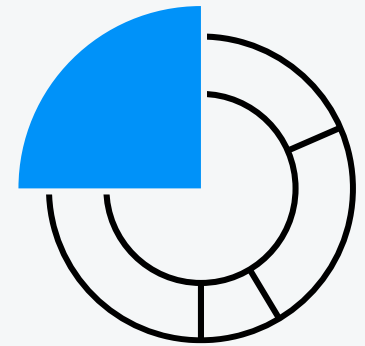


# JPMorgan High Yield Research Enhanced ETF



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# Fixed Income Investing with J.P. Morgan Asset Management

# Why fixed income with J.P. Morgan Asset Management

A powerful combination of expertise, deep resources and time-tested process focused on client outcomes



## Philosophy

Invest as lenders of our clients' money

- Bank-owned asset manager with a **fiduciary** mindset and a 150-year heritage
- Team based and transparent approach with significant access to our investment teams
- Strive to deliver consistently strong risk-adjusted returns
- Risk management, a critical part of our culture, **is embedded on multiple levels**



## Approach

Globally integrated, research-driven

- **306 fixed income investment professionals** across 5 countries benefit from **diverse views**
- Common **trading platform** creates scale and drives our goal of **best execution**
- Proprietary technology, **Spectrum**, including optimizers and trading tools
- Global research team with **73 quantitative and fundamental research analysts**



## Process

Rigorous, disciplined, proprietary

- **Fundamental, Quantitative, Technical (FQT)** inputs used to underwrite every investment
- **ESG factors** are **integrated** throughout our investment process<sup>1</sup>
- Continuous collaboration including our weekly strategy meetings and our **Investment Quarterly (IQ)**
- Access to **key industry decision makers**, and strong relationships with financial institutions
- **Proprietary insights and data** with investments in Artificial Intelligence and machine learning to harness big data

Source: J.P. Morgan Asset Management; as of September 30, 2022. The manager seeks to achieve the stated objectives. There can be no guarantee the objectives will be met.

<sup>1</sup>JPMAM defines ESG integration as the systematic inclusion of certain ESG factors (alongside other relevant factors) in investment analysis and investment decisions. For Funds that are ESG integrated, the Asset Manager considers certain ESG factors as part of the investment decision process for certain [name of group] investment strategy with the goals of managing risk and improving value.

# Common research language is the foundation of our consistent and repeatable investment process

## Fundamentals

- Macroeconomic Data: Growth, inflation, etc.
- Corporate Health: Defaults, earnings, etc.
- ESG Profile: Carbon footprint, labor practices, etc.

## Quantitative (valuations)

- Proprietary Quantitative Research (QRG) models inform rich/cheapness of sector or security
- Absolute, relative, historical basis

## Technicals

- Supply / demand (issuance and flows)
- Investor positioning and momentum

## Investment Quarterly (IQ) Meeting

- Global sector heads and investment officers discuss and debate macro environment and sector signals
- Participants establish 3-6 month forward investment themes and identify best ideas across different scenarios

## Weekly Global Strategy Meeting

- Sector heads and portfolio managers evaluate evolving market factors
- Global sector specialists provide input and updates on each sector

## Weekly Sector Team Meetings

- Teams focus on the economy, markets and relative value
- Teams adjust their strategies and tactical positioning accordingly

## Continuous Dialogue

- Teams leverage the expertise of locally based specialists
- Analysts and traders closely integrated with portfolio managers

The manager seeks to achieve the stated objective. There can be no guarantee the objective will be met. As of September 30, 2022

# Integrating material ESG risks and opportunities across three pillars

Full ESG<sup>1</sup> integration across the active GFICC platform, with a nuanced approach for each sector team

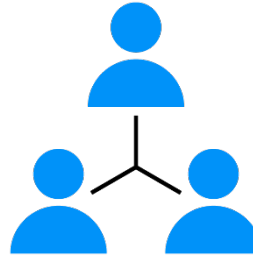
# 1



## Proprietary research

- 73 career research analysts\* covering all fixed income sectors
- ESG<sup>1</sup> factors incorporated in existing “FQT” research framework (fundamental, quantitative & technical)
- Proprietary scoring frameworks address nuances across fixed income sectors
- JPMAM’s data-driven ESG score and third-party data supplement our views

# 2



## Engagement

- Frequent engagement with company management teams, often with our equity counterparts
- Participation in industry forums to improve sustainability standards
- Engagement with data providers to increase coverage & accuracy of fixed income universe

# 3

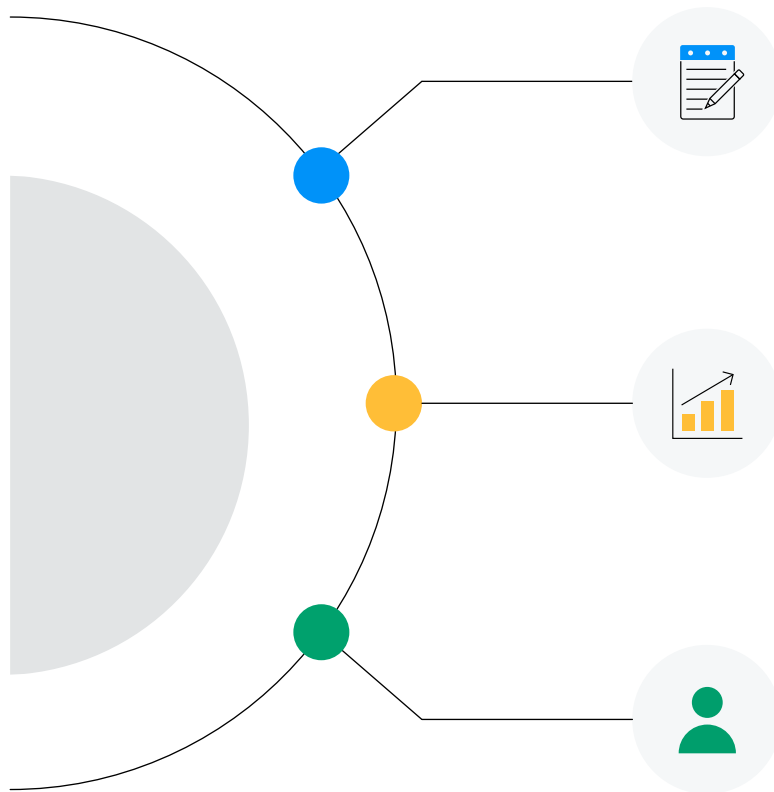


## Portfolio construction

- Spectrum houses qualitative & quantitative ESG research
- ESG evaluations can serve as security selection differentiators within a sector or as top-down risk assessment tool
- Oversight by independent and fixed income risk management teams to identify ESG outliers

Source: J.P. Morgan Asset Management; as of September 30, 2022. The manager seeks to achieve the stated objectives. There can be no guarantee the objectives will be met. \*Vice President and above. <sup>1</sup> JPMAM defines ESG integration as the systematic inclusion of certain ESG factors (alongside other relevant factors) in investment analysis and investment decisions. For Funds that are ESG integrated, the Asset Manager considers certain ESG factors as part of the investment decision process for certain [name of group] investment strategy with the goals of managing risk and improving value.

# Three tiers of risk management: An integrated and multi-layered framework



## Portfolio management

- Has day-to-day responsibility for portfolio risk and adherence with guidelines
- Ensures risks are intended
- Monitors ESG risks and opportunities
- Uses proprietary and external systems to analyse risks: tracking error, contribution to risk, factor exposure, liquidity

## Investment directors

- Provides portfolio management oversight
- Monitor adherence to investment objectives and process
- Lead in depth quarterly investment strategy reviews with portfolio managers (performance, risk, ESG profile, dispersion)
- Report findings to Global Head of GFICC

