM	Index	AXA/ Index
Services	18.7%	6.6%	285%
Capital Goods	9.6%	6.4%	150%
Healthcare	8.7%	8.9%	98%
Media	7.9%	8.7%	91%
Consumer Goods	7.4%	3.6%	205%
Real Estate	7.4%	3.9%	191%
Telecommunications	6.5%	7.2%	90%
Basic Industry	6.1%	7.5%	81%
Retail	5.6%	5.4%	103%
Technology & Electronics	5.5%	4.4%	125%
Leisure	5.1%	7.3%	70%
Financial Services	4.8%	5.0%	97%
Energy	4.6%	12.6%	36%
Transportation	1.2%	2.1%	58%
Insurance	0.6%	1.5%	36%
Automotive	0.5%	4.8%	10%
Banking	0.0%	1.3%	0%
Utility	0.0%	2.9%	0%

TOP FIVE SECURITIES	Coupon (%)	Maturity	ICE Bof A Rating	Issue Size (\$MM)	ICE BofA ML Industry	Current Price	Yield to Worst (%)	Duration to Worst	% of Portfolio
CD&R Smokey Buyer, Inc.	6.750	7/15/2025	B2	625	Personal & Household Products	92.70	9.72	2.5	1.5
Change Healthcare Holdings LLC	5.750	3/01/2025	CCC1	1,000	Health Services	98.70	6.32	2.3	1.4
CommScope Finance LLC	6.000	3/01/2026	B2	1,500	Tech Hardware & Equipment	94.51	7.82	3.1	1.4
B&G Foods, Inc.	5.250	4/01/2025	CCC1	500	Food - Wholesale	88.99	10.20	2.3	1.4
BWAY Holding Co., Inc.	5.500	4/15/2024	В3	1,480	Packaging	96.81	7.62	1.5	1.4

4.8%

0.0%

0.0%

32.3%

21.6%

3.7%



# **AXA IM Enhanced High Yield GIPS Composite**

#### **Gross Performance**

Last 12 Months	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22
US Enhanced HY Composite	0.12	0.08	(0.84)	2.14	(1.98)	(0.71)	(0.84)	(4.12)	(0.19)	(11.71)	12.75	(5.51)
Beginning of Month Gross Exposure	175%	183%	193%	198%	198%	210%	230%	238%	246%	245%	267%	259%
US SDHY Composite	0.09	0.05	(0.40)	1.07	(0.94)	(0.22)	(0.23)	(1.79)	0.18	(4.81)	4.73	(1.81)
ICE BoA US High Yield Index	0.03	(0.18)	(1.02)	1.88	(2.75)	(0.90)	(0.93)	(3.64)	0.25	(6.81)	6.02	(2.39)
2020	Q1	Q2	Q3	Q4	<b>-</b>	2021			Q1	Q2	Q3	Q4
US Enhanced HY Composite	(10.08)	11.15	5.02	4.14	_	US Enha	nced HY Co	mposite	1.65	2.26	1.03	1.37
US SDHY Composite	(6.07)	5.56	2.92	2.29		US SDHY	/ Composite	<b>!</b>	1.03	1.39	0.62	0.72
ICE BoA US High Yield Index	(13.12)	9.61	4.71	6.48		ICE BoA	US High Yie	ld Index	0.90	2.77	0.94	0.66
2022	Q1	Q2	Q3	Q4	YTD 2022	<del>-</del>	Annualized	Performa	nce	1 Year	3 Year	Since Incept.*
US Enhanced HY Composite	(3.49)	(15.51)			(13.12)	_	US Enhand	ced HY Co	mposite	(11.82)	1.09	4.52
US SDHY Composite	(1.39)	(6.34)			(5.03)		US SDHY C	Composite	9	(4.26)	1.48	3.05
ICE BoA US High Yield Index	(4.51)	(9.97)			(11.04)		ICE BoA US	S High Yie	eld Index	(10.43)	0.80	3.60
								Since	Inception	of Enhance	d HY*	
Calendar Year Performance	2019	2020	2021	_			Annualized	Perf. Stat	istics	Returns	Volatility	Sharpe Ratio
US Enhanced HY Composite	16.31	9.31	6.46				US Enhand	ced HY Co	mposite	4.52	12.78	0.28
US SDHY Composite	8.50	4.38	3.80				US SDHY C	Composite	9	3.05	5.75	0.37
ICE BoA US High Yield Index	14.41	6.17	5.36				ICE BoA US	S High Yie	eld Index	3.60	10.24	0.26



# **Summary Overview**

## **US Enhanced High Yield Strategy**

PORTFOLIO OVERVIEW - Enhanced High Yield					
Portfolio Total AUM	\$203,558,129				
Portfolio Total AUM Ex Cash	\$194,922,173				
Gross Exposure Ex Cash	\$514,320,060				
Gross Exposure (%)	264%				
Cost of Financing (SOFR + 130bps	3.59%				
Cash Position	4.1%				

CHARACTERISTICS	Levered	Unlevered	SDHY	Index
Years to Maturity		3.6	3.5	5.8
Yield to Maturity	<b>14.04%</b> 1	7.55%	7.51%	8.48%
Yield To Worst	13.94%	7.51%	7.48%	8.45%
Current Yield	10.26%	6.12%	6.06%	6.55%
Duration To Worst	<b>7.7</b> <sup>2</sup>	2.9	2.8	4.5
Average Coupon		5.77%	5.73%	5.73%
Option Adjusted Sprea	d	388	386	503
Duration Times Spread		10.3	10.1	19.9
Average Price		94	94	88
Number of Issuers		123	135	922
Number of Issues		159	182	1964

Index	Index ICE Bof A ML US High Yield								
ICE Bof A ML	RATING	ENH HY	SDHY	Index					
A Holdings		0.0%	0.0%	0.0%					
BBB Holdings		1.2%	1.5%	0.0%					
BB Holdings		43.3%	45.7%	52.6%					
B Holdings		41.2%	40.5%	36.3%					
CCC or Under		12.7%	10.3%	11.1%					
Not Rated		1.5%	1.9%	0.0%					
Average ML R	ating	B1	B1	B1					

YEARS TO MATURITY	ENH HY	SDHY	Index
Less than 1 Year	0.0%	0.8%	0.0%
1-3 Years	33.4%	38.3%	14.6%
3-5 Years	60.9%	56.1%	27.8%
5-7 Years	5.6%	4.8%	32.3%
7-10 Years	0.0%	0.0%	21.6%
Over 10 Years	0.0%	0.0%	3.7%

