

# Annual Round-Up

Portfolio Management Team

January 24<sup>th</sup>, 2023

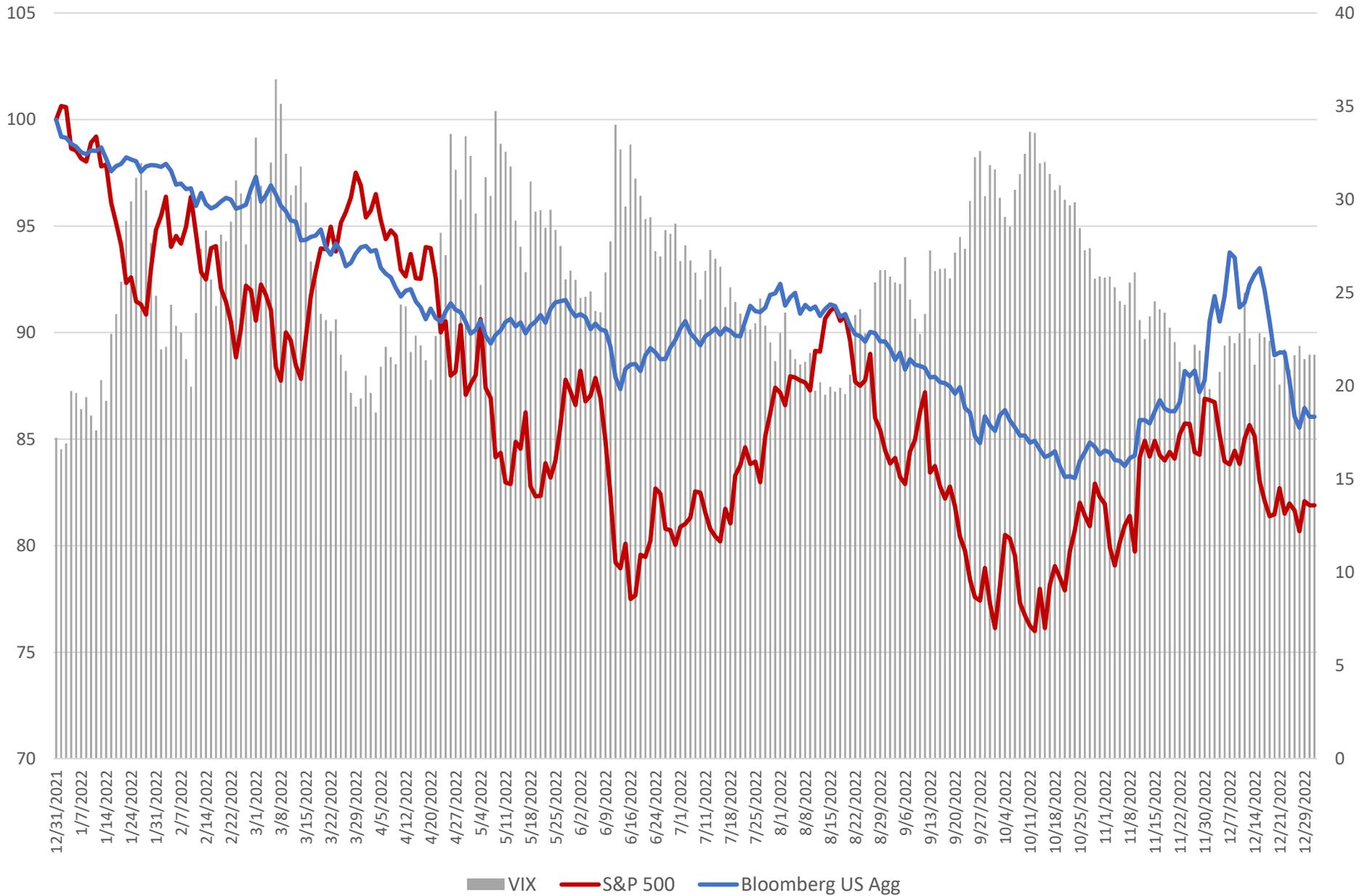
*Define Risk, Seek Improved Outcomes – Investing Redefined<sup>®</sup>*

- “Free money” era is over
- Concurrent losses across broad asset classes
- Significant bear market rallies and sell-offs