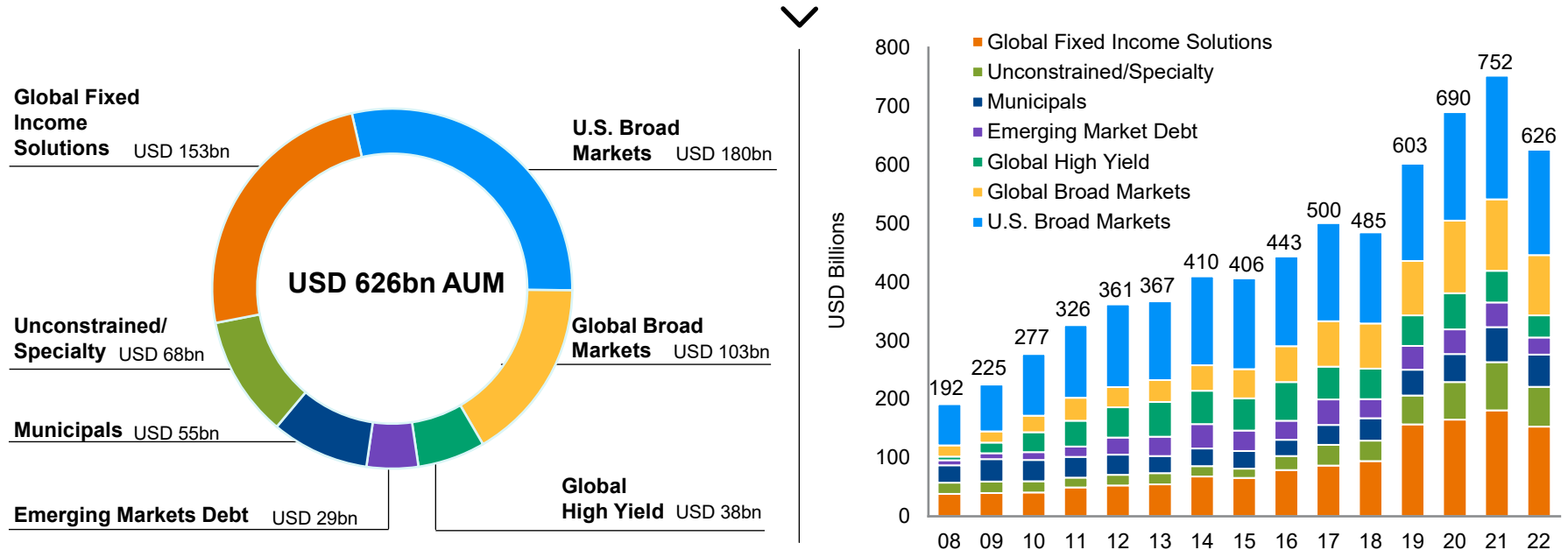
## Independent risk

- Provides credible challenge to the business
- Has a consolidated view of risks (investment, market, counterparty, liquidity, operational, reputational, ESG)
- Measures stress and liquidity profiles
- Plays a key role in governance forums
- Ensures proper risk disclosure
- Reports to independent AM Chief Risk Officer

The portfolio risk management process includes an effort to monitor and manage risk but does not imply low risk.

# Expertise to deliver superior client outcomes

## Global Fixed Income, Currency & Commodities Assets Under Management



## Asset & Wealth Management

## JPMorgan Chase & Co.

Source: J.P. Morgan Asset Management. Data as of September 30, 2022. Due to rounding, data may not always add up to the total AUM. AUM figures are representative of assets managed by the Global Fixed Income, Currency & Commodities group and include AUM managed on behalf of other J.P. Morgan Asset Management investment teams. The manager seeks to achieve the above stated objective. There can be no guarantee the objective will be met.

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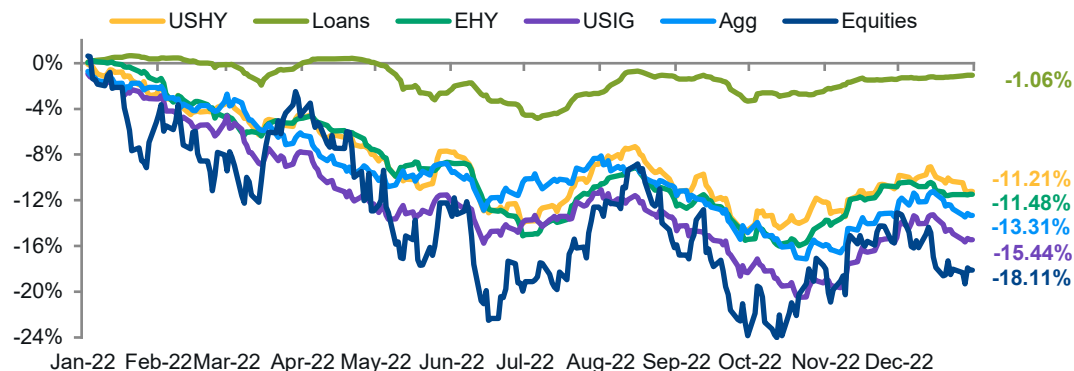
# High Yield Market Review



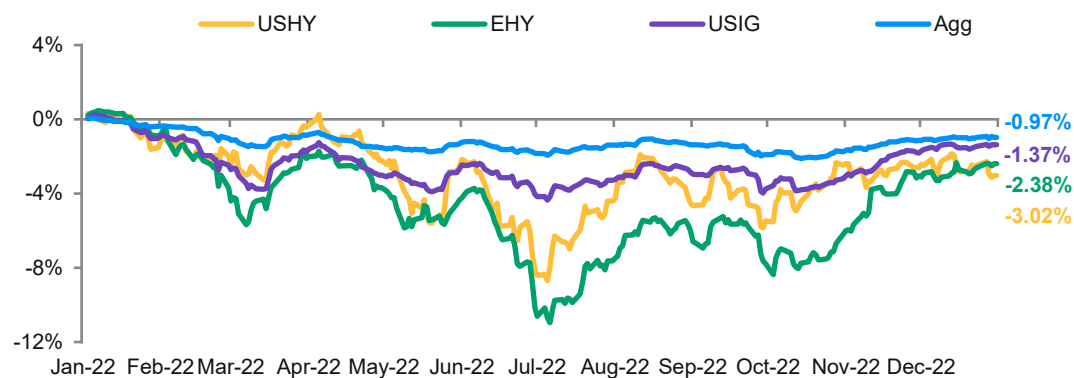
# Executive summary

## Markets rallied off of October lows

### Cumulative YTD returns across select asset classes



### Cumulative YTD excess returns across select asset classes



Source: ICE, Bloomberg, Credit Suisse. HUC0 used as proxy for USHY; HEC0 used as proxy for EHY; COA0 used as proxy for USIG; D0A0 used as proxy for US Agg; Credit Suisse Leveraged Loan Index used as proxy for Loans. Data as of 12/31/22.

### Fundamentals

Fundamental improvement still slowing, but leverage levels are solid ahead of potential recession

Defaults should increase, though risks driving increased levels of stress in market are idiosyncratic, not widespread

### Technicals

Balanced technicals of the first part of the year are starting to turn positive as outflows have slowed

Net rising stars and low new issue in 2022 are likely to continue in the near term

### Valuations

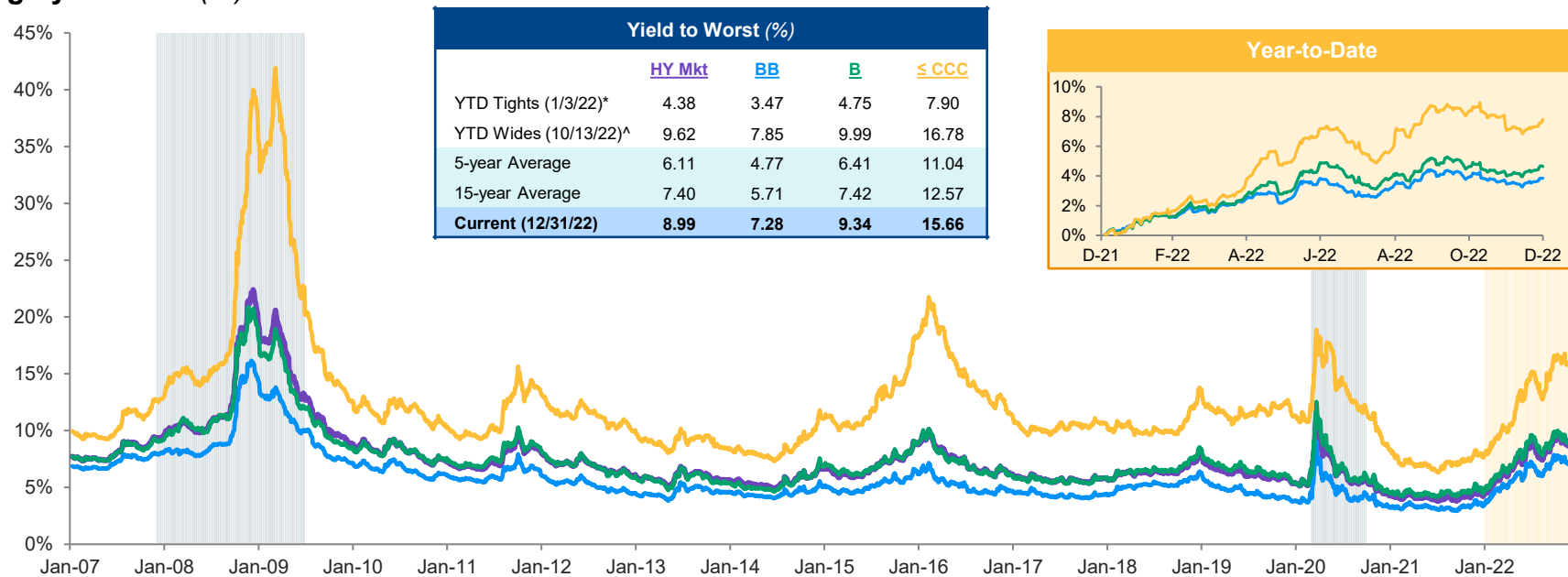
Spreads have tightened, reflecting market discounting a higher probability of a soft landing