ICE BofA ML SECTOR	ENH HY	SDHY	Index
Services	17.9%	18.7%	6.6%
Capital Goods	9.3%	9.6%	6.4%
Media	9.0%	7.9%	8.7%
Healthcare	8.4%	8.7%	8.9%
Real Estate	8.3%	7.4%	3.9%
Consumer Goods	7.5%	7.4%	3.6%
Basic Industry	6.4%	6.1%	7.5%
Telecommunications	5.7%	6.5%	7.2%
Retail	5.6%	5.6%	5.4%
Leisure	4.8%	5.1%	7.3%
Energy	4.8%	4.6%	12.6%
Financial Services	4.7%	4.8%	5.0%
Technology & Electronics	4.5%	5.5%	4.4%
Transportation	1.7%	1.2%	2.1%
Insurance	1.1%	0.6%	1.5%
Automotive	0.3%	0.5%	4.8%
Banking	0.0%	0.0%	1.3%
Utility	0.0%	0.0%	2.9%

TOP FIVE HOLDINGS	Coupon	Maturitu	Dating	Issue	la desatare	Current	Yield to	Duration to	%
TOP FIVE HOLDINGS	(%)	Maturity	Rating	Size	Industry	Price	Worst (%)	Worst	Weight
Getty Images, Inc.	9.750	3/01/2027	CCC1	300	Advertising	100.25	9.57	1.4	1.8
Change Healthcare Holdings LLC	5.750	3/01/2025	CCC1	1,000	Health Services	98.70	6.32	2.3	1.8
Aramark Services, Inc.	6.375	5/01/2025	B1	1,500	Support-Services	99.13	6.73	2.4	1.7
CD&R Smokey Buyer, Inc.	6.750	7/15/2025	B2	625	Personal & Household Products	92.70	9.72	2.5	1.6
BWAY Holding Co., Inc.	5.500	4/15/2024	В3	1,480	Packaging	96.81	7.62	1.5	1.5

Source: AXA IM, FactSet as of August 31, 2022. AXA IM Enhanced HY (ENH HY) and AXA IM Short Duration HY (SDHY) Representative portfolios. SOFR=Secured Overnight Financing Rate. All Data measured on Gross Exposure, exclusive of cash except for Portfolio Overview section. 1Levered Yield = Unlevered Yield + (Debt/Equity) × (Unlevered 14 YTW - Cost of financing). <sup>2</sup>Levered DTW= Unlevered DTW × Gross Exposure. ICE BofA US High Yield Index is shown for illustrative purposes only. The representative account shown has been selected because it utilizes an investment setup that is typical for accounts in the relevant strategy and/or on the basis that it has adequate assets under management to effectuate a fair comparison. Please refer to the appendix for additional information. Diversification does not ensure profit or protection against loss.



# **AXA IM Core High Yield GIPS Composite**

(4.51)

0.93

(9.97)

0.41

#### **Gross Performance**

Index

Alpha

Last 12 Months	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22
Composite	0.22	(0.21)	(0.62)	1.81	(2.12)	(0.99)	(0.52)	(3.19)	(0.19)	(6.41)	5.94	(1.76)
Benchmark	0.03	(0.18)	(1.03)	1.88	(2.75)	(0.90)	(0.93)	(3.64)	0.25	(6.81)	6.02	(2.39)
Alpha	0.18	(0.03)	0.41	(0.08)	0.63	(0.09)	0.41	0.45	(0.44)	0.40	(0.08)	0.63
2020	Q1	Q2	Q3	Q4	FY 2020	•	2021	Q1	Q2	Q3	Q4	FY 2021
Composite	(9.72)	8.93	4.47	5.17	8.04		Composite	1.01	2.15	0.83	0.96	5.04
Index	(13.12)	9.61	4.71	6.48	6.17		Index	0.90	2.77	0.94	0.66	5.36
Alpha	3.40	(0.68)	(0.24)	(1.32)	1.87		Alpha	0.11	(0.62)	(0.11)	0.31	(0.32)
		· 	_									
2022	Q1	Q2	Q3	Q4	YTD 2022							
Composite	(3.58)	(9.57)			(9.25)							

The strategy underperformed in 2021, driven by the strategy's lower duration relative to the benchmark, an underweight to the riskiest portion of the high yield market, and underperformance within the Energy sector. Outperformance in the 4th quarter of 2021, led by outperformance in November's market sell-off, helped to recapture half of the underperformance by year-end.

(11.04)

1.79

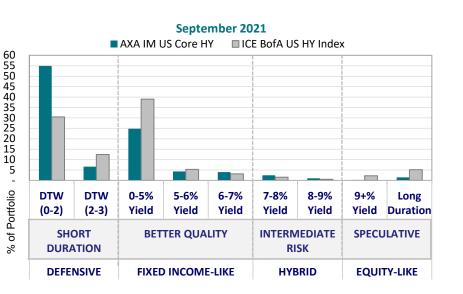
The strategy has outperformed YTD, driven by the strategy's lower duration relative to the index and positive security selection. The strategy has also benefitted from an overweight positioning in the Services sector and positive security selection in the Healthcare, Retail and Energy sectors.

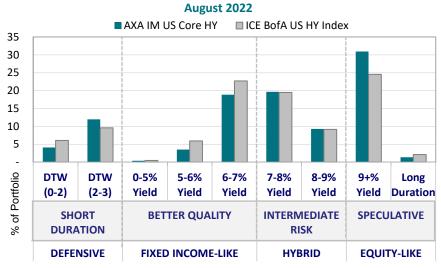


# **US Core High Yield Top-Down Risk Positioning**

## Actively managed using custom market segmentation

- Macro positioning of our US Core High Yield strategy has evolved over the past year.
- One year ago, the strategy had a more defensive positioning, with a significant overweight to shorter duration securities that resulted in a duration of 2.5 compared to the benchmark's duration of 3.9.
- At the end of 2021 and throughout 2022, we have allowed the short duration overweight to decline, making room for securities with longer maturities which are now attractively priced. This has resulted in a macro positioning that is more in-line with the benchmark from a duration and yield standpoint.







