

# Generating Better Risk-Adjusted Returns

## Introduction to High-Yield Bonds

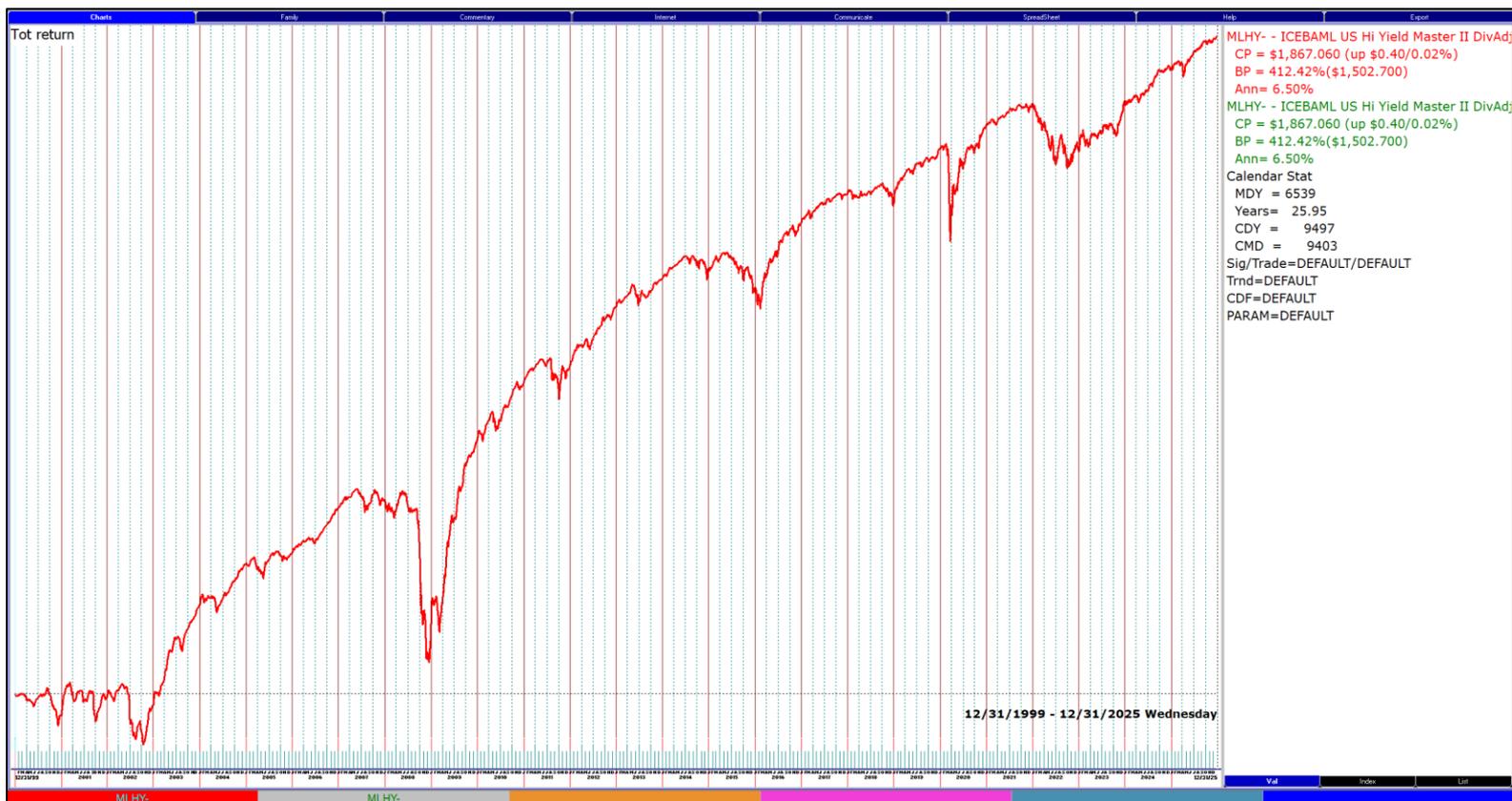
# Bonds and Credit Quality

<b>Types of Bonds</b>
US Treasury bonds
Inflation-protected bonds
Mortgage-backed bonds
Corporate bonds
<b>High-yield corporate bonds (junk)</b>
Floating Rate bonds
Municipal bonds
High-yield muni bonds

<b>Bond Rating</b>	<b>Description</b>	
AAA	Prime	Investment Grade
AA+, AA, AA-	High Grade	
A+, A, A-	Upper Medium Grade	
BBB+, BBB, BBB-	Lower Medium Grade	
BB+, BB, BB-	Non-Investment Grade	High-Yield (Junk)
B+, B, B-	Highly Speculative	
CCC+	Substantial Risks	
CCC	Extremely Speculative	
CCC-, CC, C	Default Imminent	
D	In Default	

# Merrill Lynch US High-Yield Master II Index

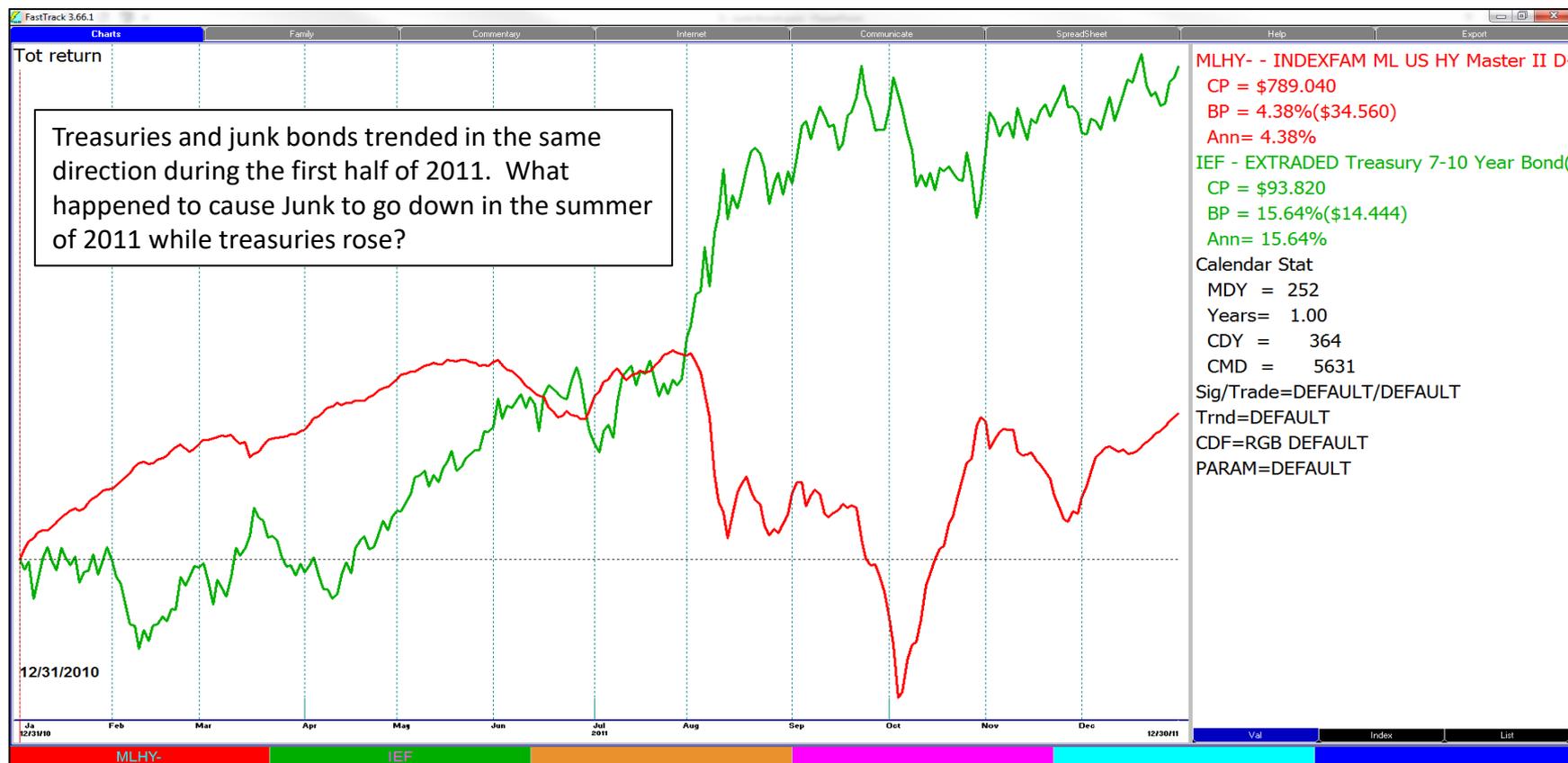
## 12/31/1996 – 12/31/2025



- Merrill Lynch US High-Yield Master II Index (FT Symbol: MLHY-) tracks below investment grade rated corporate debt publicly issued in the US domestic market.
- To qualify for inclusion in the Index, bonds must have a below investment grade rating, at least one year to maturity, a fixed coupon schedule, and a minimum of \$100 million outstanding.