Current spreads reflect ~4% default rate

# Yields declining from recent YTD peak but still wider than historical average

Yields slightly higher in December but remain ~100 bps inside of recent wides

## High yield YTW (%)



Yields remain below recent peak but higher than historical averages

Year-to-date moves have pushed yields well beyond their 15-year averages

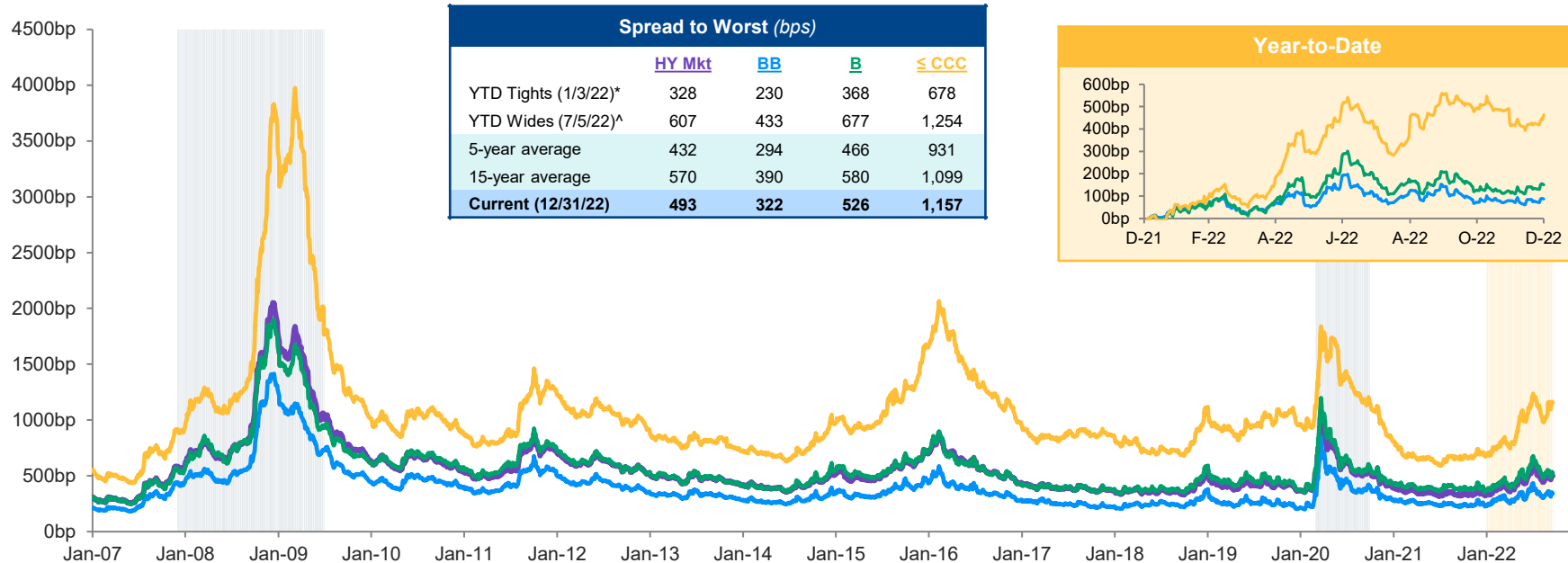
\*CCC-and-below tight occurred on 1/12/22. ^BB wide occurred on 9/29/22; CCC-and-below wide occurred on 11/09/22.

Source: ICE BofA US High Yield Indices as of 12/31/2022. ICE BofA US High Yield Constrained Index (HUC0) as proxy for broad market spreads; ICE BofA BB US High Yield Constrained Index (HUC1) as proxy for BB's spreads; ICE BofA Single-B US High Yield Constrained Index (HUC2) as proxy for B's spreads; ICE BofA CCC and Lower US High Yield Constrained Index (HUC3) as proxy for CCC's spreads. The above information is shown for illustrative purposes only. Indices do not include fees or operating expenses and are not available for actual investment.

# Spreads range-bound following the recent wides

Spreads nudged wider in December but remain within a 35 bps band over the last six weeks of the year

## High yield STW (bps)



Current spreads of 493 bps remain below the 15-year average

328 bps STW to start the year was the tightest STW of 2022; Spreads ended the year 165 bps wider

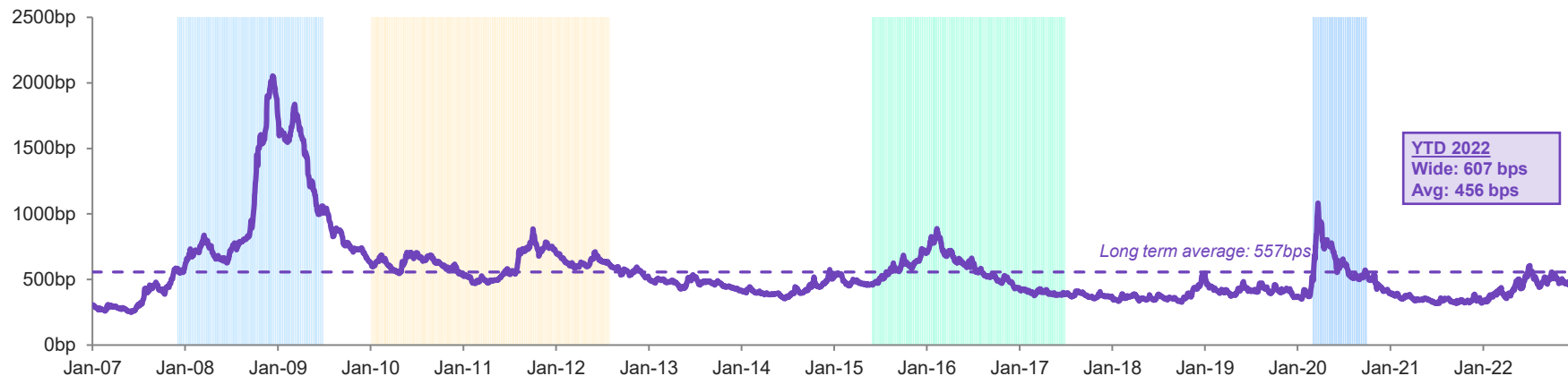
\*B and CCC-and-below tight occurred on 1/12/22. ^CCC-and-below wide occurred on 9/29/22

Source: ICE BofA US High Yield Indices as of 12/31/2022. ICE BofA US High Yield Constrained Index (HUC0) as proxy for broad market spreads; ICE BofA BB US High Yield Constrained Index (HUC1) as proxy for BB's spreads; ICE BofA Single-B US High Yield Constrained Index (HUC2) as proxy for B's spreads; ICE BofA CCC and Lower US High Yield Constrained Index (HUC3) as proxy for CCC's spreads. The above information is shown for illustrative purposes only. Indices do not include fees or operating expenses and are not available for actual investment.

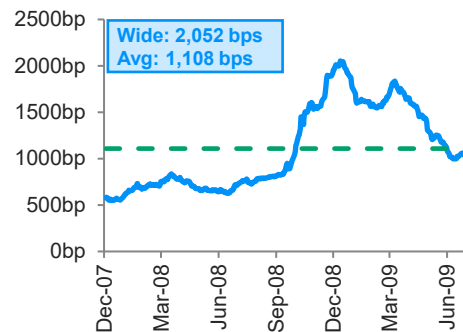
## HY spreads in periods of volatility

If current economic headwinds worsen, spreads have room to widen based on historical precedent

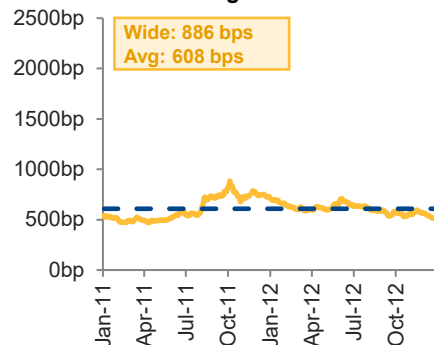
### High yield STW (bps)