	Q1	Q2	Q3	Q4	2022
<b>S&amp;P 500</b>	-4.60%	-16.10%	-4.88%	7.56%	-18.11%
<b>Russell 2000</b>	-7.53%	-17.20%	-2.19%	6.23%	-20.44%
<b>MSCI EAFE</b>	-5.79%	-14.29%	-9.29%	17.40%	-14.01%
<b>MSCI EM</b>	-6.92%	-11.34%	-11.42%	9.79%	-19.74%
<b>Russell 1000 Growth</b>	-9.04%	-20.92%	-3.60%	2.20%	-29.14%
<b>Russell 1000 Value</b>	-0.74%	-12.21%	-5.62%	12.42%	-7.54%
<b>Bloomberg US Agg</b>	-5.93%	-4.69%	-4.75%	1.87%	-13.01%



## S&P 500 and Bloomberg Agg vs. VIX



# Always Invested, Always Hedged



## Equity

for Portfolio  
Growth



## Hedge

for Portfolio  
Preservation



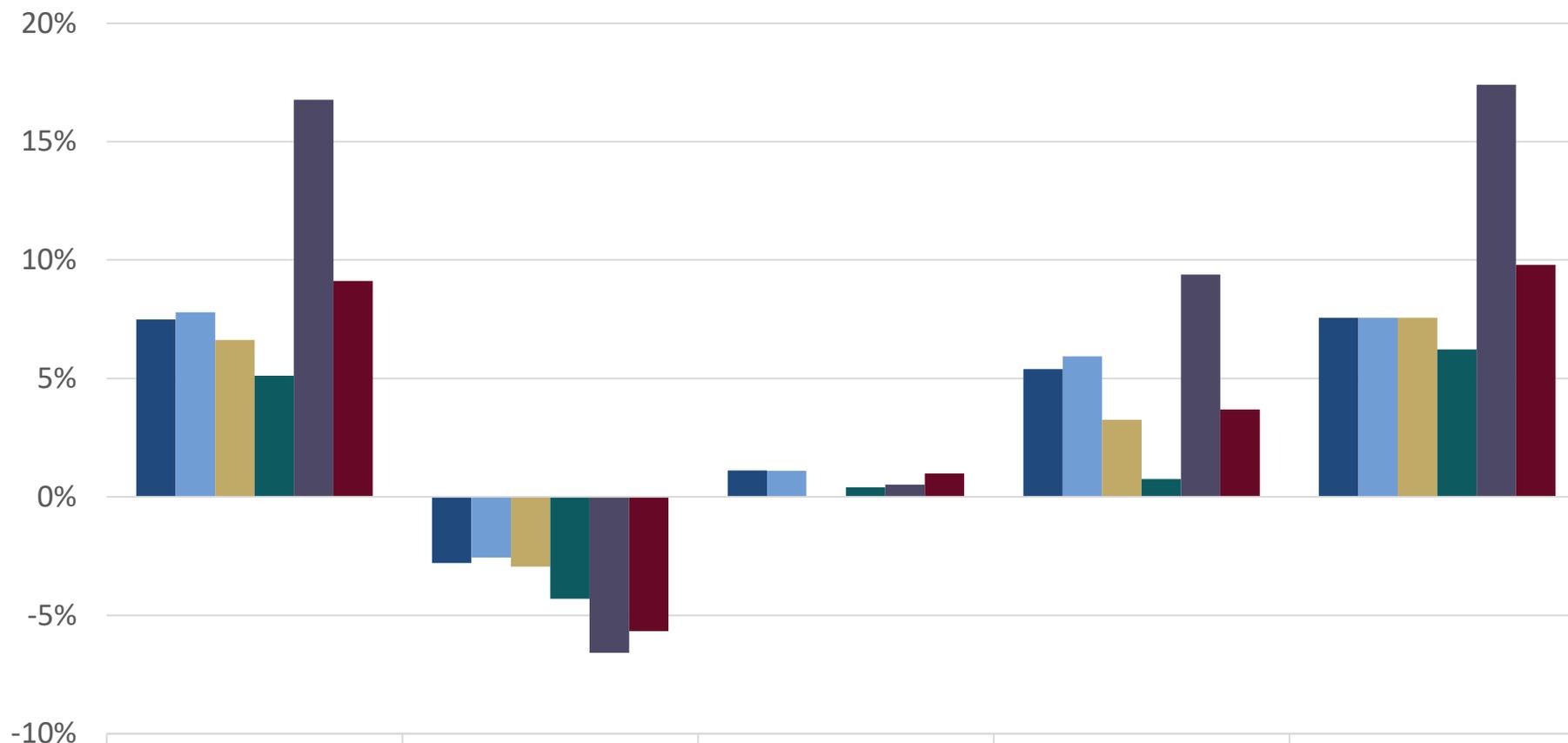
## Options

Offset Hedge Cost

A HEDGE IS NOT INSURANCE AGAINST LOSSES



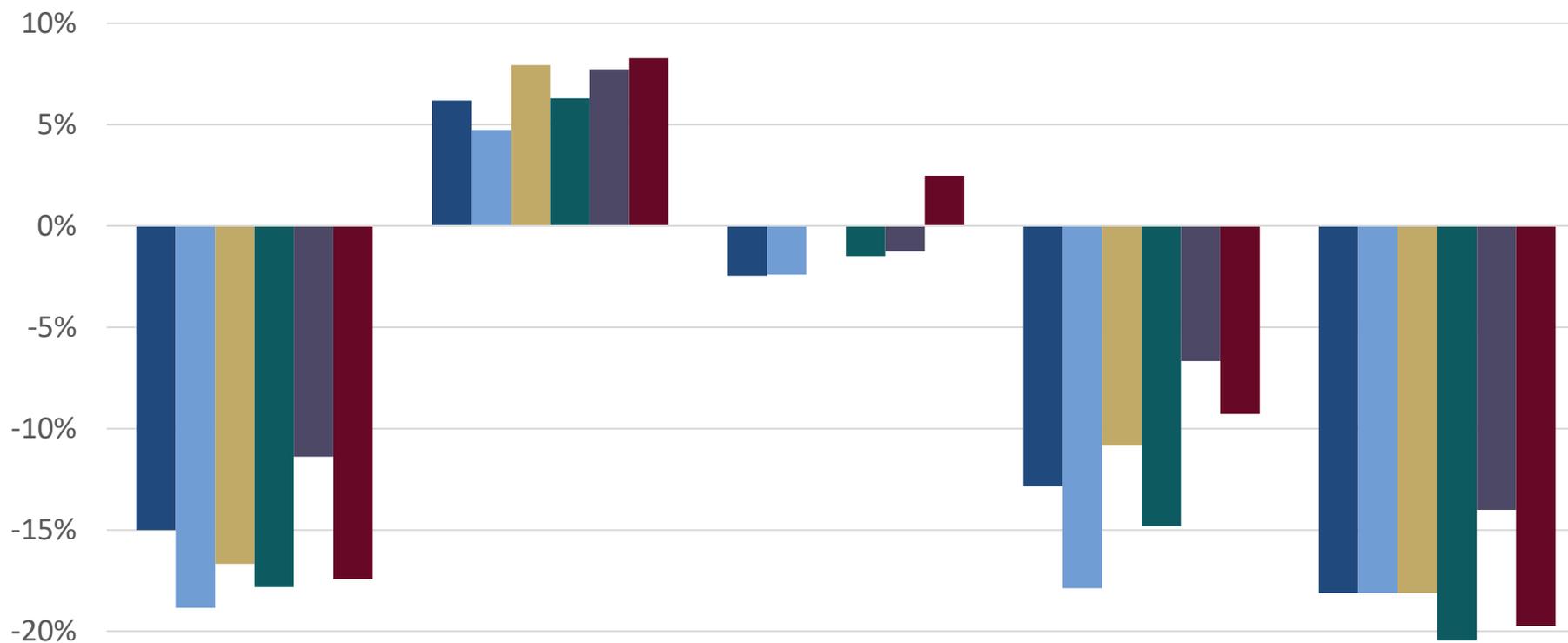
## Fourth Quarter 2022 Attribution



	Core	Hedge	Income	Total	BM
■ SDRIX	7.49%	-2.79%	1.12%	5.40%	7.56%
■ SDAIX	7.80%	-2.56%	1.11%	5.94%	7.56%
■ HEGD	6.62%	-2.94%	N/A	3.26%	7.56%
■ SDCIX	5.12%	-4.30%	0.40%	0.75%	6.23%
■ SDJIX	16.77%	-6.58%	0.52%	9.39%	17.40%
■ SDFIX	9.12%	-5.67%	0.99%	3.69%	9.79%