#### **DTW** = duration-to-worst



# **Summary Statistics**

## AXA IM Core HY Strategy – August 31, 2022

CHARACTERISTICS	AXA IM	Index
Years to Maturity	5.6	5.8
Yield to Maturity	8.49%	8.48%
Yield To Worst	8.47%	8.45%
Current Yield	6.78%	6.55%
Duration To Worst	4.3	4.5
Average Coupon	6.04%	5.73%
Option Adjusted Spread	499	503
Duration Times Spread	19.5	19.9
Average Price	89	88
Cash Position	4.0%	N/A
Number of Issuers	199	922
Number of Positions	257	1964
Average ML Rating	B2	B1

ASSETS UNDER MANAGE	MENT (\$millions)
Representative Portfolio*	\$2,162
US Core HY Strategy	\$6,154

DATA AS OF

8/31/2022

INDEX

AXA IM	Index
0.0%	0.0%
1.0%	0.0%
28.8%	52.6%
47.9%	36.3%
21.6%	11.1%
0.7%	0.0%
	0.0% 1.0% 28.8% 47.9% 21.6%

ICE BofA ML SECTOR	AXA IM	Index	AXA / Index
Services	13.2%	6.6%	200%
Energy	11.2%	12.6%	89%
Healthcare	11.1%	8.9%	124%
Technology & Electronics	8.6%	4.4%	196%
Media	8.2%	8.7%	94%
Basic Industry	7.7%	7.5%	102%
Capital Goods	7.0%	6.4%	111%
Consumer Goods	6.3%	3.6%	175%
Leisure	5.9%	7.3%	81%
Telecommunications	5.4%	7.2%	75%
Retail	4.4%	5.4%	81%
Financial Services	3.6%	5.0%	72%
Real Estate	3.5%	3.9%	90%
Insurance	1.5%	1.5%	100%
Transportation	1.3%	2.1%	62%
Automotive	1.2%	4.8%	24%
Banking	0.0%	1.3%	0%
Utility	0.0%	2.9%	0%

ICE Bof A ML US High Yield

MATURITY	AXA IM	Index
Less Than 1 Year	0.0%	0.0%
1 - 3 Years	11.0%	14.6%
3 - 5 Years	34.0%	27.8%
5 - 7 Years	32.3%	32.3%
7 - 10 Years	21.0%	21.6%
Over 10 Years	1.7%	3.7%

DURATION TO WORST	AXA IM	Index
Less Than 1	1.7%	1.4%
1 - 3	22.4%	22.1%
3 - 5	41.7%	38.9%
5 - 7	28.0%	31.0%
7 - 10	5.6%	5.0%
Over 10	0.6%	1.6%

TOP 5 SECURITIES	Coupon	Maturity	ICE Bof A	Issue	ICE Bof A ML	Current	Yield to	Duration	% of
TOF 3 SECONTIES	(%)	watarity	Rating	Size	Industry	Price	Worst %	to Worst	Portfolio
Change Healthcare Holdings LLC	5.750	3/01/2025	CCC1	1,000	Health Services	98.70	6.32	2.3	1.2
Getty Images, Inc.	9.750	3/01/2027	CCC1	300	Advertising	100.25	9.57	1.4	1.2
Watco Companies, Inc.	6.500	6/15/2027	CCC1	500	Rail	95.86	7.54	4.0	1.1
Matthews International	5.250	12/01/2025	B2	300	Support-Services	91.06	8.45	2.9	1.0
BWAY Holding Co., Inc.	7.250	4/15/2025	CCC2	1,200	Packaging	91.00	11.30	2.2	1.0



# **AXA IM Dynamic High Yield GIPS Composite**

#### **Gross Performance**

Last 12 Months	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22
Composite	0.62	(0.35)	(0.62)	1.99	(1.76)	(1.30)	(0.77)	(3.84)	(1.94) <sup>1</sup>	(8.27) <sup>1</sup>	7.05 <sup>1</sup>	(0.28)
Benchmark	0.03	(0.18)	(1.03)	1.88	(2.75)	(0.90)	(0.93)	(3.64)	0.25	(6.81)	6.02	(2.39)
Alpha	0.58	(0.17)	0.40	0.11	0.99	(0.40)	0.16	(0.20)	(2.19)	(1.47)	1.03	2.11
2020	Q1	Q2	Q3	Q4	FY 2020		2021	Q1	Q2	Q3	Q4	FY 2021
Composite	(14.97)	15.04	6.54	8.12	12.67		Composite	2.80	2.77	0.66	1.00	7.41
Index	(13.12)	9.61	4.71	6.48	6.17		Index	0.90	2.77	0.94	0.66	5.36
Alpha	(1.85)	5.44	1.83	1.64	6.50		Alpha	1.90	(0.01)	(0.27)	0.35	2.05
2022	Q1	Q2	Q3	Q4	YTD 2022							
Composite	(3.77)	(13.50)			(11.16)							
Index	(4.51)	(9.97)			(11.04)							
Alpha	0.74	(3.53)			(0.11)							
Annualized Retur	ns	1 Yr	3 Yr	5 Yr	Since Incep.*	k	Annualized V	olatility	1 Yr	3 Yr	5 Yr	Since Incep
Composite		(9.71)	4.91	4.93	5.75		Composite		12.33	13.24	11.00	9.54
Index		(10.43)	0.80	2.43	3.47		Index		10.77	10.88	8.92	7.73
Alpha		0.72	4.11	2.50	2.27		Difference		1.56	2.36	2.08	1.81
Annualized Retur	ns	2014 *	2015	2016	2017	2018	2019	2020	2021	2022 YTD		
Composite		1.27	(7.98)	24.40	12.15	(3.87)	19.64	12.67	7.41	(11.16)		
Index		(0.03)	(4.64)	17.49	7.48	(2.26)	14.41	6.17	5.36	(11.04)		
Alpha		1.30	(3.33)	6.91	4.66	(1.60)	5.23	6.50	2.05	(0.11)		

- Throughout the volatility of 2020, our credit intensive process helped in avoiding credit losses during a rising default rate environment while still maintaining a higher yield than the market. Through positive security selection, the strategy's 12.67% return in 2020 compares favorably to the 2.9% return from CCC-rated securities and 3.7% return from B-rated securities.
- In 2021, the strategy's higher yield relative to the market generated another year of meaningful outperformance.
- In 2022, the strategy is performing in-line with the overall market. The better-than-expected performance during a significant sell-off can be attributed to the strategy's lower duration relative to the market and a positive contribution to return from the CDS portfolio.