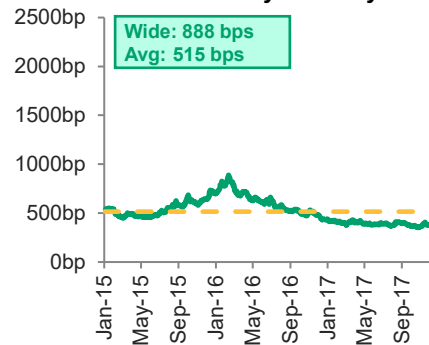
#### Global Financial Crisis



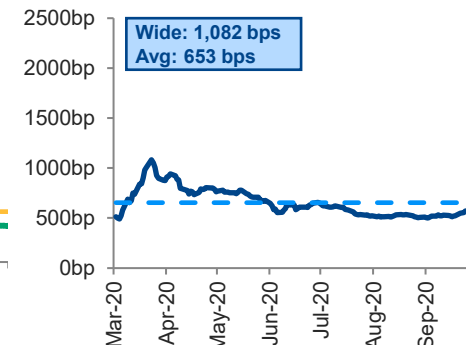
#### Sovereign Debt Crisis



#### Commodity Volatility



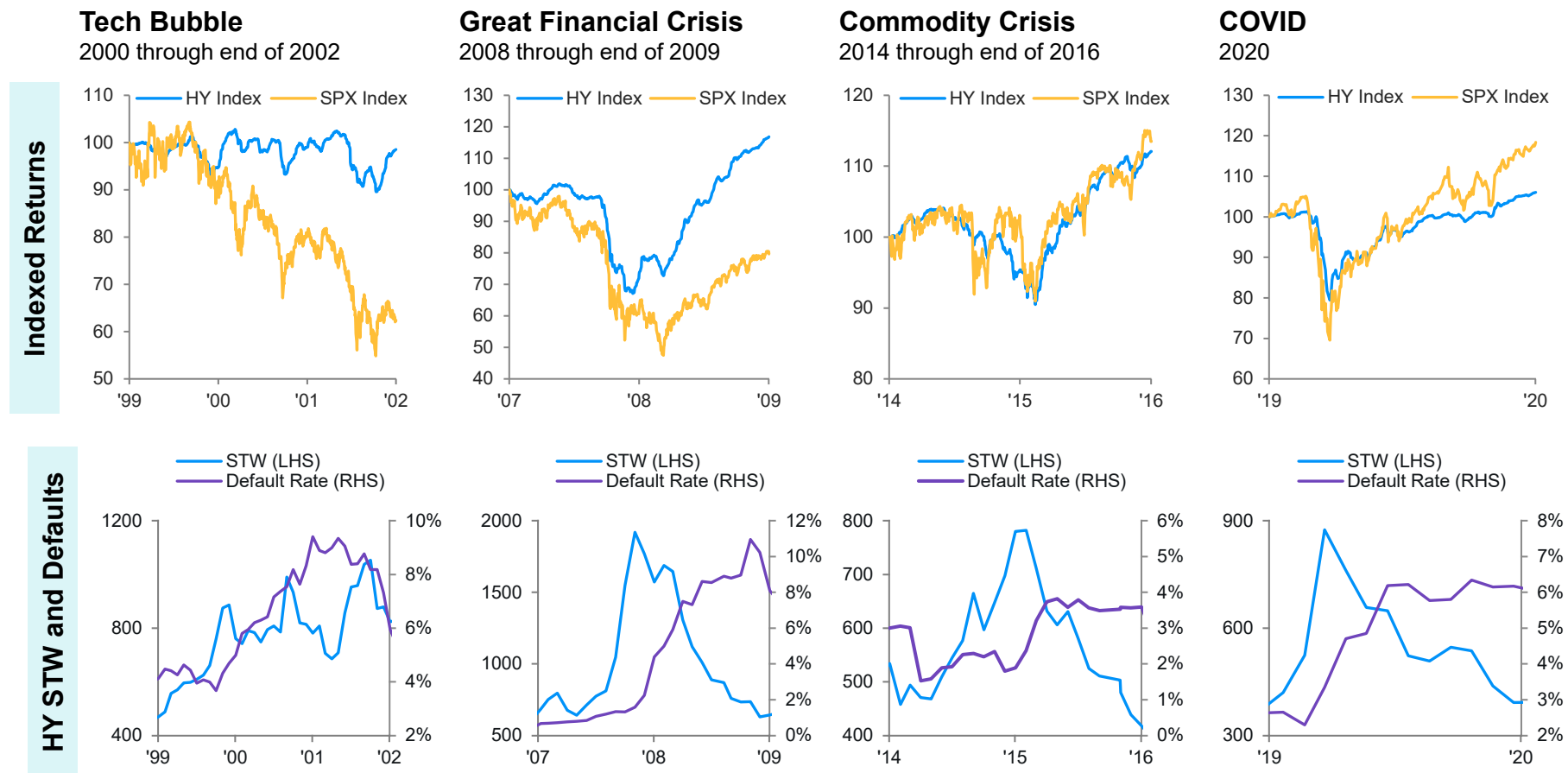
#### Pandemic



Source: ICE BofA US High Yield Indices as of 12/31/2022. ICE BofA US High Yield Constrained Index (HUC0) as proxy for broad market spreads. The above information is shown for illustrative purposes only. Indices do not include fees or operating expenses and are not available for actual investment.

# In periods of stress, equity and HY markets bottom at the same time

While changes in HY returns are less pronounced than in equities, the timing of stress and recoveries in each market generally track each other



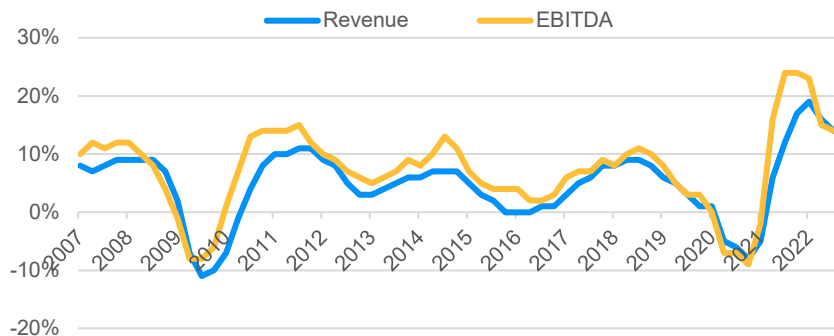
Source: ICE, Bloomberg. ICE BofA US High Yield Constrained Index and S&P 500 Index. Indices rebased to 100 at the beginning of the period. As of November 30, 2022.

# Fundamentals leveling out but still solid

Post-COVID growth trajectory decelerating, though year-over-year growth is still positive on top of strong 2021; balance sheets in strong position ahead of potential slowdown

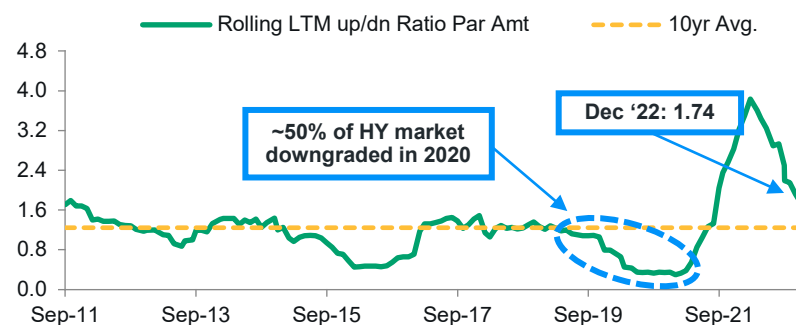
## HY sales and EBITDA growth still slowly decelerating

Median LTM year-over-year changes



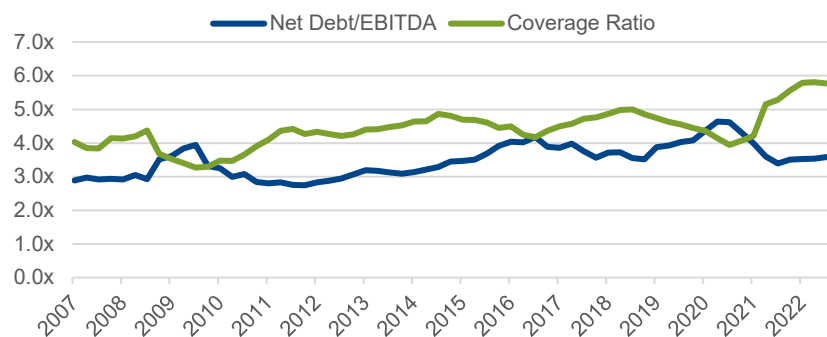
## Upgrade trend remains historically positive

LTM upgrade-to-downgrade ratio



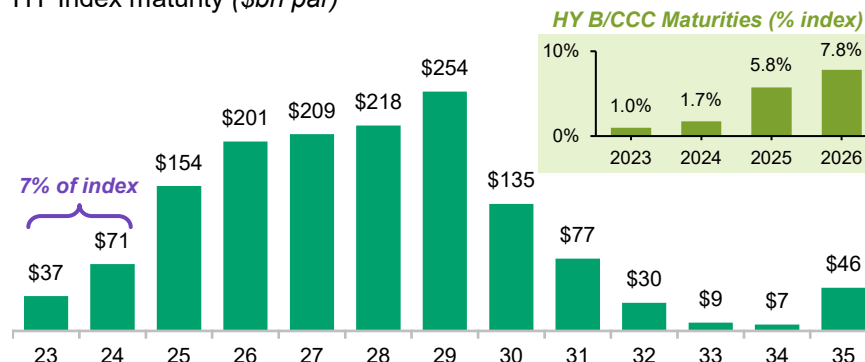
## Debt levels still well covered

Median net debt (LHS) and coverage ratio (RHS)



## Manageable low quality and/or near-term maturities

HY Index maturity (\$bn par)



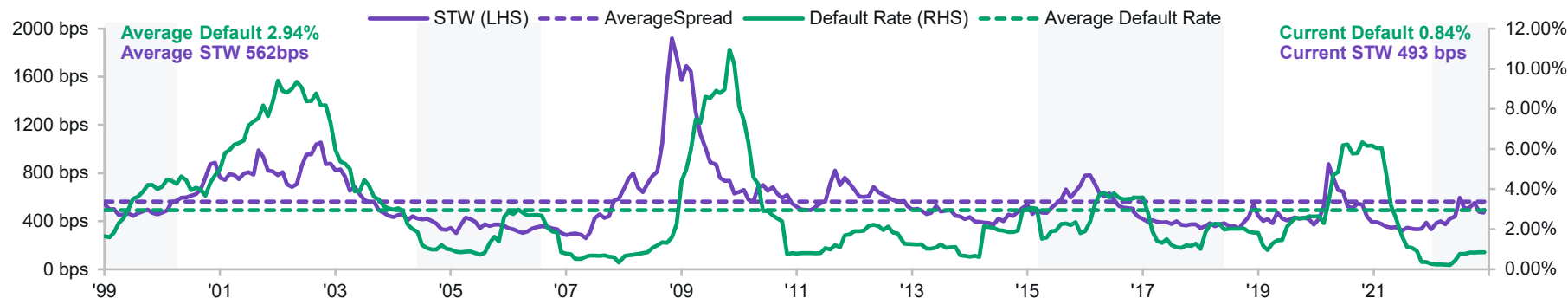
Source: JPMorgan Asset Management, JPM CIB, GS, DB Research. As of November 30, 2022.