## 2022 Attribution



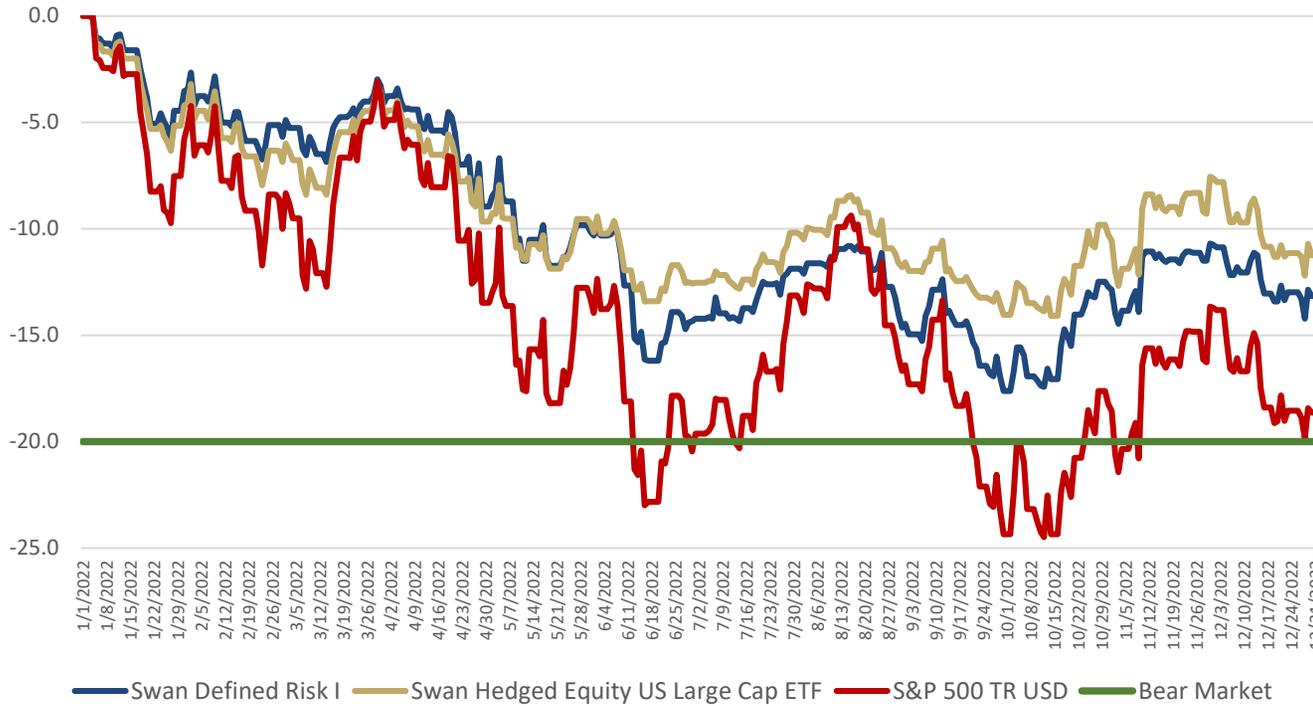
	Core	Hedge	Income	Total	BM
■ SDRIX	-15.00%	6.19%	-2.46%	-12.84%	-18.11%
■ SDAIX	-18.85%	4.74%	-2.40%	-17.87%	-18.11%
■ HEGD	-16.67%	7.94%	N/A	-10.84%	-18.11%
■ SDCIX	-17.82%	6.29%	-1.48%	-14.81%	-20.44%
■ SDJIX	-11.38%	7.73%	-1.25%	-6.67%	-14.01%
■ SDFIX	-17.42%	8.28%	2.48%	-9.28%	-19.74%



- All Swan products outperformed their benchmarks
- Outperformance was strongest during depths of market sell-off
- “Sell high, buy low” throughout 2022 with re-hedge process
- All products enter 2023 with a new set of hedges



# Swan Defined Risk Fund - I Share (SDRIX) & HEGD – Max Drawdown



2022	SDRIX	HEGD	S&P 500
Max Drawdown	-17.61%	-14.08%	-24.49%
Peak Date	1/4/2022	1/4/2022	1/4/2022
Valley Date	9/30/2022	10/14/2022	10/12/2022