# Junk Bonds – Are they bonds or equities?

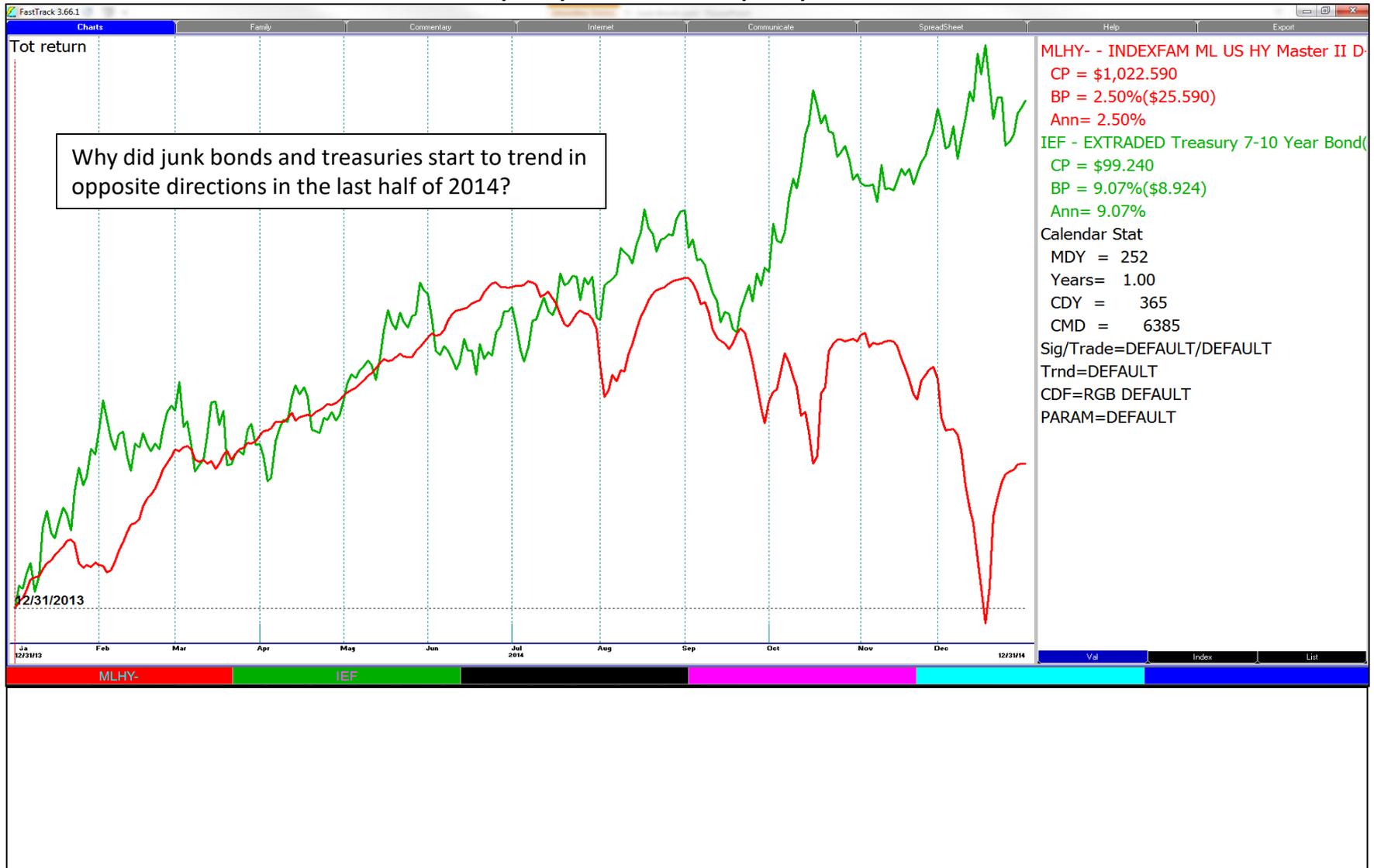
12/31/2010 – 12/31/2011



- Junk bonds share characteristics with both bonds and equities.
- Junk bond prices are influenced by interest rates like most other bonds but are also influenced by economic conditions and expected default rates. As expected default rates rise, investors require additional yield to compensate for this risk, driving down bond prices.

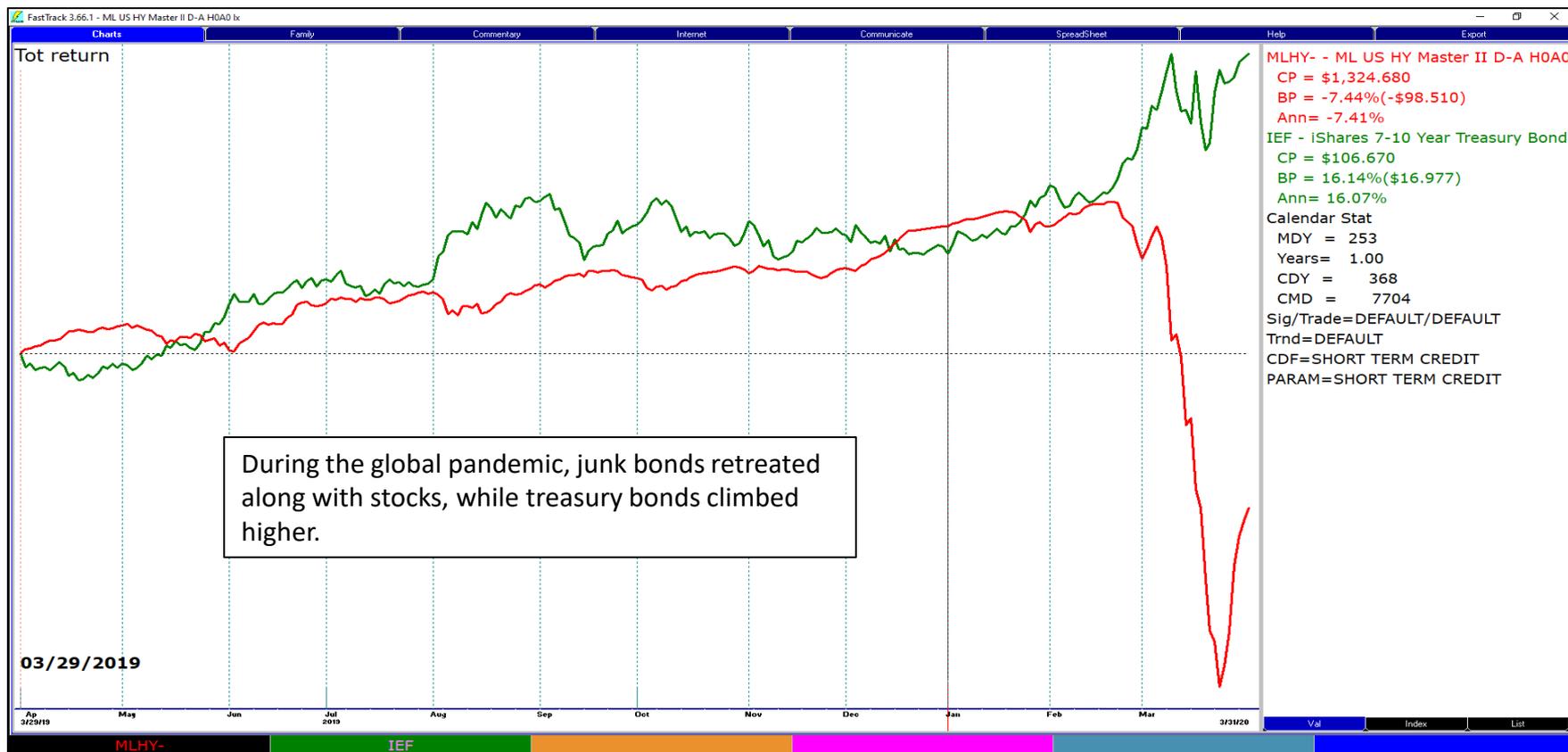
# Junk Bonds – Are they bonds or equities?