## Default rate up from cyclical lows but still modest

Defaults likely to move off of cyclical low and towards the long-term average, but should remain below default peaks seen in prior recessionary periods

### Defaults trend up modestly in periods of rising rates

STW (LHS), default rates (RHS; % of par), highlighting denotes periods of rising rates



### Default estimates driven by macro views

Sell side default rate estimates (par-weighted where specified)

Analyst	HY Defaults		Drivers of Estimate
	2023	2024	
BofA	5.0 %	-	Low GDP growth offset by strong fundamentals
Barclays	4.5 %	-	1H23 recession; macro-driven default model
Deutsche Bank	4.5 %	9.0 %	2H23 recession; ignores strong fundamentals
Goldman Sachs	1.8 %	-	Avoid full recession; bottom-up estimate
JPMorgan CIB	3.0 %	3.3 %	Mild 2H23 recession; strong fundamentals
Morgan Stanley	4.0 %	-	Muted GDP growth
Wells Fargo	7.0 %	-	Mid-2023 US recession, macro-driven est.
<b>Average</b>	<b>4.3 %</b>	<b>6.1 %</b>	

### Implied Excess Spread

Recovery Rate	Annualized Default Rate										
	STW = 493										
	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	
30%	423	353	283	213	143	73	3	-67	-137	-207	
35%	428	363	298	233	168	103	38	-27	-92	-157	
40%	433	373	313	253	193	133	73	13	-47	-107	
45%	438	383	328	273	218	163	108	53	-2	-57	
50%	443	393	343	293	243	193	143	93	43	-7	

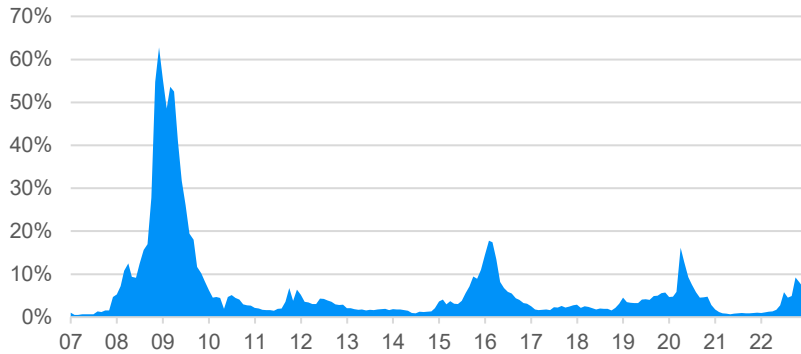
Sources: ICE BofA US High Yield Constrained Index; JPMorgan Research. Data as of 12/31/22.

# Market quality and lack of distressed concentration mitigate certain risks

While distress in the market rose in 2022, high quality market and distressed debt that is not concentrated in a specific sector help offset some of the biggest risks that could make defaults spike quickly

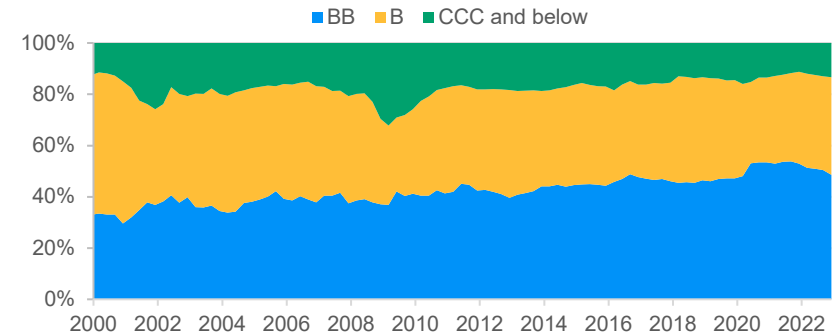
## Distress in market relatively high in 2022

% of par in HY index trading below \$70



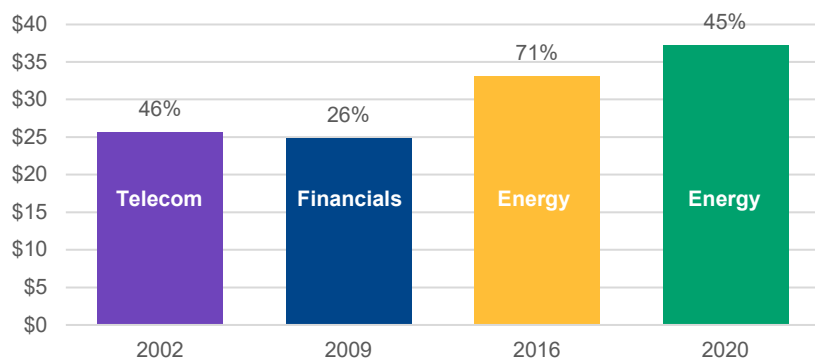
## HY market quality near cyclical highs

HY par by rating



## Largest distressed sectors in periods of high defaults

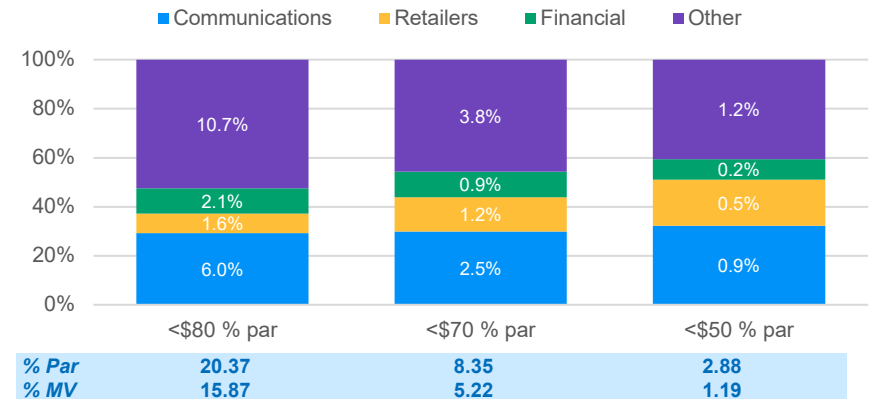
Default volume (\$bn; LHS) and % of total defaults



Source: ICE BofA US HY Constrained Index data as of 12/31/22.

## Sectors currently trading distressed

% of par in HY index trading at given price





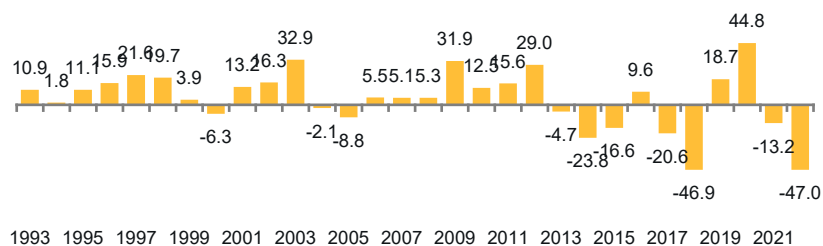


## Technicals have turned positive (cont'd)

Very low new issue volumes and net rising stars in 2022 have helped balance YTD outflows; supply expected to be low in 2023 as well, while demand may have bottomed-out in 2022

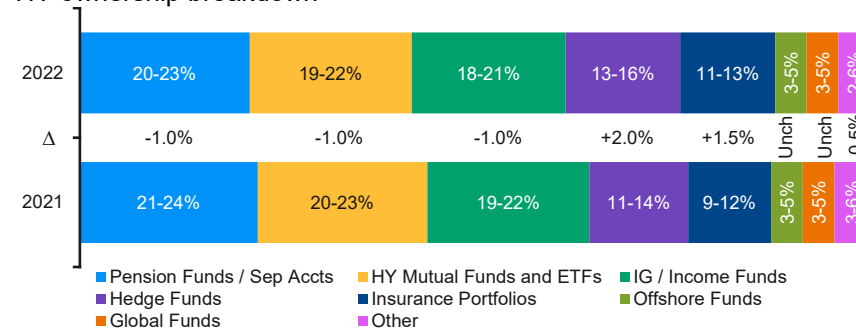
### HY outflows during and ahead of rate increases

HY mutual fund flows (\$bn)



### Retail and crossover credit decreased HY exposure

HY ownership breakdown



### Summary supply and demand

(\$bn)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
<b>Gross new issuance</b>	245.6	368.1	398.5	355.7	293.2	286.2	328.1	187.4	286.6	449.9	483.0	106.5
Fallen angels	38.4	26.7	41.2	37.2	52.7	71.6	18.4	42.0	15.1	227.7	9.6	13.6
<b>Total Supply</b>	<b>284.0</b>	<b>394.8</b>	<b>439.8</b>	<b>392.9</b>	<b>345.9</b>	<b>357.8</b>	<b>346.5</b>	<b>229.4</b>	<b>301.7</b>	<b>677.6</b>	<b>492.6</b>	<b>120.1</b>
Calls	73.4	102.1	122.8	137.2	126.3	127.5	179.9	141.5	156.3	211.4	284.6	85.8
Tenders	51.3	50.9	47.2	47.2	49.8	70.6	61.8	45.3	55.1	60.1	66.0	54.4
Maturities	47.4	42.6	48.8	40.1	44.2	50.9	37.5	46.5	55.0	41.5	52.3	64.1
Rising stars	34.7	51.9	83.7	45.9	48.5	21.6	22.0	38.9	58.9	23.6	53.7	113.0
Coupon reinvestment @ 75%	82.3	83.0	88.3	89.3	93.8	98.2	87.4	82.7	89.1	86.6	87.5	75.9
Mutual fund flows (AMG)	15.6	29.0	-4.7	-23.8	-16.6	9.6	-20.6	-46.9	18.7	44.8	-13.2	-47.0
<b>Total Demand</b>	<b>304.6</b>	<b>359.5</b>	<b>386.2</b>	<b>336.0</b>	<b>345.9</b>	<b>378.5</b>	<b>368.1</b>	<b>307.9</b>	<b>433.2</b>	<b>468.1</b>	<b>530.9</b>	<b>346.2</b>
<b>Supply surplus (shortfall)</b>	<b>-20.7</b>	<b>35.2</b>	<b>53.6</b>	<b>56.9</b>	<b>0.0</b>	<b>-20.7</b>	<b>-21.6</b>	<b>-78.5</b>	<b>-131.4</b>	<b>209.5</b>	<b>-38.3</b>	<b>-226.0</b>

Source: JPMorgan CIB Research, St. Louis Fed, Barclays Research. Data through 12/31/22.