Performance shown is historical and does not guarantee future results. Current performance may be lower or higher. Because share price, principal value, and return will vary, you may have a gain or loss when you sell fund shares. There is no assurance the fund will pay dividends or capital gains in the future. Performance assumes the reinvestment of dividends and capital gains. "Without sales charge" performance does not reflect the current maximum sales charge. Had the sales charge been included, the Fund's returns would have been lower. Class I shares have no sales charge and may be purchased by specified classes of investors. You cannot invest directly in an index or average. For performance information current to the most recent month end, please call (877) 896-2590. Maximum sales charge for Class A Shares is 5.50%. Gross annual fund operating expenses for the Swan Defined Risk Fund are 1.51% for Class A, 2.26% for Class C, and 1.26% for Class I.

The Gross Expense ratio for the Swan Hedged Equity U.S. Large Cap ETF is 0.87%.

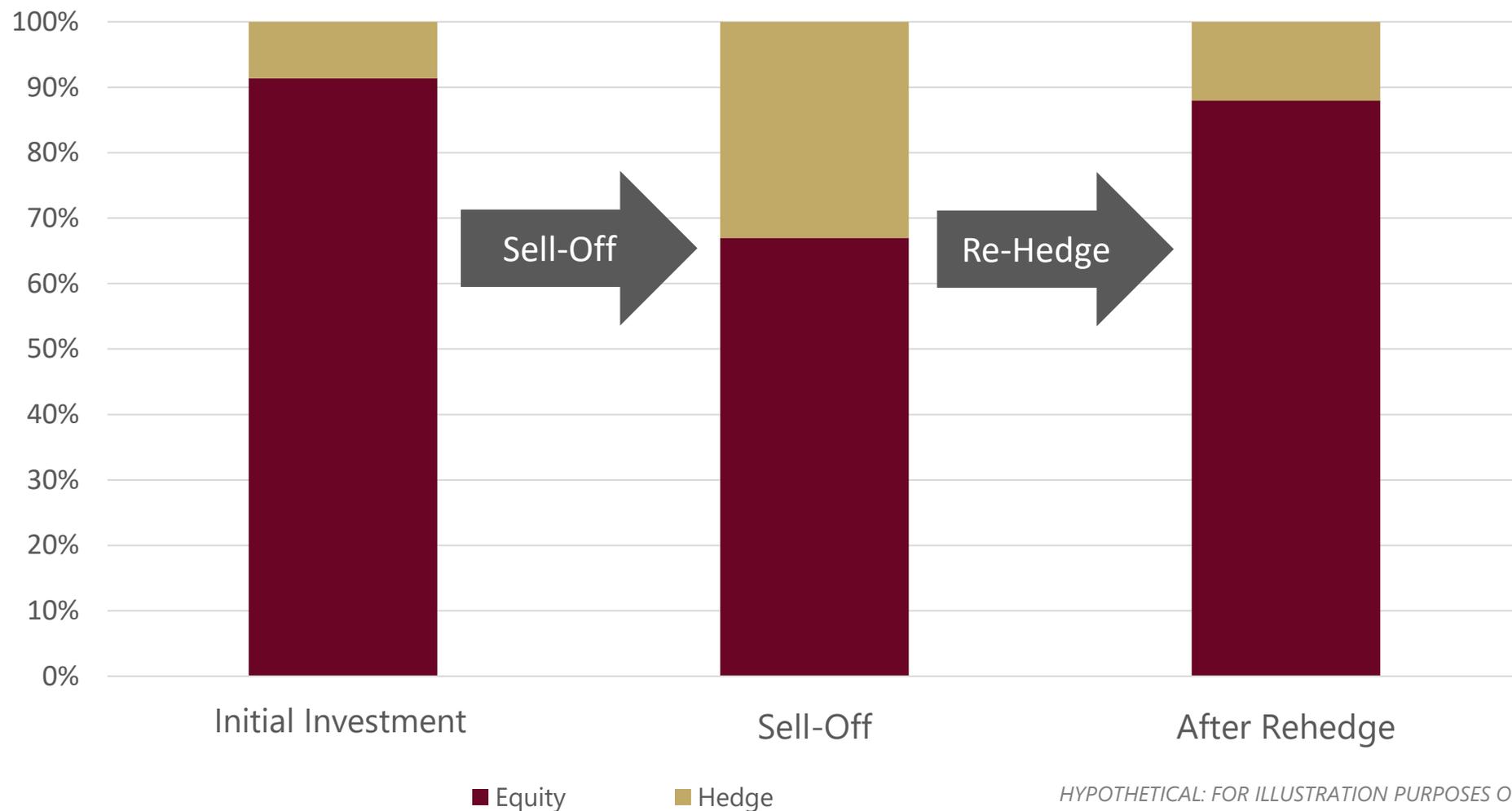
Returns	Incept Date	Average Annualized Returns						
		YTD	3M	1Yr	3Yr	5Yr	10Yr	Since Inception
Defined Risk Fund Cl. A	07/30/12	-12.91%	5.43%	-12.91%	2.30%	1.82%	4.02%	3.84%
Defined Risk Fund Cl. A w/ load	07/30/12	-17.68%	-0.36%	-17.68%	0.39%	0.67%	3.42%	3.28%
Defined Risk Fund Cl. I	07/30/12	-12.84%	5.40%	-12.84%	2.50%	2.05%	4.26%	4.08%
S&P 500	-----	-18.11%	7.56%	-18.11%	7.66%	9.42%	12.56%	12.45%
Defined Risk Fund Cl. C	10/18/12	-13.60%	5.23%	-13.60%	1.50%	1.05%	3.24%	2.99%
S&P 500	-----	-18.11%	7.56%	-18.11%	7.66%	9.42%	12.56%	12.12%
Swan Hedged Equity ETF NAV	12/22/20	-10.84%	3.26%	-10.84%	-----	-----	-----	2.66%
Swan Hedged Equity ETF Closing Price	12/22/20	-11.25%	2.92%	-11.25%	-----	-----	-----	2.60%
S&P 500	-----	-18.11%	7.56%	-18.11%	-----	-----	-----	3.59%