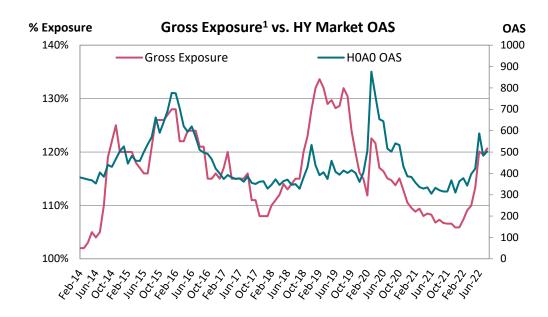
Source: AXA IM as of August 31, 2022. Benchmark: ICE BofA US High Yield Index. \*Composite inception date: Feb. 28, 2014. ¹Swing pricing applied to a composite member portfolio per AXA IM swing pricing policy. The approximate impact to the composite's May performance was +25 bps, the impact to June's performance was approximately -48 bps, and the impact to July's performance was approximately +26bps. **Performance shown gross of fees** is calculated before expenses, carried interest, taxation costs and other expenses the investor may incur. An investor's return will be reduced by management fees and other expenses. Past performance and/or awards is not indicative of future results. Please see the Appendix for further information about the effect of management fees. The above is supplemental information to the US Dynamic High Yield GIPS composite presentation provided in the GIPS Disclosure Notes. Past performance is not indicative of future results. No assurance can be given that the strategy will be successful or achieve its objectives.



# **AXA IM Dynamic High Yield Bond Strategy**

## CDS Positioning – Gross Exposure

- Investing in single-name CDS adds an overlay to the strategy, increasing the income generation while increasing the strategy's gross exposure to the market.
- The strategy often adds to its CDS investments when the general market widens, as shown on chart to the right.
- With each CDS position we decide whether to "roll down the curve" as the position becomes "de-risked" over time, extend into the on-the-run tenor to maintain current risk exposure, or exit the position completely if we do not believe we are being adequately compensated for the risks.
- Due to this active management, the level of risk within the CDS portfolio can also vary over time.
- However, relative to the cash bond holdings, the CDS positions tend to be higher quality and lower spread.



#### Current Positioning as of 8/31/2022

#### % Allocation of CDS portfolio: Years to Maturity

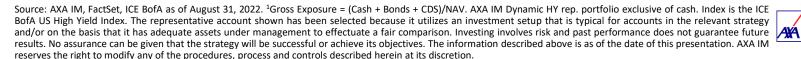
<1	1-2	2 - 3	3 -4	4 - 5	>5
5.9%	10.2%	15.6%	21.0%	47.3%	0.0%

#### % Allocation of CDS portfolio: Spread

% < 400	< 100	100 - 200	200 - 300	300 - 400	400 - 500	> 500
71.2%	0.0%	12.2%	49.3%	9.8%	19.5%	9.3%

#### % Allocation of Cash Bond portfolio: Spread

< 100	100 - 200	200 - 300	300 - 400	400 - 500	> 500	% > 400
0.0%	0.0%	0.5%	2.2%	10.7%	86.5%	97.2%





# **Summary Statistics**

## AXA IM Dynamic HY Strategy – August 31, 2022

POSITION COUNTS	AXA IM	Index
Number of Issuers	116	922
Number of Cash Bonds	109	1,964
Number of CDS Positions	29	N/A

AUM / NOTIONAL EXPOSURE					
Portfolio Total AUM \$1,009,080,396					
Notional AUM	\$1,217,732,968				
Gross Exposure:	121%				
Cash*:	1.6%				

All Data as of 8/31/2022	
Index: ICE Bof A ML US HY Index	

ICE BofA ML SECTOR

For Cash Bonds only (excludes CDS)									
CHARACTERISTCS	AXA IM	Index							
Yield to Maturity	11.27%	8.48%							
Yield To Worst	11.26%	8.45%							
Current Yield	8.63%	6.55%							
Duration To Worst	4.3	4.5							
Average Coupon	7.09%	5.73%							
Option Adjusted Spread	788	503							
Duration Times Spread	30.9	19.9							
Average Price	82	88							
Avg Years to Maturity	5.7	5.8							
DURATION TO WORST	AXA IM	Index							
Less Than 1	0.7%	1.4%							
1 - 3	17.7%	22.1%							
3 - 5	47.4%	38.9%							
5 - 7	32.0%	31.0%							
7 - 10	2.2%	5.0%							
Over 10	0.0%	1.6%							

ICE BofA ML RATING	<b>AXA IM</b>	Index
AAA Holdings	0.0%	0.0%
BBB Holdings	0.0%	0.0%
BB Holdings	3.1%	52.6%
B Holdings	35.7%	36.3%
CCC or Under	61.2%	11.1%
Not Rated	0.0%	0.0%
Average ML Rating	CCC1	B1
	-	

**AXA IM** 

0.0%

5.2%

29.6%

43.6%

20.2%

1.3%

Index

0.0%

14.6%

27.8%

32.3%

21.6%

3.7%

Services	15.1%	6.6%
Basic Industry	12.8%	7.5%
Capital Goods	11.0%	6.4%
Energy	9.4%	12.6%
Financial Services	9.0%	5.0%
Technology & Electronics	8.6%	4.4%
Consumer Goods	6.6%	3.6%
Healthcare	6.6%	8.9%
Media	6.6%	8.7%
Leisure	4.6%	7.3%
Retail	4.5%	5.4%
Insurance	2.9%	1.5%
Telecommunications	1.6%	7.2%
Automotive	0.5%	4.8%
Banking	0.0%	1.3%
Real Estate	0.0%	3.9%
Transportation	0.0%	2.1%
Utility	0.0%	2.9%

**AXA IM** 

Index

Top 5 Cash Bond Positions	Coupon (%)	Maturity Date	ICE Bof A Rating	Issue Size (\$mil)	ICE BofA ML Industry	Current Price	Yield to Worst	Duration to Worst	% of Portfolio
Getty Images, Inc.	9.750	3/01/2027	CCC1	300	Advertising	100.25	9.57	1.4	2.5
Illuminate Buyer LLC	9.000	7/01/2028	CCC1	460	Chemicals	86.00	12.44	4.2	2.4
W.R. Grace Holdings LLC	5.625	8/15/2029	В3	1,155	Chemicals	79.00	9.87	5.4	2.3
BWAY Holding Co., Inc.	7.250	4/15/2025	CCC2	1,200	Packaging	91.00	11.30	2.2	2.2
CURO Group Holdings Corp.	7.500	8/01/2028	CCC1	750	Cons/Comm/Lease Fin.	60.61	18.81	4.1	1.9



MATURITY

1 - 3 Years

3 - 5 Years

5 - 7 Years

7 - 10 Years

Over 10 Years

Less Than 1 Year

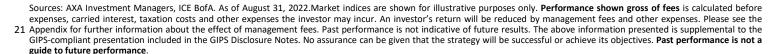
# US Dynamic High Yield's Role in a Balanced Fixed Income and Equity Portfolio

- Each US high yield strategy offered at AXA IM has a different risk/reward profile, and each can play a different role within a balanced equity and fixed income portfolio.
- Within US asset classes, we believe US Dynamic High Yield is positioned between the US high yield market and the equity market from a risk/reward perspective.
- Dynamic High Yield can be competitive with equity returns in risk-on markets (2016, 2017, 2019) and can provide better drawdown protection and less volatility in most risk-off markets (2018, YTD 2022).