# Looking past the near-term volatility

Using historical data, high yield offers an attractive 12-month forward return

US High Yield Constrained Index			
Inception: December 31, 1996			
Yield to Worst (Floor)	% Time Yield Higher than Floor	% Time 12mo Fwd Return Positive	Avg 12mo Fwd Return
5.0%	95%	81%	7.3%
5.5%	91%	81%	7.5%
6.0%	82%	80%	8.0%
6.5%	72%	82%	8.5%
7.0%	64%	80%	8.7%
7.5%	57%	78%	8.9%
8.0%	50%	77%	9.2%
8.5%	40%	72%	9.0%
<b>9.0%</b>	<b>32%</b>	<b>71%</b>	<b>9.9%</b>
9.5%	27%	67%	9.3%
10.0%	24%	69%	10.5%
10.5%	21%	71%	12.4%

US High Yield Constrained Index			
Inception: December 31, 1996			
Spread to Worst (Floor)	% Time Spread Higher than Floor	% Time 12mo Fwd Return Positive	Avg 12mo Fwd Return
250	100%	79%	6.8%
350	84%	80%	7.5%
400	70%	79%	8.2%
450	58%	79%	9.2%
<b>500</b>	<b>47%</b>	<b>84%</b>	<b>10.8%</b>
550	38%	83%	12.0%
600	31%	82%	13.6%
650	25%	80%	14.9%
700	20%	80%	16.6%
800	11%	84%	24.8%
900	5%	88%	35.3%
1000	4%	100%	43.6%

Source: ICE. HUC0. Data as of 12/31/22.

Opinions, estimates, forecasts, projections and statements of financial market trends are based on market conditions at the date of the publication, constitute our judgment and are subject to change without notice. There can be no guarantee they will be met. Past performance is not a guarantee of comparable future results.

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# Process and Track Record

# Our approach to research enhanced credit investing

The strategy looks to efficiently replicate the US High Yield bond universe while offering potential to enhance returns by systematically incorporating our proprietary credit analyst rankings and sector scoring into the portfolio construction process

## Start with investable universe

### Investment universe

- Starting investment universe:
  - Bloomberg Barclays U.S. Corporate High Yield - 2% Issuer Capped Index
- Universe then filtered:
  - Keep only scored bonds
  - Remove Rank 1 bonds
  - Initial liquidity screen



## Segment the universe into groups

### Segment the universe

- We segment the investable universe into groups of comparable securities
- All securities occupy a unique group organized by:
  - Sector (level 3 sectors)
  - Duration ('0-3', '3-5', '5+')



## Apply fundamental overlay

### Determine security weights within each segment

- Security weights are driven from scoring by the credit research team
  - Security ranking (1-4)
- Portfolio construction algorithm optimizes weights within the remaining bonds to overweight highly ranked issuers and sectors while maintaining market-like duration and sector weights



## Make sure output is realistic

### Evaluate liquidity and credit risk exposures

- Liquidity and trade execution analysis performed to evaluate practical implementation
- Portfolio output reviewed for qualitative assessment on sector and individual issuer risk

## Fundamental Overlay- Security Ranking

- Rank 1- Worst risk/return tradeoff, typically elevated default risk- excluded from the portfolio.
  - Example: Carvana – following poor 1Q22 earnings, where the company indicated break-even EBITDA would not occur for a few more quarters, the company issued new debt that struggled find buyers in the public markets. Despite the weak recent performance, we do not believe investors are being compensated for the current risks.
- Rank 2- Below average risk/return, no apparent catalysts for default- typically underweight.
- Rank 3- Above average risk/return, positive fundamental credit views- market weight to slight overweight
- Rank 4- Best risk/return tradeoff, strong fundamental trends and business models- overweight positioning
  - Example: Cinemark USA - spreads greater than 500bps for unsecured bonds offer attractive risk / return given the recent strength in theaters and Cinemark's increasing market share. Relative to its peers, Cinemark is also positioned favorably, requiring lower levels of box office recovery to generate sustainable free cash flow and leverage.

Bond spreads as of 9/30/22. The security highlighted above has been selected based on its significance and is shown for illustrative purposes only. It is not a recommendation. The manager seeks to achieve the stated objectives. There can be no guarantee the objectives will be met.

# Global High Yield Investment team: seasoned investment professionals dedicated to high yield

Portfolio Management			Credit Research						Trading	
<b>Robert Cook, CFA</b> Head of Global High Yield Managing Director 19/32 years	<b>Thomas Hauser, CFA</b> Senior Portfolio Manager Managing Director 19/30 years	<b>Jeffrey Lovell, CFA</b> Senior Portfolio Manager Managing Director 19/28 years	<b>Lily Baik, CFA</b> Euro Leisure, Technology, Media, Telecom, Transportation Vice President 8/8 years	<b>Brendan Breen</b> Euro Gaming, Pharmaceuticals, Real Estate, Services Vice President 9/9 years	<b>Samuel Castell, CFA</b> Airlines, Midstream Vice President 6/6 years	<b>Andrew Clouse, CFA</b> Aero/Defense, Bldg. Materials, Industrials, Transportation Executive Director 16/27 years	<b>Mark Dunbar, CFA</b> Cable, Wireless, Wirelines Executive Director 10/10 years	<b>Patrick Goff, CFA</b> Chemicals, Gaming, Leisure, Lodging Executive Director 5/24 years	<b>John Lux, CFA</b> Trader Executive Director 16/19 years	<b>James Gibson</b> Trader Managing Director 35/35 years
<b>Peter Aspbury</b> Euro HY Senior Portfolio Manager Managing Director 12/27 years	<b>James Shanahan, Jr.</b> Senior Portfolio Manager Managing Director 37/37 years	<b>Christopher Musbach</b> Portfolio Manager Executive Director 18/18 years	<b>Andrew Guest</b> Autos, Health Insurance, Home Construction, Retail Executive Director 19/24 years	<b>Giles Haworth, CFA</b> Euro Bldg. Mats, Cap Goods, Construction, Energy, Utilities Vice President 3/13 years	<b>Jeffrey Hutz, CFA</b> Consumer Products, Technology, Converts Managing Director 19/23 years	<b>Kyle Lanphear</b> Food & Beverage, Packaging, Paper, Restaurants Vice President 7/17 years	<b>Matthew Nelson, CFA</b> Healthcare, Pharmaceuticals Managing Director 19/22 years	<b>Mark Prenger, CFA</b> Exploration & Production, Refining, Oil Field Services Managing Director 19/29 years	<b>Kyle McCarthy</b> Trader Executive Director 12/15 years	<b>Samuel Brown, CFA</b> Trader Vice President 9/9 years
<b>Thomas Davis, CFA</b> Leveraged Loan Portfolio Manager Executive Director 16/23 years	<b>Alexander Sammarco, CFA</b> Leveraged Loan Portfolio Manager Executive Director 10/27 years		<b>Ryan Sapp</b> Environmental, Media & Entertainment, Satellite Executive Director 10/10 years	<b>Gregory Seketa</b> Distressed Securities Specialist Executive Director 7/22 years	<b>Irem Sukan</b> Euro Chemicals Healthcare Svcs, Autos, Metals & Mining Executive Director 4/17 years	<b>Russell Taylor</b> Euro Consumer Goods, Retail Executive Director 12/21 years	<b>Scott Telford III, CFA</b> Financials, Utilities Executive Director 22/22 years	<b>Kenneth Williamson, CFA</b> Consumer Cyclical Services, Metals & Mining, Supermarkets Executive Director 16/19 years	<b>Ben Callan</b> Euro HY Trader Executive Director 13/25 years	
<b>Edward Gibbons, CFA</b> Portfolio Analyst Vice President 9/9 years	<b>Anne Lenzi</b> Portfolio Analyst Vice President 3/11 years	<b>Miles Johnston</b> Portfolio Analyst Associate 6/6 years	<b>Jacob Shamion</b> High Yield Generalist Analyst <1/1 years	<b>William Smith, CFA</b> High Yield Generalist Associate 3/3 years	<b>Laura Watanabe</b> High Yield Generalist Associate 3/3 years	<b>Trenton Zoeller</b> High Yield Generalist Analyst <1/1 years				
<b>Investment Specialists</b>			<b>Bradley Barnett</b> Investment Specialist Executive Director 5/23 years	<b>Garrett Cargin, CFA</b> Investment Specialist Associate 6/6 years	<b>Rohan Duggal</b> Euro HY Investment Specialist Managing Director 5/21 years	<b>Lisa Tomasi</b> Euro HY Investment Specialist Associate <1/5 years				

Source: JPMorgan Asset Management as of December 31, 2022. There can be no assurance that the professionals currently employed by JPMorgan Asset Management will continue to be employed by JPMorgan Asset Management or that the past performance or success of any such professional serves as an indicator of such professional's future performance or success. Years reflects firm/industry experience.