12/31/2013 – 12/31/2014



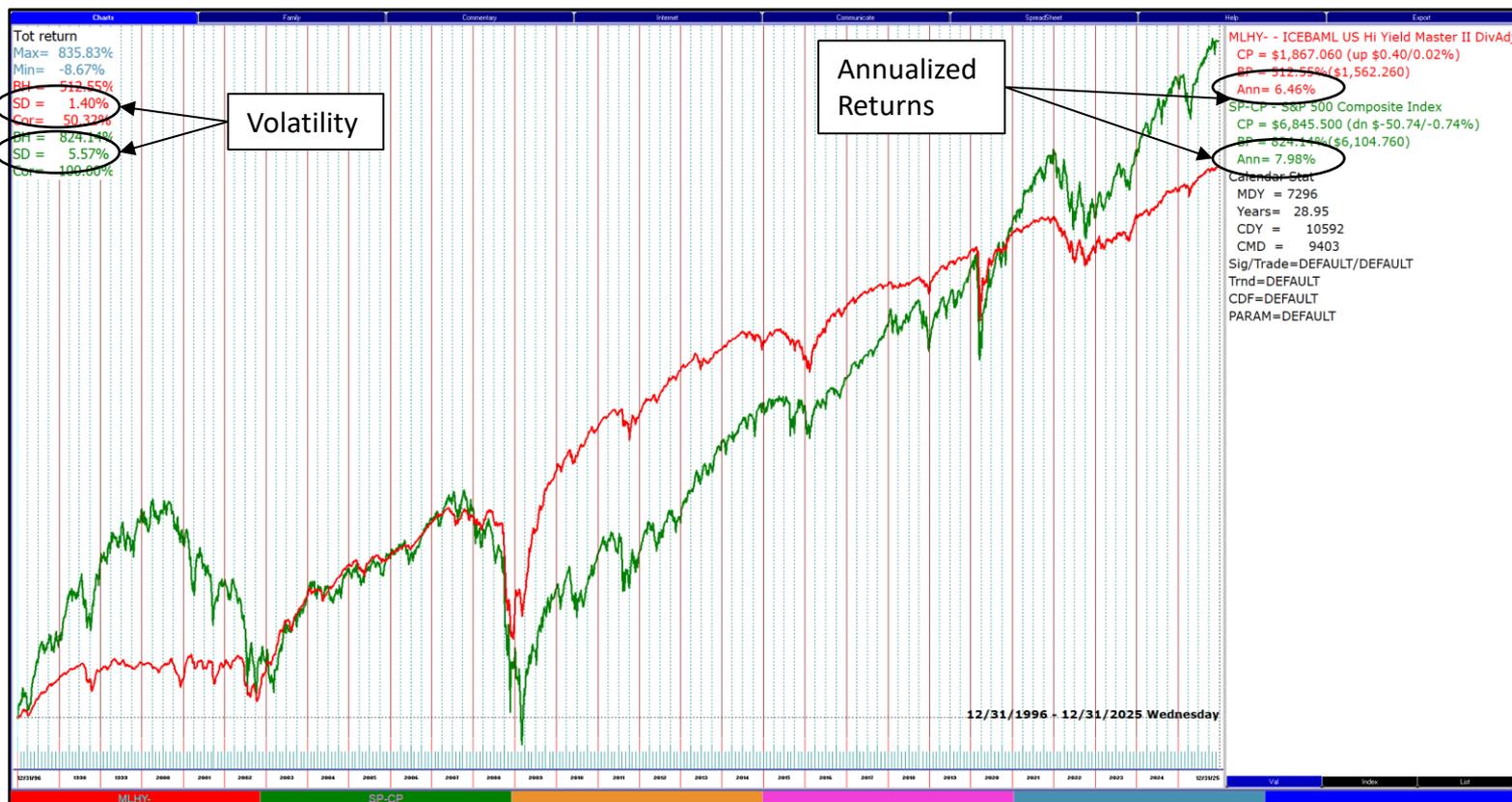
# Junk Bonds – Are they bonds or equities?

3/29/2019 – 3/29/2020



# Equity-like Returns with Lower Volatility

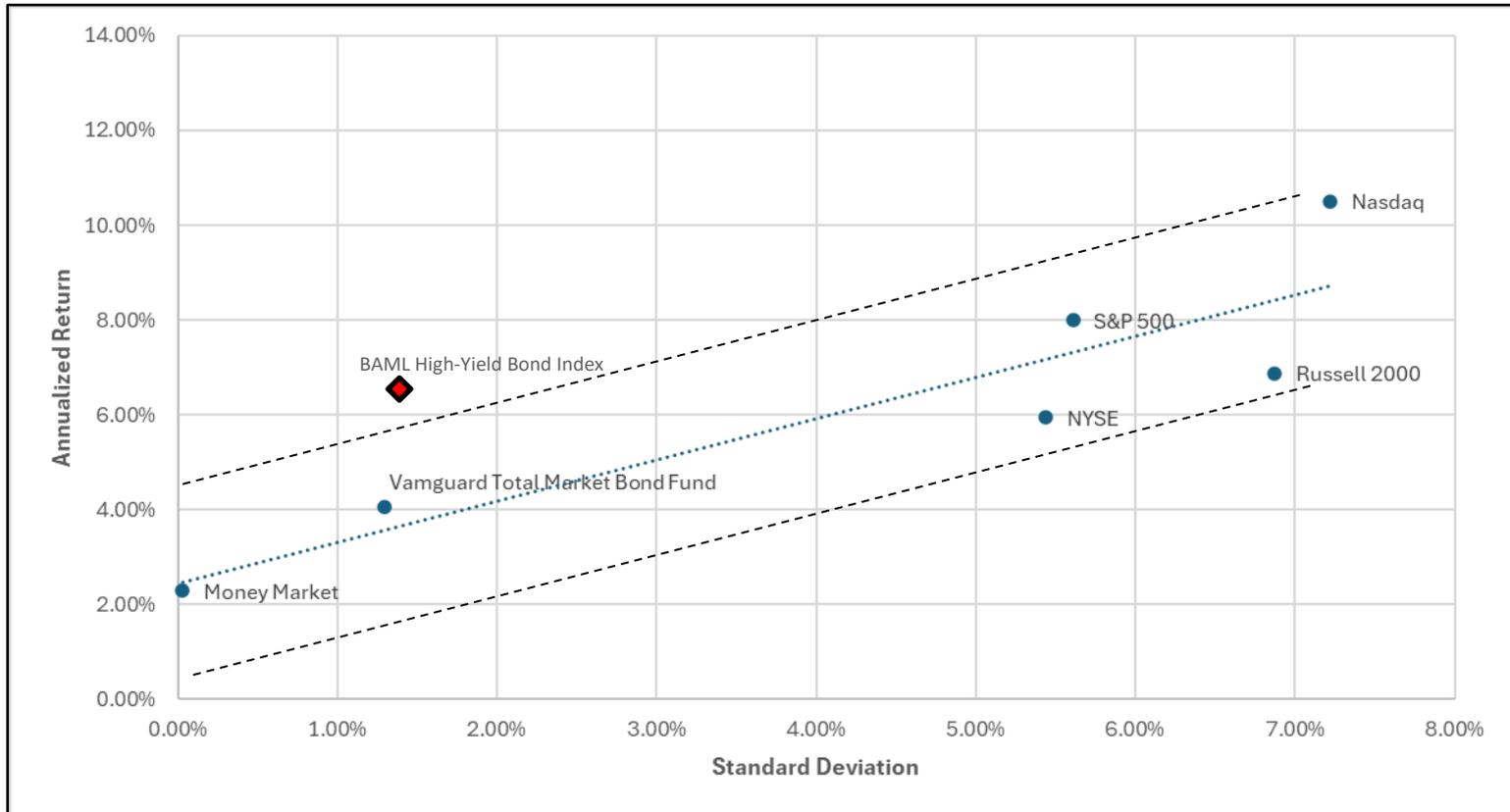
## MLHY- vs. S&P 500 (12/31/1996 – 12/31/2025)



- Junk bonds tend to trend in the same direction as equities. Why?
- Over the long-term, junk bonds have provided returns that have kept pace with the S&P 500 on a fraction of the volatility, which makes them a desirable investment for most investors.