LEGEND:	
SDHY	AXA IM US Short Duration HY GIPS Composite
Core HY	AXA IM US Core High Yield GIPS Composite
Dyn HY	AXA IM US Dynamic High Yield GIPS Composite
Enh HY	US Enhanced High Yield GIPS Composite
US IG	ICE US Corporate Index (COAO)
10Y Tr	ICE 10 Year Treasury (GA10)
US HY	ICE US High Yield index 9H0A0)
Loans	Credit Suisse Leveraged Loan index
S&P 500	Standard & Poor 500 index
Russell	Russ = Russell 2000 index

## **Performance by Calendar Years**

2015	2016	2017	2018	2019	2020	2021	2022 YTD
S&P 500 1.4	Dyn HY 24.4	S&P 500 21.8	SDHY 1.7	S&P 500 31.5	Russell 20.0	S&P 500 28.7	Loans -1.2
SDHY 1.2	Russell 21.3	Russell 14.6	Loans 1.1	Russell 25.5	S&P 500 18.4	Russell 14.8	SDHY -5.0
10Y Tr 0.9	US HY 17.5	Dyn HY 12.1	10Y Tr 0	Dyn HY 19.6	Dyn HY 12.7	Dyn HY 7.4	Core HY -9.3
Loans -0.4	Core HY 15.8	Core HY 8.1	Core HY -1.2	Enh HY 16.3	10Y Tr 10.6	Enh HY 6.5	US HY -11.0
US IG -0.6	S&P 500 12	US HY 7.5	US IG -2.2	US HY 14.4	US IG 9.8	Loans 5.4	Dyn HY -11.2
Russell -4.4	Loans 9.9	US IG 6.5	US HY -2.3	US IG 14.2	Enh HY 9.3	US HY 5.4	10Y Tr -12.2
Core HY -4.5	SDHY 6.4	Loans 4.2	Dyn HY -3.9	Core HY 13.3	Core HY 8.0	Core HY 5.0	Enh HY -13.1
US HY -4.6	USIG 6	SDHY 4.0	S&P 500 -4.4	10Y Tr 8.9	US HY 6.2	SDHY 3.8	US IG -13.7
Dyn HY -8.0	10Y Tr -0.2	10Y Tr 2.0	Russell -11	SDHY 8.5	SDHY 4.4	US IG -0.9	S&P 500 -16.1
Enh HY	Enh HY	Enh HY	Enh HY	Loans 8.2	Loans 2.8	10Y Tr -3.7	Russell -17.2





# **Higher Returns Follow Higher Yields**

#### ICE US High Yield Index (H0A0)

Year	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Return (%)	2.51	(5.12)	4.48	(1.89)	28.15	10.87	2.74	11.77	2.19	(26.39)	57.51	15.19
<b>Ending YTW</b>	11.02	14.14	12.67	11.9	7.56	6.93	8.24	7.75	9.61	19.43	8.83	7.38
Voor	2011	2012	2012	2014	2015	2016	2017	2010	2010	2020	2021	TODAY*
Year	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	TODAY*
Year Return (%)	<b>2011</b> 4.38	<b>2012</b> 15.58	<b>2013</b> 7.42	<b>2014</b> 2.50	<b>2015</b> (4.64)	<b>2016</b> 17.49	<b>2017</b> 7.48	<b>2018</b> (2.27)	<b>2019</b> 14.41	<b>2020</b> 6.17	<b>2021</b> 5.36	<b>TODAY*</b> -11.32

- The US high yield market has never experienced back-to-back calendar years of negative returns.
- Following years with negative returns, the average return in the next year was +26%.
- Following negative returning years, the next year had double-digit returns 86% of the time.
- Since 1999, when the ending yield-to-worst of the preceding year was greater than 8%, only three years (2000, 2002 and 2008) followed with a negative return
- Seasonality:
  - December returns have been positive 83% of the time
  - January returns have been positive 83% of the time.



## **Additional Risks**

## **US High Yield**

**CREDIT RISK** - If an issuer of bonds defaults on its obligations to pay income or repay capital, it may result in a decrease in portfolio value. The value of a bond (and subsequently, the portfolio) is also affected by changes in credit rating downgrades and/ or market perceptions of the risk of future default. Investment grade issuers are regarded as less likely to default than issuers of high yield bonds. High-yield, lower-rated, securities involve greater risk than higher-rated securities. Portfolios that invest in them may be subject to greater levels of credit and liquidity risk than portfolios that do not.

**RISK OF CAPITAL LOSS** – Any investment in our high yield strategies are not guaranteed and returns can be negative. The performance of a portfolio may not be consistent with the objectives of investors and their investment may not be fully returned.

**INTEREST RATE RISK** - Fluctuations in interest rates will change the value of bonds, impacting the value of the investment portfolio. Often, when interest rates rise, the value of the bonds fall and vice versa. The valuation of bonds will also change according to market perceptions of future movements in interest rates.

**LIQUIDITY RISK** - Some investments may trade infrequently and in small volumes and the risk of low liquidity level in certain market conditions might lead to difficulties in valuing, purchasing or selling bonds.

**HIGH YIELD BOND RISK** - The portfolio will be exposed to a risk related to investments in high yield financial instruments. These instruments present higher default risks than those of the investment grade category. In case of default, the value of these instruments may decrease significantly, which would affect the value of the portfolio. Lower-rated securities generally tend to reflect short-term corporate and market developments to a greater extent than higher-rated securities which respond primarily to fluctuations in the general level of interest rates.

**RE-INVESTMENT RISK** - Reinvestment risk describes the risk that, as interest rates or market environment changes, the future coupons and principal from any bond may have to be reinvested in a less favorable rate environment. This is more likely to occur during periods of declining interest rates when issuers can issue bonds with lower levels of coupon. Re-investment risk may be greater with callable bonds.





# **Appendix**

# **US Core High Yield Composite**

## **GIPS Compliant Performance Presentation**

#### **Investment Strategy Objective**

Generates total returns by investing in the full maturity spectrum of non-investment grade debt of U.S. companies with improving fundamentals. The portfolios in this composite are managed with a total return investment strategy and aim to provide risk-adjusted out-performance, given their respective benchmarks and constraints.