# Disciplined and repeatable investment process has remained consistent

## Security selection



### Fundamental research

Thorough understanding of fundamental credit risk and forecasting of financial outlook

- Market position
- Management
- Competitors and peers
- Earnings
- Metrics: historic, forecast



### Security valuation

Understanding of the characteristics of each potential investment, its risk ranking and valuation

- Covenants
- Capital structure and enterprise valuation
- Relative value within sector and market



### Team review

Presentation, debate and challenge of each new opportunity and each position held in the portfolio

- Daily update
- Credit update meetings
- Sector and portfolio reviews

## Portfolio construction/ risk management



### Portfolio construction

Seeking to maximise alpha while controlling risk. Position sizes reflect both **downside risk** and **conviction**

- Issuer weights
- Sector weights
- Yield analysis
- Diversification



### Portfolio & risk management

Risk management is embedded at every stage of the investment process, combined with robust oversight and risk management tools

- Ongoing portfolio management process
- Weekly risk and stress test reporting/analysis
- Quarterly IDR process

The manager seeks to achieve the stated objectives. There can be no guarantee the objectives will be met.

# Rank 1 security examples

## Carvana - CVNA

- Largest online platform for buying, selling and delivering used cars in the US
- Inflationary pressures have resulted in higher used vehicle sourcing and delivery costs and weaker than expected margins YTD
- Carvana has been EBITDA negative every year except FY21 and has burned >\$6B cash over the last 5 years as they prioritized growth over profitability
- Recent consumer softness and declining used car prices may lead to vehicle impairment charge and further stress margins and cash flow, all while funding costs have risen dramatically

## Ligado Networks - NEWLSQ

- Operating business de minimis compared to the capital structure as the major asset held by the Company is undeployed wireless spectrum
- Unsustainable capital structure in light of Ligado's inability to overcome political and technological controversies to deploy, sell or lease the spectrum it owns

## Carvana – CVNA 4.875 due 9/1/29



## Ligado Networks – NEWLSQ 17.50 due 5/1/24



Source: Bloomberg, JPMAM. Data as of 9/30/2022. The securities highlighted above have been selected based on their significance and are shown for illustrative purposes only. It is not a recommendation.



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# Portfolio and Performance

# Positioning snapshot

## JPMorgan high yield research enhanced ETF

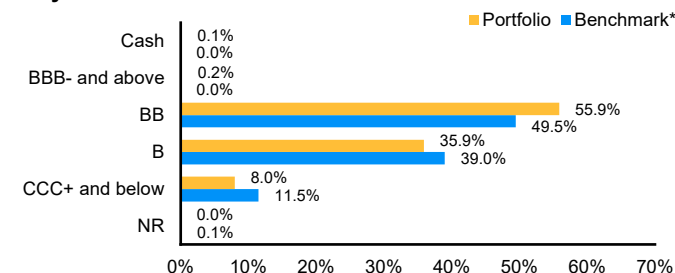
Focused strategy demonstrated relative to benchmark statistics & subsector weighting

### Current positioning as of December 31, 2022

Relative to the benchmark, the portfolio is positioned defensively in yield and spread, is slightly shorter in duration and is more selective in number of issuers

Portfolio statistics	Portfolio	Benchmark	Variance
Yield to Worst (%)	8.48	9.03	-0.55
Yield to Maturity (%)	8.50	9.05	-0.55
Spread to Worst (bps)	439	490	-51
Average Coupon (%)	5.60	5.79	-0.19
Duration	4.15	4.18	-0.03
Spread Duration	4.16	4.19	-0.03
Average Quality	B+	B+	--
Number of Issuers	505	930	-425

### Quality distribution



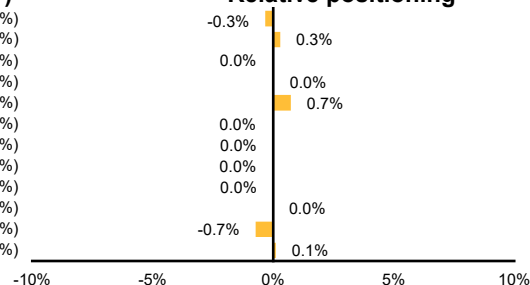
### Current sector positioning

Currently overweight midstream and automotive and underweight retailers and industrial other while being market weight all level 3 sectors

### Sector index (%MV)

Consumer Cyclical (22.3%)
Communications (16.0%)
Energy (12.6%)
Consumer Noncyclical (11.3%)
Capital Goods (9.8%)
Finance (9.4%)
Technology (7.0%)
Basic Industry (5.0%)
Transportation (2.7%)
Utility (2.5%)
Industrial Other (1.4%)
Other (0.0%)

### Relative positioning



### Top subsector overweights

Subsector	Portfolio	Benchmark	Variance
Midstream	6.56%	5.27%	1.29%
Automotive	4.91%	3.86%	1.05%
Aerospace/Defense	3.25%	2.38%	0.86%
Cable Satellite	7.27%	6.61%	0.66%
Banking	1.51%	0.88%	0.63%

### Top subsector underweights

Subsector	Portfolio	Benchmark	Variance
Retailers	2.83%	3.60%	-0.76%
Industrial Other	0.71%	1.44%	-0.73%
Gaming	3.93%	4.57%	-0.65%
Refining	0.00%	0.53%	-0.53%
P&C	0.76%	1.25%	-0.49%

Sources: JPMorgan, Bloomberg US High Yield 2% Issuer Capped Index. Stats are shown ex-cash.

Notes: Benchmark is the Bloomberg US High Yield 2% Issuer Capped Index. Statistics compiled by running vendor data through J.P. Morgan Asset Management internal analytic models and JPM PRISM System. J.P. Morgan Investment Management (JPMIM) receives credit quality ratings on underlying securities of the portfolio from the three major ratings agencies – S&P, Moody's and Fitch. When calculating the credit quality breakdown, JPMIM selects the middle rating of the agencies when all three agencies rate a security, or the lower of the two ratings if only two agencies rate a security, or one rating if that is all that is provided. Securities that are not rated are reflected as such.

# Performance

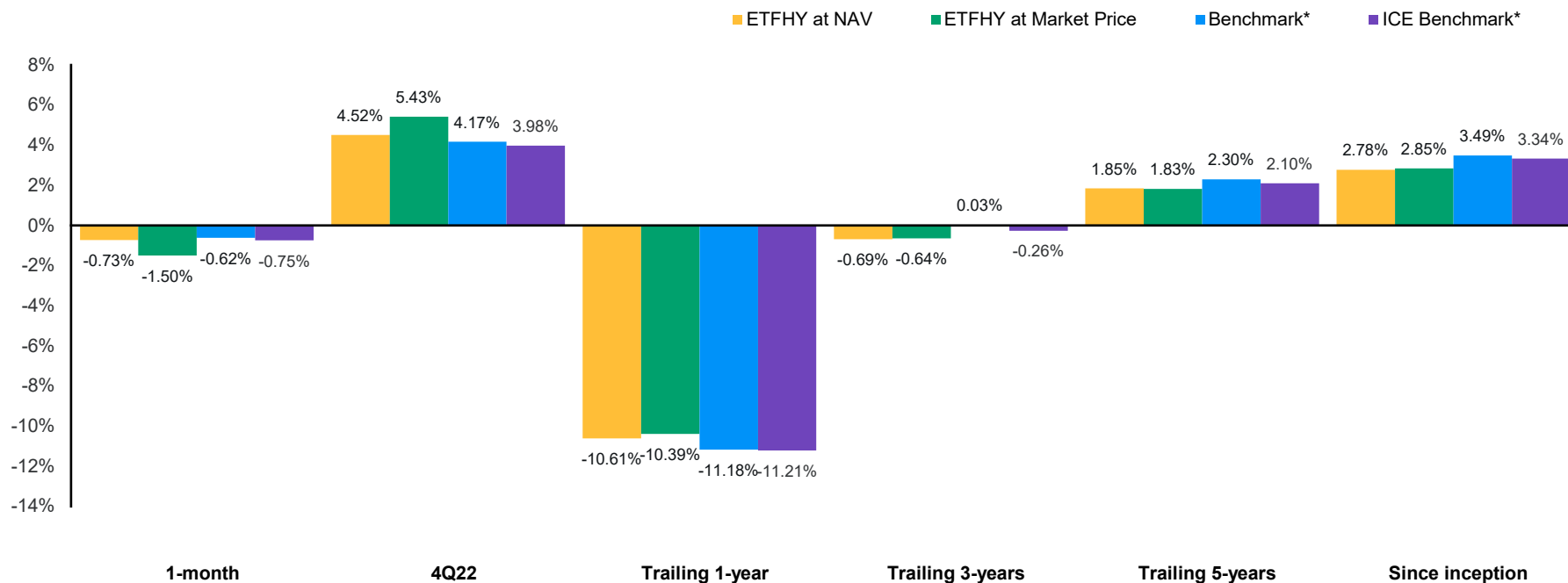
JPMorgan High Yield Research Enhanced ETF  
Investment performance as of December 31, 2022

## Market value

JP Morgan Disciplined High Yield ETF

USD 384m

## Trailing performance results – gross of fees



JPHY's strategy change was effective 9/9/2019. Inception: 9/14/16

The performance quoted is past performance and is not a guarantee of future results. Investment returns and principal value of an investment will fluctuate so that an investor's shares, when sold or redeemed, may be worth more or less than original cost. Current performance may be higher or lower than the performance data shown. For performance current to the most recent month-end please call 1-844-4JPM-ETF. ICE Benchmark used for reference is ICE US High Yield Constraint Index (HUC0). Returns prior to 9/30/19 do not reflect the research enhanced investment strategy that became fully implemented 10/1/19.