# Junk Bonds

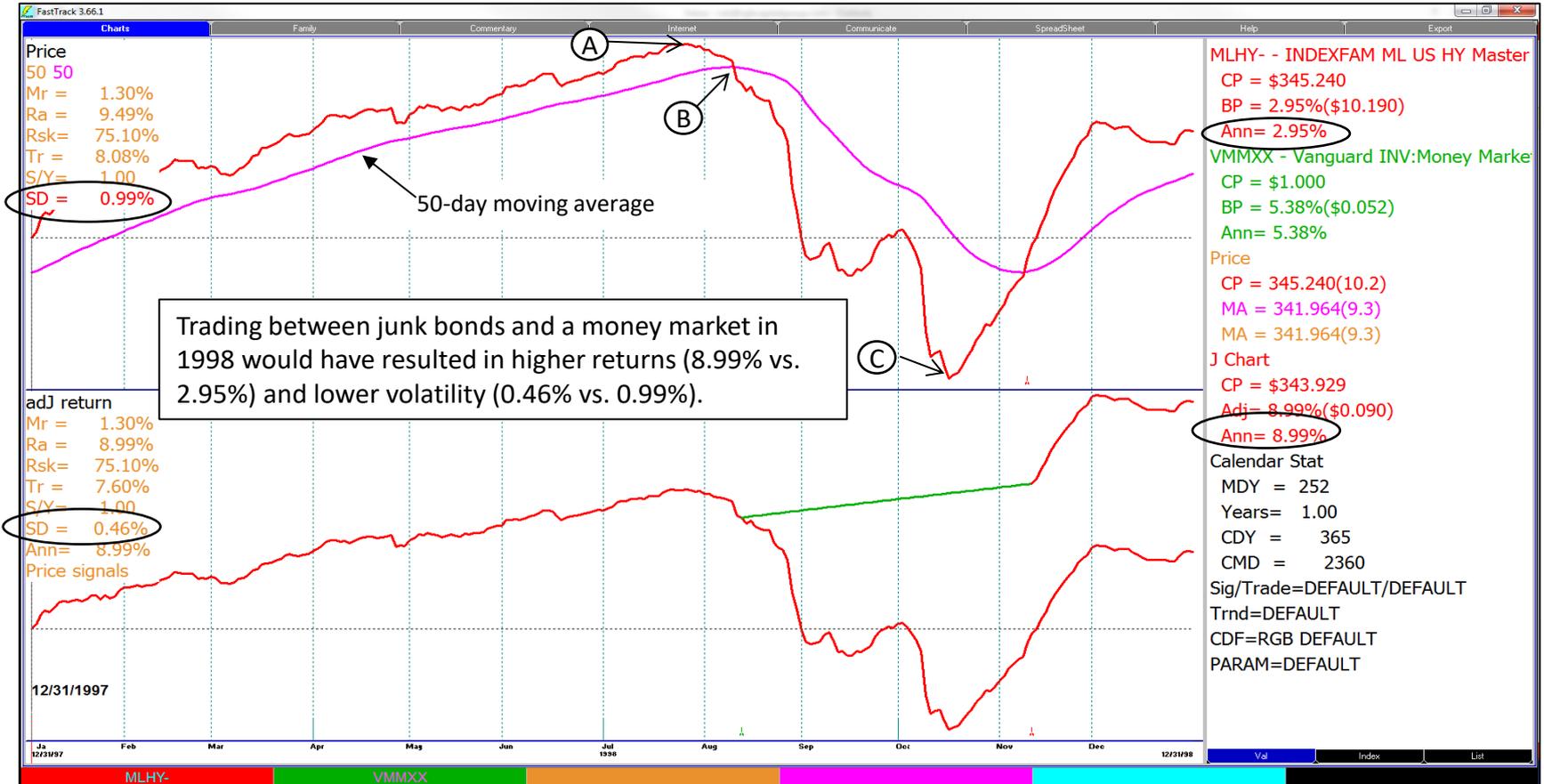
## Risk vs. Reward (12/31/1996 – 12/31/2025)



- Owning junk bond mutual funds provides better risk-adjusted returns compared to many of the major market indices and provides investors a potential vehicle for moving outside the long-term expected return channel.
- Can we do better?

# MLHY- Timed with a 50-day Moving Average

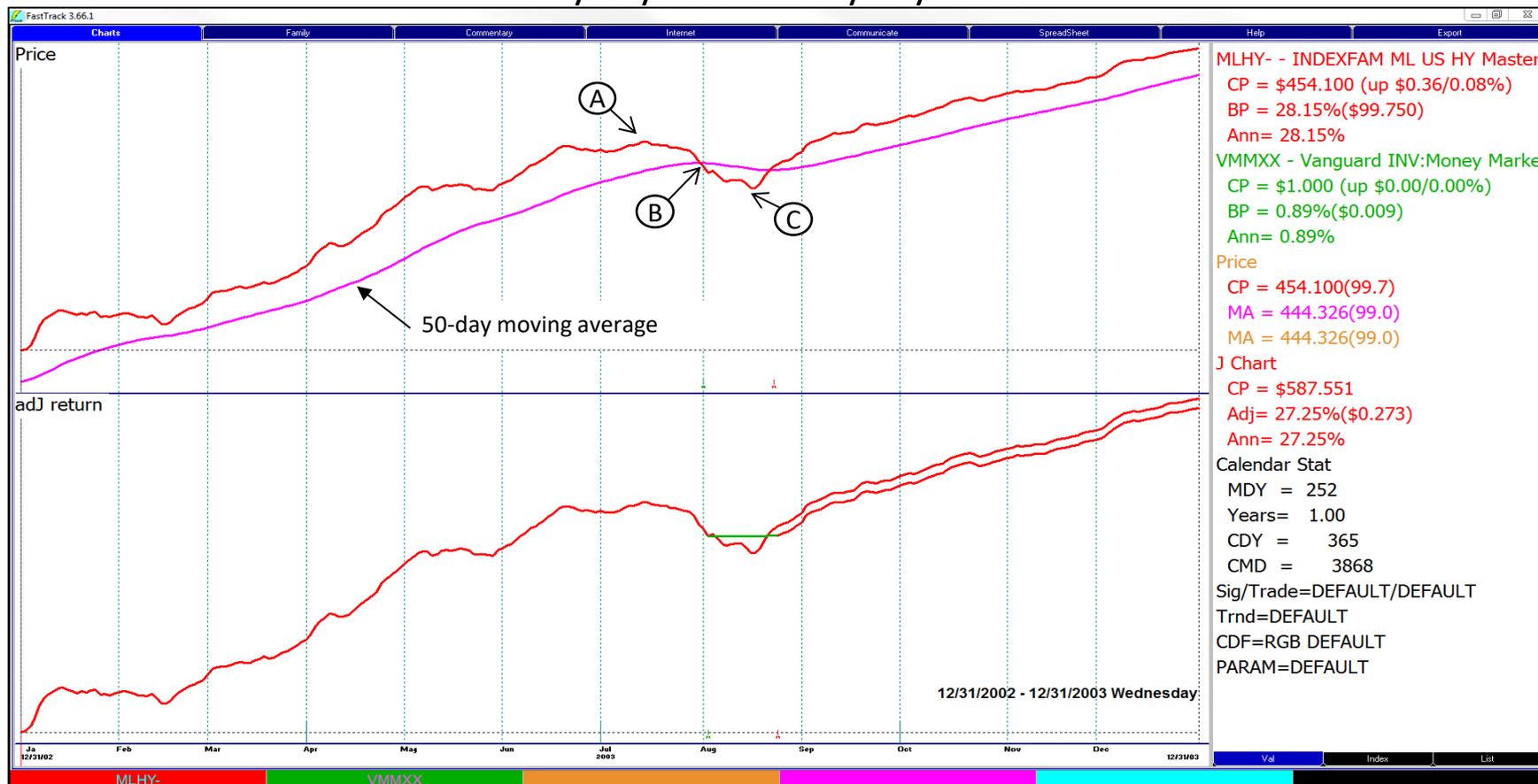
## 12/31/1997 – 12/31/1998



- Moving average timing can provide appropriate entry and exit points when investing in junk bonds.
- Timed drawdown is the % decline from a peak to the point it crosses the moving average (with a 1-day trading delay); total drawdown is the % decline from a peak to a trough prior to crossing above the moving average.
- The timed drawdown (point A → B) is -1.0%; much better than the -8.7% total drawdown (point A → C).
- During 1998, a 50-day moving average would have increased returns and reduced overall volatility/drawdown.