#### Composite Benchmark

ICE Bof A Merill Lynch US High Yield Index (H0A0)

General information	
Reporting date	August 31, 2022
Composite Inception Date	September 30, 2001
Composite Creation Date	September 30, 2001
Composite Currency	USD

Canaval Information

Cumulative (%)	1 mo	3 mo	6 mo	YTD
Composite (Gross)	-1.76	-2.59	-6.37	-9.25
Composite (Net)	-1.80	-2.71	-6.59	-9.55
Benchmark	-2.39	-3.56	-7.70	-11.04

				Since
Annualized (%)	1 year	3 year	5 year	inception
Composite (Gross)	-8.18	2.06	3.23	7.45
Composite (Net)	-8.62	1.57	2.73	6.94
Benchmark	-10.43	0.80	2.43	7.00

	2021	2021	2022	2022
Quarterly (%)	3Q	4Q	1Q	2Q
Composite (Gross)	0.83	0.96	-3.58	-9.57
Composite (Net)	0.71	0.84	-3.70	-9.68
Benchmark	0.94	0.66	-4.51	-9.97

Calendar year (%)	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012
Composite (Gross)	5.04	8.04	13.30	-1.20	8.07	15.83	-4.47	2.08	9.88	16.06
Composite (Net)	4.54	7.53	12.77	-1.68	7.55	15.29	-4.92	1.59	9.37	15.51
Benchmark	5.36	6.17	14.41	-2.26	7.48	17.49	-4.64	2.50	7.42	15.58
Internal Dispersion (Std. Deviation)	0.15	0.28	0.19	0.07	0.35	0.16	0.07	0.05	0.10	0.08

As of end of period	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012
Composite Assets (USD mil)	4,758	5,575	4,649	4,221	5,010	5,578	6,882	7,549	8,490	5603
# of Portfolios in Composite	12	12	11	11	11	11	10	8	7	6
Total Strategy Assets (USD mil)	10,076	8,915	7,264	6,329	7,716	7,513	8,172	8,951	9,405	6,052
Total Firm Discr. Assets (USD mil)		250,851	208,569	191,910	223,150	177,183	182,303	215,895	225,582	196,489
Total Firm Assets (USD mil)		689,782	618,264	583,866	650,149	555,036	558,650	668,139	686,214	658,109



# **US Short Duration High Yield Composite**

## **GIPS Compliant Performance Presentation**

#### **Investment Strategy Objective**

Aims to generate high current income by investing in better-quality, non-investment grade debt of U.S. companies with an expected redemption of three years or less.

#### Composite Benchmark

The "US Short Duration High Yield" composite is not shown against a benchmark, since the strategy is an absolute return strategy and not managed against a benchmark.

General Information				
Reporting date		August 31,	2022	
Composite Inception Date	е	September	30, 2001	
Composite Creation Date	;	September	30, 2001	
Composite Currency		USD		
Cumulative (%)	1 mo	3 mo	6 mo	YTD

Cumulative (%)	1 mo	3 mo	6 mo	YTD
Composite (Gross)	-1.81	-2.11	-3.92	-5.03
Composite (Net)	-1.85	-2.22	-4.13	-5.31

Annualized (%)	1 year	3 year	5 year	Since inception		Quarterly	(%)	2021 3Q	2021 4Q	2022 1Q	2022 2Q
Composite (Gross)	-4.26	1.48	2.71	5.21		Composite	(Gross)	0.62	0.72	-1.39	-6.34
Composite (Net)	-4.69	1.04	2.26	4.72		Composite	(Net)	0.51	0.60	-1.50	-6.45
Calendar year (%)		2021	2020	2019	2018	2017	2016	2015	2014	2013	2012
Composite (Gross)		3.80	4.38	8.50	1.69	3.98	6.38	1.23	1.51	5.46	7.87
Composite (Net)		3.34	3.93	8.06	1.22	3.48	5.88	0.77	1.03	4.96	7.35
Internal Dispersion (Std	I. Deviation)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.10	0.04
As of end of period		2021	2020	2019	2018	2017	2016	2015	2014	2013	2012
Composite Assets (USI	D mil)	6,507	5,772	5,712	5,575	8,217	10,039	11,014	12,390	20,483	17,520
# of Portfolios in Compo	osite	5	5	7	4	4	5	4	3	12	12
Total Strategy Assets (	(USD mil)	8,161	7,131	7,109	8,351	13,335	18,867	18,648	19,681	24,991	21,182
Total Firm Discr.Assets	(USD mil)		250,851	208,569	191,910	223,150	177,183	182,303	215,895	225,582	196,489
Total Firm Assets (USD	mil)		689,782	618,264	583,866	650,149	555,036	558,650	668,139	686,214	658,109



# **US Dynamic High Yield Composite**

## **GIPS Compliant Performance Presentation**

#### **Investment Strategy Objective**

Seeks to generate high income by investing in US high yield debt securities and credit default swaps. This is a total return investment strategy that aims to provide risk-adjusted out-performance, given their respective benchmarks and constraints

#### Composite Benchmark

Bof A Merill Lynch US High Yield Index (H0A0)

				Since
Annualized (%)	1 Year	3 Year	5 Year	inception
Composite (Gross)	-9.71	4.91	4.93	5.75
Composite (Net)	-10.25	4.29	4.30	5.12
Benchmark	-10.43	0.80	2.43	3.47

Calendar year (%)	2021	2020	2019	2018	2017
Composite (Gross)	7.41	12.67	19.64	-3.87	12.15
Composite (Net)	6.77	12.01	18.93	-4.45	11.48
Benchmark	5.36	6.17	14.41	-2.26	7.48

As of end of period	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012
Composite Assets (USD mil)	1,444	740	319	214	232	122	N/A	N/A	N/A	N/A
# of Portfolios in Composite	1	1	1	1	1	1	N/A	N/A	N/A	N/A
Total Strategy Assets (USD mil)	1,444	740	318	247	287	122	N/A	N/A	N/A	N/A
Total Firm Discr. Assets (USD mil)		250,851	208,569	191,910	223,150	177,183	182,303	215,895	225,582	196,489
Total Firm Assets (USD mil)		689,782	618,264	583,866	650,149	555,036	558,650	668,139	686,214	658,109

August 31, 2022
February 28, 2014
February 22, 2017

Composite Currency USD

2016

24.4

23.67

17.49

Cumulative (%)	1 mo	3 mo	6 mo	YTD
Composite (Gross)	-0.28	-2.09	-8.38	-11.16
Composite (Net)	-0.33	-2.23	-8.65	-11.52
Benchmark	-2.39	-3.56	-7.70	-11.04

	2021	2021	2022	2022
Quarterly (%)	3Q	4Q	1Q	2Q
Composite (Gross)	0.66	1.00	-3.77	-13.50
Composite (Net)	0.51	0.85	-3.92	-13.64
Benchmark	0.94	0.66	-4 51	-9 97

2014

NΑ

NΑ

NΑ

2013

N/A

N/A

N/A

2012

NΑ

N/Α

N/A

2015

N/A

N/A

N/A

	AV/A	Investment Managers
l.	AXA	Managers

# **US Enhanced High Yield Composite**

## **GIPS Compliant Performance Presentation**

#### **Investment Strategy Objective**

Aims to generate high current income by investing in better-quality, noninvestment grade (high yield) debt of U.S. companies with an expected redemption of three years or less (i.e. short duration) and in Total Return Sw aps derived on single-name better-quality, short duration high yield bonds of U.S. companies. Portfolios in this composite may utilize leverage.