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# Appendix

# Risks

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The deduction of an advisory fee reduces an investor's return. Actual account performance will vary depending on individual portfolio security selection and applicable fee schedules. Fees are available upon request.

The following is an example of the effect of compounded advisory fees over a period of time on the value of a client's portfolio: A portfolio with a beginning value of USD 100 million, gaining an annual return of 10% per annum would grow to USD 259 million after 10 years, assuming no fees have been paid out. Conversely, a portfolio with a beginning value of USD 100 million, gaining an annual return of 10% per annum, but paying a fee of 1% per annum, would only grow to USD 235 million after 10 years. The annualized returns over the 10-year time period are 10.00% (gross of fees) and 8.91% (net of fees). If the fee in the above example was 0.25% per annum, the portfolio would grow to USD 253 million after 10 years and return 9.73% net of fees. Fees were calculated on a monthly basis, which shows the maximum effect of compounding.

**High Yield Securities Risk:** One of the Fund's main investment strategies is to invest in high yield, high risk securities (also known as junk bonds) which are considered to be speculative. These investments may be issued by companies which are highly leveraged, less creditworthy or financially distressed. Although these investments generally provide a higher yield than higher-rated debt securities, the high degree of risk involved in these investments can result in substantial or total losses. These securities are subject to greater risk of loss, greater sensitivity to interest rate and economic changes, valuation difficulties, and a potential lack of a secondary or public market for securities. The market price of these securities can change suddenly and unexpectedly. As a result, the Fund is intended for investors who are able and willing to assume a high degree of risk.

**Credit Risk** is the risk that issuers and counterparties will not make payments on securities and investment held by the portfolio. Such default could result in losses to an investment in the portfolio. In addition, the credit quality of securities held by a portfolio may be lowered if an issuer's financial condition changes. Lower credit quality may lead to greater volatility in the price of a security. Lower credit quality also may affect liquidity and make it difficult for the portfolio to sell the security. The portfolio may invest in securities that are rated in the lowest investment grade category. Such securities are considered to have speculative characteristics similar to high yield securities, and issuers of such securities are more vulnerable to changes in economic conditions than issuers of higher-grade securities.

The Strategy may use derivatives in connection with its investment strategies. Derivatives may be riskier than other types of investments because they may be more sensitive to changes in economic or market conditions than other types of investments and could result in losses that significantly exceed the Strategy's original investments. Certain derivatives may give rise to a form of leverage. As a result, the Strategy may be more volatile than if the Strategy had not been leveraged because the leverage tends to exaggerate the effect of any increase or decrease in the value of the Strategy's portfolio securities. Derivatives are also subject to the risk that changes in the value of a derivative may not correlate perfectly with the underlying asset, rate or index. The use of derivatives for hedging or risk management purposes or to increase income or gain may not be successful, resulting in losses to the Strategy, the cost of which may reduce the Strategy's returns. Derivatives also expose the Strategy to the credit risk of the derivative counterparty.

The Strategy mainly invests in bonds and other debt securities. These securities will increase or decrease in value based on changes in interest rates. If rates increase, the value of the Strategy's investments generally declines. On the other hand, if rates fall, the value of the investments generally increases. Your investment will decline in value if the value of the investments decreases. Securities with greater interest rate sensitivity and longer maturities tend to produce higher yields but are subject to greater fluctuations in value. Usually, the changes in the value of fixed income securities will not affect cash income generated, but may affect the value of your investment.

Any securities mentioned throughout the presentation are shown for illustrative purposes only and should not be interpreted as recommendations to buy or sell. A full list of firm recommendations for the past year is available upon request.

## Risks (cont'd)

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### Definition of indices:

**10-year Treasury** is a debt obligation issued by the United States government that matures in 10 years. **5-year Treasury** is a debt obligation issued by the United States government that matures in 5 years. Treasury notes pay interest at a fixed rate once every six months and pays the face value to the holder at maturity. **Bloomberg Aggregate Bond Index** is a broad bond index covering most U.S. traded bonds and some foreign bonds traded in the U.S. **JPMorgan JULI High Grade Index** is comprised of investment grade dollar denominated US corporate bonds and emerging market corporates. The **JPMorgan Global High Yield Index** is comprised of high yield corporate debt issuers domiciled across global emerging and developed markets. **JPMorgan EMBI Global Composite** is comprised of traded external debt instruments (external meaning foreign currency denominated fixed income) in the emerging markets. The **J.P. Morgan Leveraged Loan Index** is designed to mirror the investable universe of USD institutional leveraged loans, including US and international borrowers. **CDX High Yield Index** is a credit default swap index that reflects the performance of a basket of assets, namely, a basket of single-name credit default swaps on individual credits. HYG ETF seeks to track the investment results of an index composed of U.S. dollar-denominated, high yield corporate bonds. **EMCB: The ICE BofA Emerging Markets Corporate Plus Index** tracks the performance of U.S. dollar and euro denominated emerging markets non-sovereign debt publicly issued in the major domestic and eurobond markets and includes all securities rated BB1 or lower. **H0A0: The ICE BofA US High Yield Index** tracks the performance of US dollar denominated below investment grade corporate debt publicly issued in the US domestic market. **HUC0: The ICE BofA US High Yield Constrained Index** contains all securities in The ICE BofA US High Yield Index (H0A0) but caps issuer exposure at 2%. **HUC1: The ICE BofA BB US High Yield Constrained Index** contains all securities in The ICE BofA US High Yield Index (H0A0) that are rated BB1 through BB3, based on an average of Moody's, S&P and Fitch, but caps issuer exposure at 2%. **HUC2: The ICE BofA Single-B US High Yield Constrained Index** contains all securities in The ICE BofA US High Yield Index (H0A0) that are rated B1 through B3, based on an average of Moody's, S&P and Fitch, but caps issuer exposure at 2%. **HUC3: The ICE BofA CCC and Lower US High Yield Constrained Index** contains all securities in The ICE BofA US High Yield Index (H0A0) that are rated CCC1 and lower, based on an average of Moody's, S&P and Fitch, but caps issuer exposure at 2%. **HUC4: The ICE BofA BB-B US High Yield Constrained Index** contains all securities in The ICE BofA US High Yield Index (H0A0) rated BB1 through B3, based on an average of Moody's, S&P and Fitch, but caps issuer exposure at 2%. **C0A0: The ICE BofA US Corporate Index** tracks the performance of US dollar denominated investment grade corporate debt publicly issued in the US domestic market. **D0A0: The ICE BofA US Corporate, Government & Mortgage Index** tracks the performance of US dollar denominated investment grade debt publicly issued in the US domestic market, including US Treasuries, quasi-governments, corporates, covered bonds and residential mortgage pass-throughs. **M0A0: The ICE BofA US Mortgage-Backed Securities Index** tracks the performance of US dollar denominated fixed rate and hybrid residential mortgage pass-through securities publicly issued by US agencies in the US domestic market. **Credit Suisse Leveraged Loan Index** is an index that represents the investible universe of the US\$-denominated Leveraged Loan market **SPX: S&P 500** is an index of 500 stocks chosen for market size, liquidity and industry grouping, among other factors. The S&P 500 is designed to be a leading indicator of U.S. equities and is meant to reflect the risk/return characteristics of the large cap universe.

# Disclaimer

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There can be no assurance that the professionals currently employed by JPMAM will continue to be employed by JPMAM or that the past performance or success of any such professional serves as an indicator of such professional's future performance or success. 30-day SEC Yield: Represents net investment income earned by a fund over a 30-day period, expressed as an annual percentage rate based on the fund's share price at the end of the 30-day period. The 30-day yield should be regarded as an estimate of investment income and may not equal the fund's actual income distribution rate. 30-day SEC Yield (unsubsidized): Unsubsidized yield does not adjust for any fee waivers and/or expense reimbursements. Dividend Yield: The dividend yield for monthly paying Funds is calculated by annualizing actual dividends distributed for the monthly period ended on the date shown and dividing by the net asset value on the last business day for the same period.

Past performance does not guarantee future results. Total returns assumes reinvestment of any income. Total return assumes reinvestment of dividends and capital gains distributions and reflects the deduction of any sales charges. Performance may reflect the waiver of a portion of the Fund's advisory or administrative fees for certain periods since the inception date. If fees had not been waived, performance would have been less favorable.

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