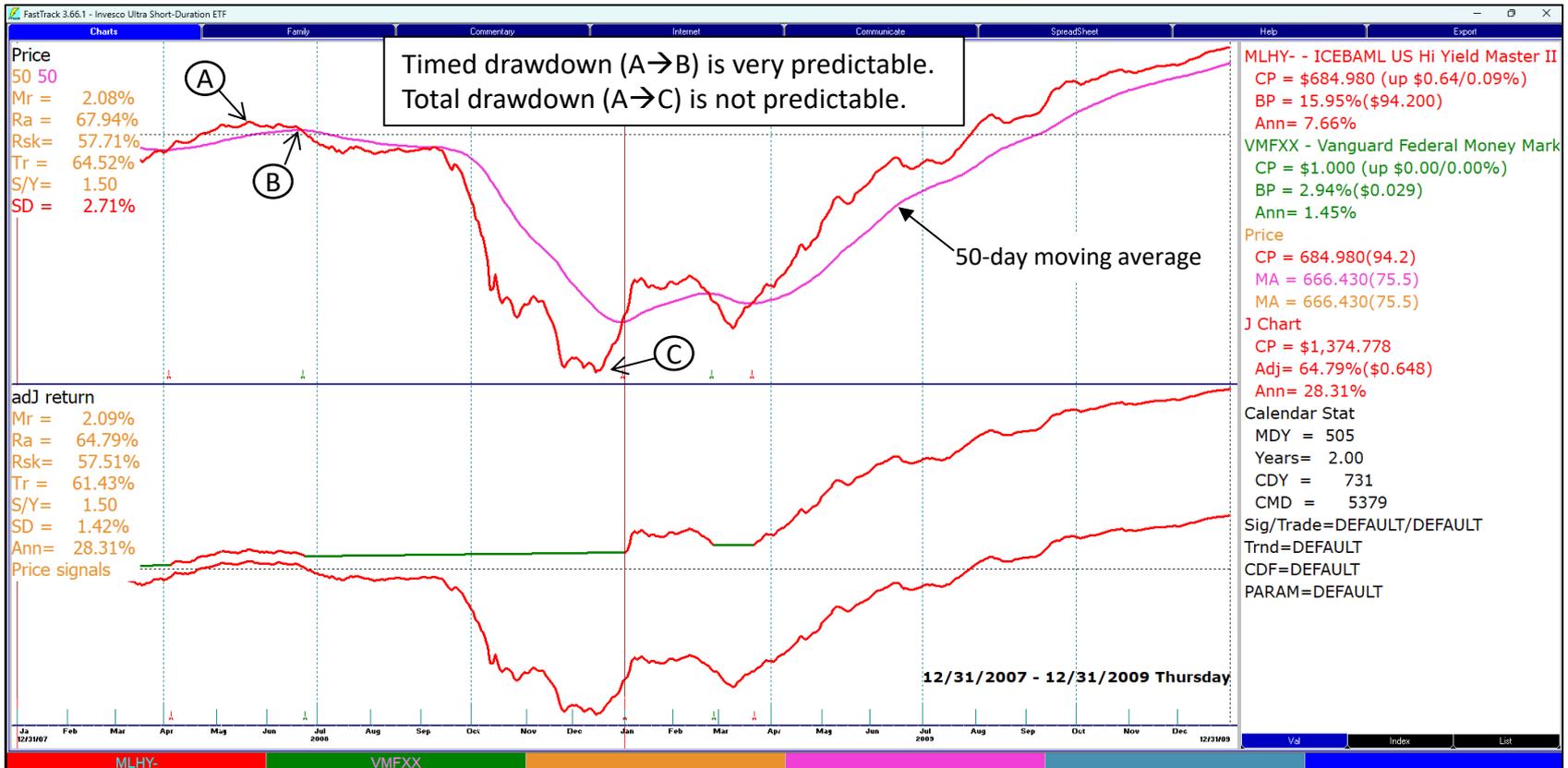
# MLHY- Timed with a 50-day Moving Average

## 12/31/2002 – 12/31/2003



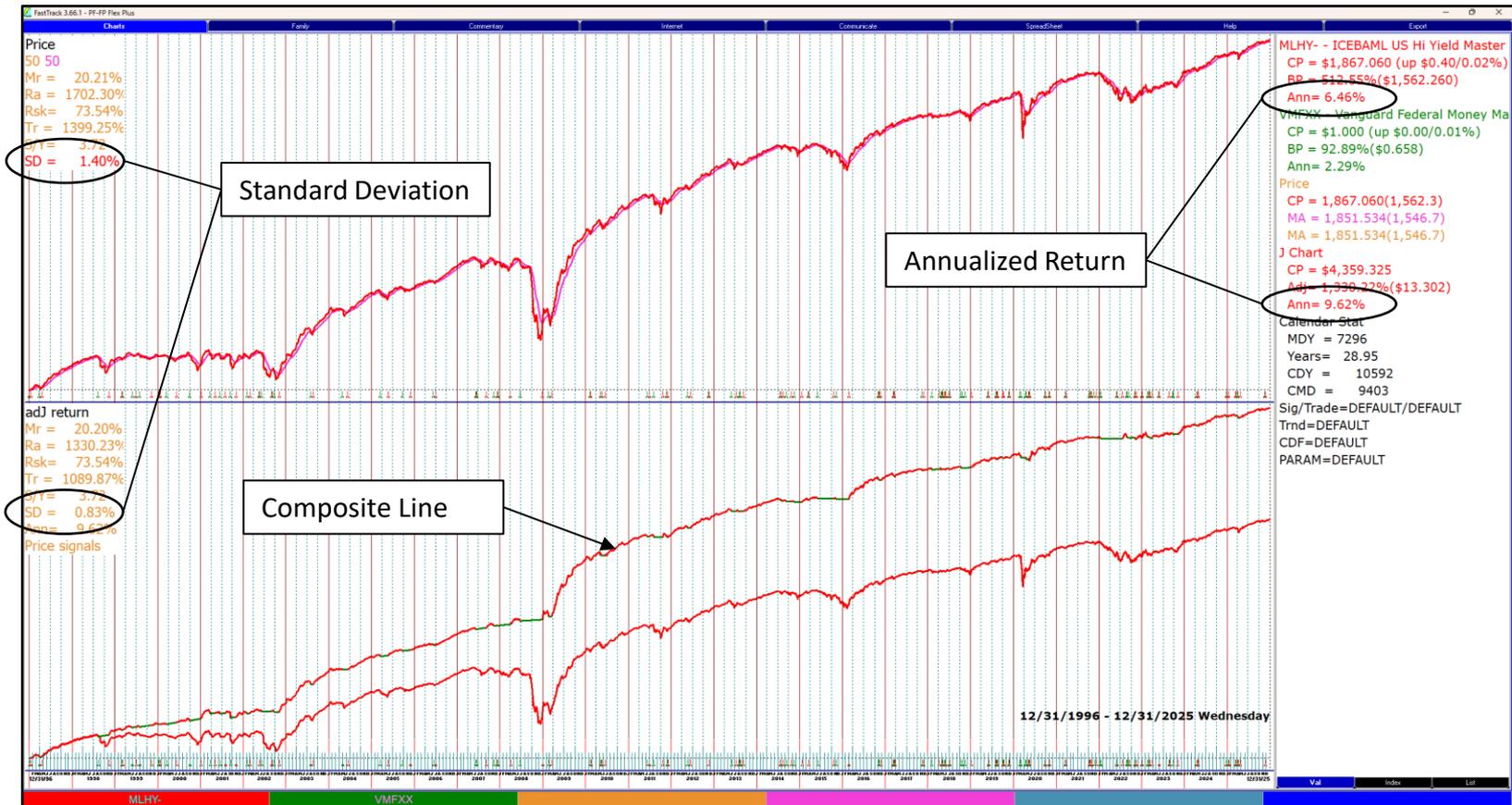
- Timing junk bonds will not always generate larger returns, however it will always limit drawdown.
- In 2003, the timed drawdown (point A → B) was -2.0%; total drawdown (point A → C) was only -3.7%.
- In this case, trading when MLHY- crossed the 50-day moving average resulted in a whipsaw creating slightly less return.