#### Composite Benchmark

The "US Enhanced High Yield" composite is not shown against a benchmark, since the strategy is an absolute return strategy and not managed against a benchmark.

				Since
Annualized (%)	1 year	3 year	5 year	inception
Composite (Gross)	-11.82	1.09		4.52
Composite (Net)	-12.67	0.13		3.53

Annualized (%)	i year	3 year	5 year	inception
Composite (Gross)	-11.82	1.09		4.52
Composite (Net)	-12.67	0.13		3.53

As of end of period
Composite Assets (USD mil)
# of Portfolios in Composite
Total Strategy Assets (USD mil)
Total Firm Discr.Assets (USD mil)
Total Firm Assets (USD mil)

General Inf	ormation
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Reporting date August 31, 2022 Composite Inception Date December 31, 2018 Composite Creation Date December 31, 2018 Composite Currency USD

Cumulative (%)	1 mo	3 mo	6 mo	YTD		
Composite (Gross)	-5.51	-5.94	-10.73	-13.12		
Composite (Net)	-5.59	-6.16	-11.17	-13.68		

	2021	2021	2022	2022
Quarterly (%)	3Q	4Q	1Q	2Q
Composite (Gross)	1.03	1.37	-3.49	-15.51
Composite (Net)	0.80	1.13	-3.72	-15.72

Calendar year (%)	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012
Composite (Gross)	6.46	9.32	16.31	N/A						
Composite (Net)	5.46	8.28	15.22	N/A						

As of end of period	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012
Composite Assets (USD mil)	359	320	101	N/A						
# of Portfolios in Composite	1	1	1	N/A						
Total Strategy Assets (USD mil)	359	320	101	N/A						
Total Firm Discr. Assets (USD mil)		250,851	208,569	191,910	223,150	177,183	182,303	215,895	225,582	196,489
Total Firm Assets (USD mil)		689,782	618,264	583,866	650,149	555,036	558,650	668,139	686,214	658,109



## GIPS® Performance Disclosure Notes

#### **Claim of Compliance**

AXA IM claims compliance with the Global Investment Performance Standards (GIPS\*) and has prepared and presented this report in compliance with the GIPS standards. AXA IM has been independently verified for the periods from December 31, 1999 through December 31, 2018. Verification assesses whether (1) the firm has complied with all the composite construction requirements of the GIPS standards on a firm-wide basis and (2) the firm's policies and procedures are designed to calculate and present performance in compliance with GIPS standards. The US Core High Yield and the US Short Duration High Yield Composites have been examined since inception. GIPS verification and performance examination reports are available upon request. Select AXA IM funds under management that are included in select GIPS composites are subject from time to "swing" pricing. In order to ensure that AXA IM maintains its GIPS compliance standards, it has developed a comprehensive set of policies and procedures to account for such swing price impacts. As with other policies and procedures, the GIPS standards are reviewed and revised on an as needed basis.

#### Presentation of the Firm

AXA IM is an active long-term, responsible multi-asset manager with investment centers in the Americas, Asia Pacific and Europe offering the following investment capabilities:

Framlington Equity - an active, fundamental, bottom-up stock selection approach for core equities and thematic equity strategies incorporating specialist investment capabilities and responsible investing (RI).

Equity QI (Quant Investing) - offering quantitative investing by the use of technology and modelling to deliver fundamental strategies including advanced factor, systematic alpha and targeted outcome, underpinned by environmental, social and governance (ESG) principles.

Active Fixed Income Europe & Asia - a robust, repeatable process, which involves bottom-up credit analysis and top-down macroeconomic research to deliver outcome-oriented solutions that span the fixed income spectrum.

US Active Fixed Income and European & Global High Yield - a range of high yield strategies investing within and across regions, sectors and maturities. Dedicated high yield teams employ a consistent investment process which has been tested over a range of market cycles and conditions.

Fixed Income for AXA and Buy & Maintain - a strong bottom-up credit analysis and top-down macroeconomic research approach for traditional, benchmarked to fully flexible strategies which employ several different investment styles, including active and buy-and-maintain.

Structured Finance - a broad range of alternative sources of return from across the credit continuum, beyond traditional credit investments, to suit various risk/return and liquidity profiles through standalone and multi strategy investments.

Multi Asset - a combined fundamental top-down and bottom-up analysis with embedded risk monitoring to all client types for outcome-oriented and customized multi-asset solutions.

Chorus - a research and technology-driven approach to deliver stable and sustainable, positive returns regardless of market conditions offering clients a differentiated proposition with low correlation to traditional assets.

#### **Composite List and Description**

A complete list and description of all composites is available on request.

#### Portfolio Valuation

Portfolios are valued according to the market closing prices each day, except for certain portfolios valued in Germany, which use the closing price of the previous day, and the UK, where the price used is the 2pm price of the same day. In order to apply this valuation policy, the NAV of the day following the valuation date is used for certain portfolios. Dividends paid on securities in the portfolio are accounted for using ex-dividend date and are gross of any withholding taxes. Buy and sell transactions are taken into account using trade-date valuation after confirmation of the trade by the counterparty, except in Germany where settlement date valuation is used. Accrued interest on debt securities is recorded each time the portfolio is valued. All proceeds, including realized and unrealized gains or losses in the portfolio are included in the value of assets. There are minor exceptions to these general rules for specific types of portfolios. Some securities in portfolios of US High Yield composites are valued by reference to broker quotes.

#### Minimum Asset Level & Total Firm Assets

The minimum portfolio size for the US High Yield and US Investment Grade composites is 10,000,000 USD. If the portfolio falls below 10,000,000 USD for more than three months from the performance calculations for the following month. For all other composites, the upper threshold is defined at 10,000,000 EUR the lower threshold at 8,000,000 EUR threshold EUR t

## GIPS® Performance Disclosure Notes (Continued)

#### **Significant Cash Flows**

If the average cash balance of a portfolio is above 10% for a specific month, the entire portfolio is temporarily removed from the composite performance for that particular month. Additional information regarding the treatment of significant cash flows is available upon request.