# MLHY- Timed with a 50-day Moving Average 12/31/2007 – 12/31/2009



- Timed drawdown for MLHY- (A → B) was 1.5%; a lot better than the total drawdown (A→C) of 34.7%.
- Timed drawdown for MLHY- using a 50-day MA for the last 20 years is generally between 1%-3% and is very predictable.
- Total drawdown is not predictable.

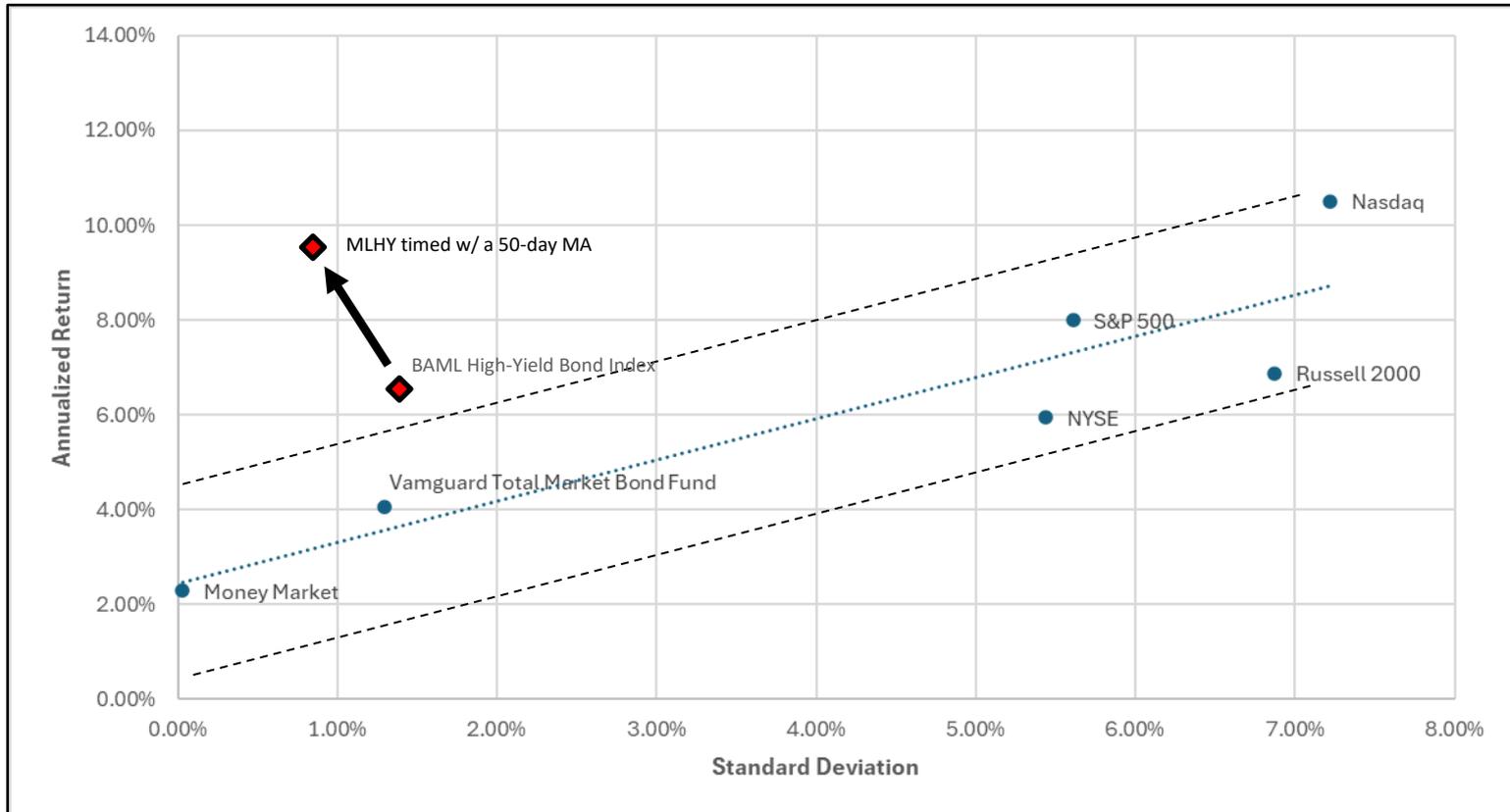
# MLHY- Timed with a 50-day Moving Average 12/31/1996 – 12/31/2025



- The composite line shows the results of trading between junk bonds and cash based on a 50-day MA.
- Timing junk bonds with a 50-day moving average has provided higher returns and less risk than buying and holding junk bond funds.
- Maximum drawdown of the composite line is 5.9%; significantly less than the 35.0% max drawdown for MLHY-.

# Junk Bonds

## Risk vs. Reward (12/31/1996 – 12/31/2025)



- Using a 50-day moving average to time entry into and exits from junk bond funds produces better risk-adjusted returns.
- This technique is consistent with most investors' desire to strive for lower risk and higher returns.

# Generating Better Risk-Adjusted Returns

12/31/1996 – 12/31/2025



	Ann Ret	SD	UI	UPI	Max DD
<b>S&amp;P 500 Index (SP-CP)</b>	7.98%	5.57%	17.42	0.41	-56.78%
<b>ML High Yield Master II Index (MLHY-)</b>	6.46%	1.40%	5.25	1.07	-34.99%
<b>MLHY Index Timed w/ 50-day MA (HY50)</b>	9.62%	0.83%	1.20	7.33	-5.94%

# Junk Bond Moving Average

## Which Moving Average Should I Use?

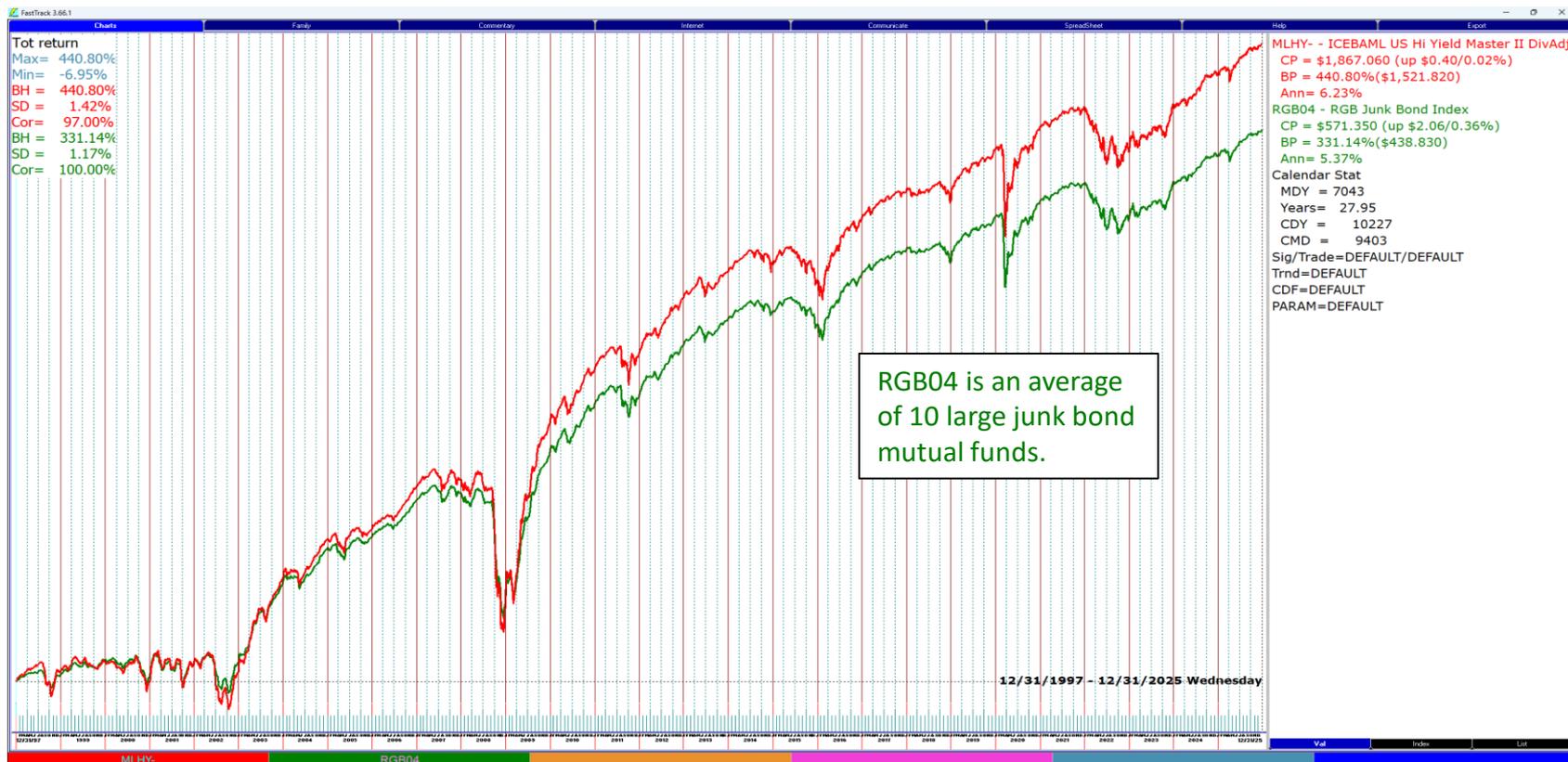
	Annualized Return	Max DrawDown	Standard Deviation	Switches/Year
10-day Moving Average	11.95%	-4.40%	0.82%	8.72
20-day Moving Average	11.43%	-4.37%	0.80%	5.51
30-day Moving Average	10.84%	-3.94%	0.80%	4.72
40-day Moving Average	10.01%	-4.63%	0.82%	4.00
50-day Moving Average	9.62%	-5.94%	0.83%	3.51
60-day Moving Average	9.19%	-6.61%	0.82%	2.89
70-day Moving Average	8.94%	-7.38%	0.82%	2.45
80-day Moving Average	8.78%	-7.31%	0.82%	2.21
90-day Moving Average	8.33%	-8.18%	0.85%	1.90

Time Period: 12/31/1996 – 12/31/2025

- Adjusting the moving average will impact risk and return – higher moving averages produce higher drawdown and lower return; the lower moving averages produce less drawdown and higher returns.
- Investors need to consider switches per year (S/Y) due to restrictions on frequent trading with junk bond mutual funds.

# Junk Bond Mutual Funds

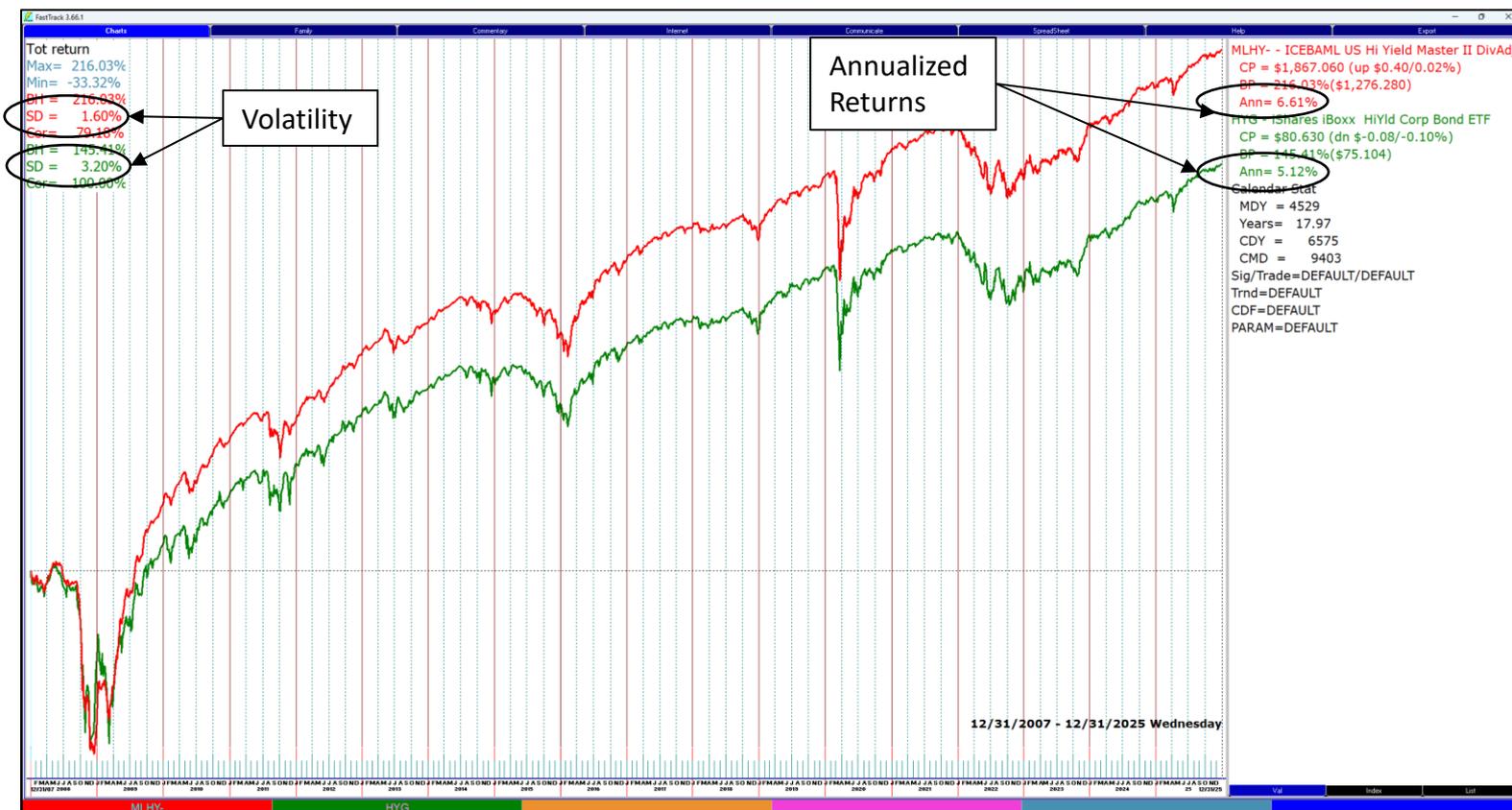
## A Good Proxy for Merrill Lynch US High-Yield Master II Index



- You can not invest directly in the Merrill Lynch US High-Yield Master II Index.
- However, junk bond mutual funds do a good job of tracking the overall high-yield market as represented by the ML US HY Master II Index. Note similarity of risk and return.