#### **Currency Used to Express Performance**

Composite performance figures are presented in the currency of the composite.

#### Performance Results / Fees

Composite returns are calculated gross of fees. Gross of fees returns are calculated gross of management and custodial fees and net of all trading expenses. The management fee schedule is as follows:

US Core High Yield Composite: First \$50 million: 0.48%; next \$50 million (50 to 100): 0.44%, next \$50 million (100 to 150): 0.41%, next \$50 million (150 to 200): 0.39%, Amount above \$200 million: 0.37%.

US Short Duration High Yield Composite: Flat fee: 0.45%.

US Dynamic High Yield Composite: Flat fee: 0.60%.

US Investment Grade Corporate Bond Composites: First \$50 Million: 0.26%; next \$50 million: 0.24%; next \$50 million: 0.20%; next \$50 million: 0.18%. Amount above \$200 million: 0.17%.

#### Benchmarks

The composite may be managed against a specific benchmark as indicated on the composite page. The extent to which any given composite invests in countries or regions not included in the benchmark depends on the limits (if any) specified in the investment management contracts of the individual portfolios in the composite. In general, such investment is marginal and is typically less than 10% for any given portfolio.

#### Compliance with Local Laws

This performance presentation does not conflict with any relevant local laws in any of the AXA IM management centers included in the Firm perimeter as at 31/12/2016.

#### **Calculation Methods**

Composite performance is calculated on a monthly basis as follows:

- The portfolios entering the performance calculation are determined according to the Minimum Asset Level described above.
- Each portfolio brings its own specific start and end dates to the calculation, depending on the particular valuation dates of the portfolio.
- The performance of each portfolio is calculated using the start and end dates relevant to the period in question, and using daily-weighted cash flows.
- The performance of a composite is calculated as a weighted average (using each portfolio's assets under management as at each portfolio's specific start date for the period in question) of the performances of the portfolios.
- Quarterly, annual, cumulative and since-inception returns are calculated by linking the composite monthly returns through compounded multiplication.

The benchmark performance is calculated in a similar fashion, using the same portfolio-related weights and date values, and replacing the portfolio values by the composite benchmark values. The calculation of the composite benchmark return is always comparable in terms of time periods and asset-weightings to the calculation of the composite return.

#### Dispersion

Dispersion is the weighted average (using the AUM of each portfolio at the start of the period) of the tracking error between the composite and those portfolios satisfying the Minimum Asset Level test (see above) for the whole period. Composites dispersion is defined as the standard deviation of the returns of the portfolios for the period in question, taking into account the relative size of the portfolios. It is only displayed if there are at least 5 such portfolios.



# Representative Portfolios and Indices used

Gross Performance: Performance shown gross of fees is calculated before the deduction of applicable management fees and other expenses. An investor's actual return will be reduced by management fees and other expenses the investor may incur. Further information on the firm's fees may be found in its Form ADV Part 2 (for US investors) or provided upon request. The collection of management fees produces a compounding effect on the total rate of return net of management fees. [As an example, the effect of management fees on the total value of an investor's portfolio assuming a) quarterly fee assessment, b) \$1,000,000 investment, c) portfolio return of 8% a year, and d) 1.00% annual investment management fee would be \$10,416 in the first year, and cumulatively \$59,816 over five years and \$143,430 over ten years.] Net Performance: Performance shown net of fees is calculated after the deduction of management fees and other applicable expenses. The risk information provided herein is not sufficient to support an investment decision, and is qualified in its entirety by the more complete disclosures, risk factors and other terms available upon request from AXA Investment Managers.

Representative Accounts: Such accounts have been selected based on objective, non-performance based criteria, including, but not limited to the size and the overall duration of the management of the account, the type of investment strategies and the asset selection procedures in place. Therefore, the results portrayed relate only to such accounts and are not indicative of the future performance of such accounts or other accounts, products and/or services described herein. In addition, these results may be similar to the applicable GIPS composite results, but they are not identical and are not being presented as such. Account performance will vary based upon the inception date of the account, restrictions on the account, along with other factors, and may not equal the performance of the representative accounts presented herein. The performance results for representative accounts are gross of all fees and do reflect the reinvestment of dividends or other earnings. The examples of securities provided for each representative account presentation are for illustrative purposes only and are intended to reflect the typical securities, sectors, and/or geographies that could be deployed by the strategy to generate the target returns. These examples do not represent all of the securities purchased, sold or recommended for the client's accounts, and should not be considered a buy/sell recommendation. An investor's actual experience may vary.

The ICE BofA ML US High Yield Index is composed of high-yield corporate bonds and other distressed securities. Taxable and tax-exempt US municipal, DRD eligible and defaulted securities are excluded from the Index. Indices are rebalanced monthly by market capitalization. The BofA Merrill Lynch High Yield Index is an unmanaged index consisting of U.S. dollar denominated bonds that are rated BB1/BB+ or lower, but not currently in default. No assurance can be given that the strategy/fund will be successful or that investors will not lose some or all of their capital.

The ICE BofA ML US Corporate Master Index is composed investment grade corporate bonds. Taxable and tax-exempt US municipal, DRD eligible and defaulted securities are excluded from the Index. Indices are rebalanced monthly by market capitalization.

The ICE BofA ML 1-3 Year US corporate Index is composed of investment grade corporate bonds including securities with a remaining term to final maturity of less than 3 years. Taxable and taxexempt US municipal, DRD eligible and defaulted securities are excluded from the Index. Indices are rebalanced monthly by market capitalization.

The Bloomberg Barclays Capital US Corporate Credit – Intermediate Index is composed dollar-denominated investment grade debt from U.S. and non-U.S. industrial, utility, and financial institutions issuers of intermediate maturities (1-10 years). Subordinated issues, securities with normal call and put provisions and sinking funds, medium-term notes (if they are publicly underwritten), 144A securities with registration rights, and global issues that are SEC-registered are included. Structured notes with embedded swaps or other special features, as well as private placements, floating-rate securities, and Eurobonds are excluded from the U.S. Corporate Index.

The Bloomberg Barclays Capital US Corporate Credit Index is composed of dollar-denominated investment grade debt from U.S. and non-U.S. industrial, utility, and financial institutions issuers. Subordinated issues, securities with normal call and put provisions and sinking funds, medium-term notes (if they are publicly underwritten), 144A securities with registration rights, and global issues that are SEC-registered are included. Structured notes with embedded swaps or other special features, as well as private placements, floating-rate securities, and Eurobonds are excluded from the U.S. Corporate Index.

An index is unmanaged and is not available for direct investment.



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