# Mutual Funds vs. ETFs

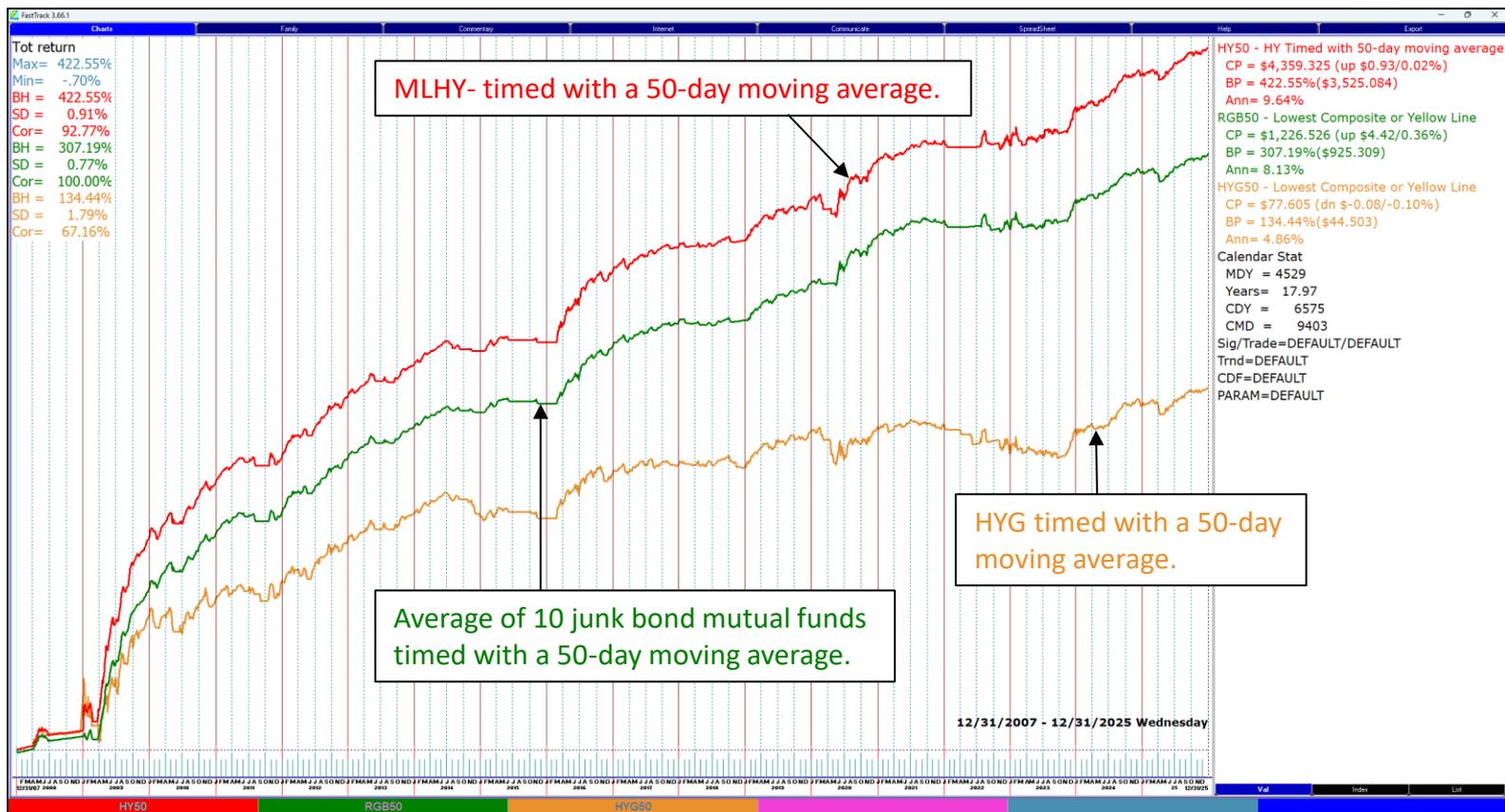
## Can I use Junk Bond ETFs with 50-day Moving Average?



- Although junk bond ETFs trend in the same general direction as MLHY-, the ETFs tend to be much more volatile.
- The volatility of HYG (iShares iBoxx HiYld Corp Bond ETF) is two times the volatility of MLHY- (3.20% vs. 1.60%).

# Mutual Funds vs. ETFs

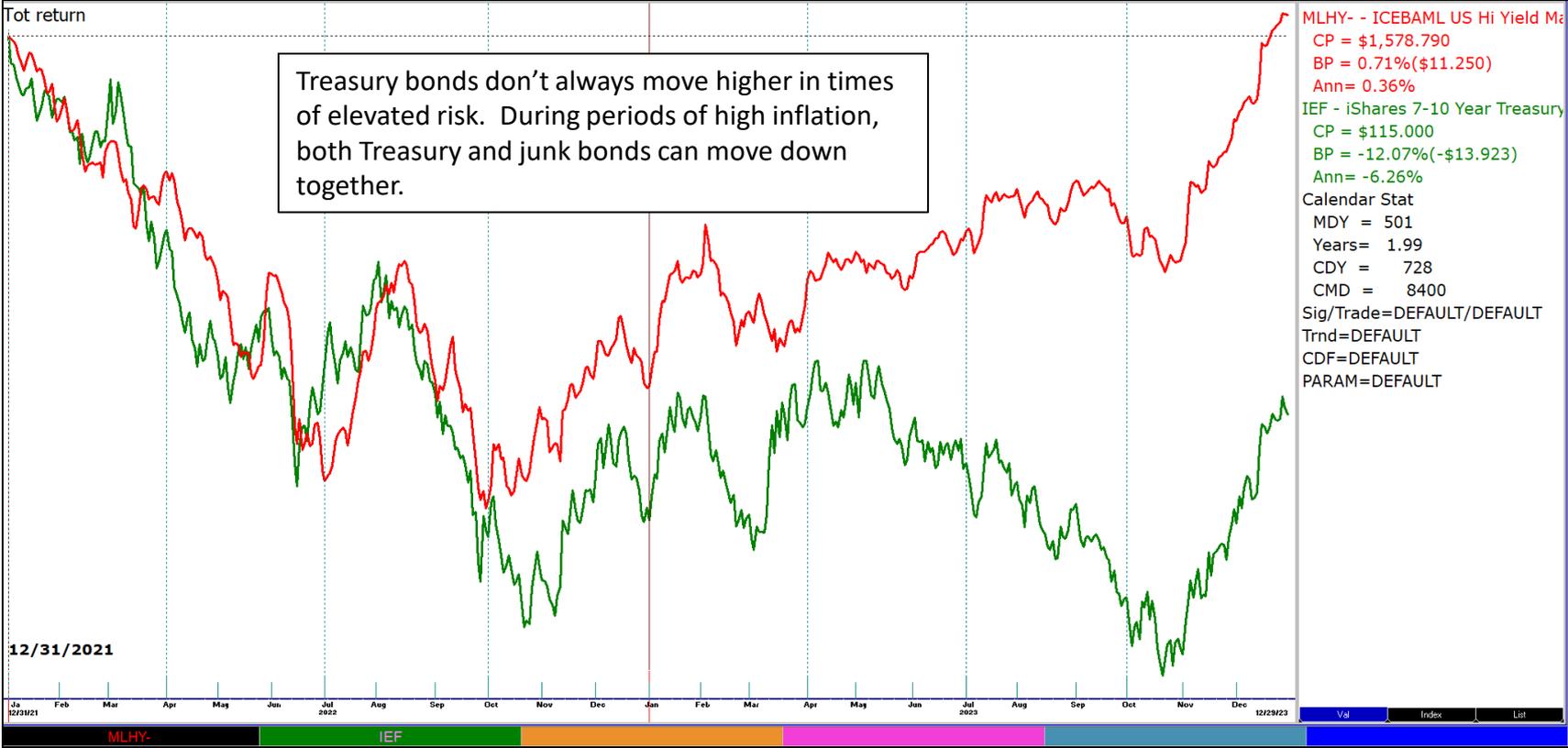
## Can I use Junk Bond ETFs with 50-day Moving Average?



- Using a 50-day moving average on HYG resulted in lower returns than timing mutual funds with a 50-day moving average (8.55% annualized vs. 11.52%) and over twice the volatility (2.25% vs. 0.85%).
- This is generally not consistent with investors desire for better risk-adjusted returns.

# Junk Bond Strategy – Move to Cash or Treasuries

12/31/2021 – 12/31/2023



# Summary

- Junk bond mutual funds
  - a) Have a high propensity to trend (high serial day-to-day correlation),
  - b) Are low volatility in both up and down markets, and
  - c) Drastically reduce default risk relative to holding individual junk bonds.
- Review junk bonds in FastTrack database – FastTrack Family = Junk Bonds
- Invest in junk bonds when they are trending up above their moving average.
- Sell junk when they are trending down below their moving average.
- Avoid trading when junk bonds are in a trading range. Wait for a trend to develop.
- Whipsaws are a normal aspect of investing; stick with your plan.
- Consider the frequent trading restrictions of mutual funds. If you have to sell a mutual fund and want to buy again, use a different fund family.
- Don't make this complicated.
- Consider using margin – this will be discussed in an upcoming session



If you have any questions about the presentation, feel free to contact:

Rob Bernstein

[rob@rgbcapitalgroup.com](mailto:rob@rgbcapitalgroup.com)

858-367-5200