For Financial Professional Use Only. Source: Morningstar Direct as of 12/31/22. Past performance is no guarantee of future results. Current performance may be lower or higher than the performance data quoted. Index performance is shown for illustrative purposes only. It is not possible to invest directly in an index. **Investors should carefully consider the investment objective, risks, charges and expenses of the Swan Defined Risk Fund or Exchange Traded Funds (ETFs) before investing. This and other information is contained in the prospectus and should be read carefully before investing. For a Swan Defined Risk Fund prospectus please call (877) 896-2590. The Swan Defined Risk Fund is distributed by Northern Lights Distributors, LLC, member FINRA/SIPC. Northern Lights Distributors, LLC and Swan Capital Management, LLC are not affiliated. There is no guarantee the fund will meet its objective.**

To obtain a Swan Hedged Equity US Large Cap ETF prospectus containing this and other important information, please call (855) 772-8488, or visit [etfs.swanglobalinvestments.com](https://etfs.swanglobalinvestments.com). Please read the prospectus carefully before you invest. An investment in the fund involves risk, including possible loss of principal. The Swan Hedged Equity US Large Cap ETF is distributed by Foreside Fund Services, LLC member FINRA / SIPC. Foreside Fund Services, LLC and Swan Capital Management, LLC & Swan Global Investments, LLC are not affiliated.



## Hypothetical Equity/Hedge Split: Rebalancing of Portfolio



*HYPOTHETICAL: FOR ILLUSTRATION PURPOSES ONLY*  
A HEDGE IS NOT INSURANCE AGAINST LOSSES



# The Good: Multiple Re-Hedges Throughout Year

## Approximate Hedge Levels of SDRIX and HEGD vs S&P 500 Price Level



## The Good: Hedge Levels & Re-Hedge

	Reference for Hedge	Intra-Year Re-Hedge	Year-End Re-Hedge	Composite Strike	Current Level (1/12/23)
US Large Cap	S&P 500	75%	100%	3806	3983
Growth	S&P 500	75%	100%	3731	3983
ETF	S&P 500	75%	100%	3750	3983
US Small Cap	Russell 2000	50%	100%	1752	1876
Foreign Developed	EFA ETF	75%	100%	65	70.16
Emerging Markets	EEM ETF	75%	100%	38	41.03

Green = in-the-money puts

Red = out-of-the-money puts



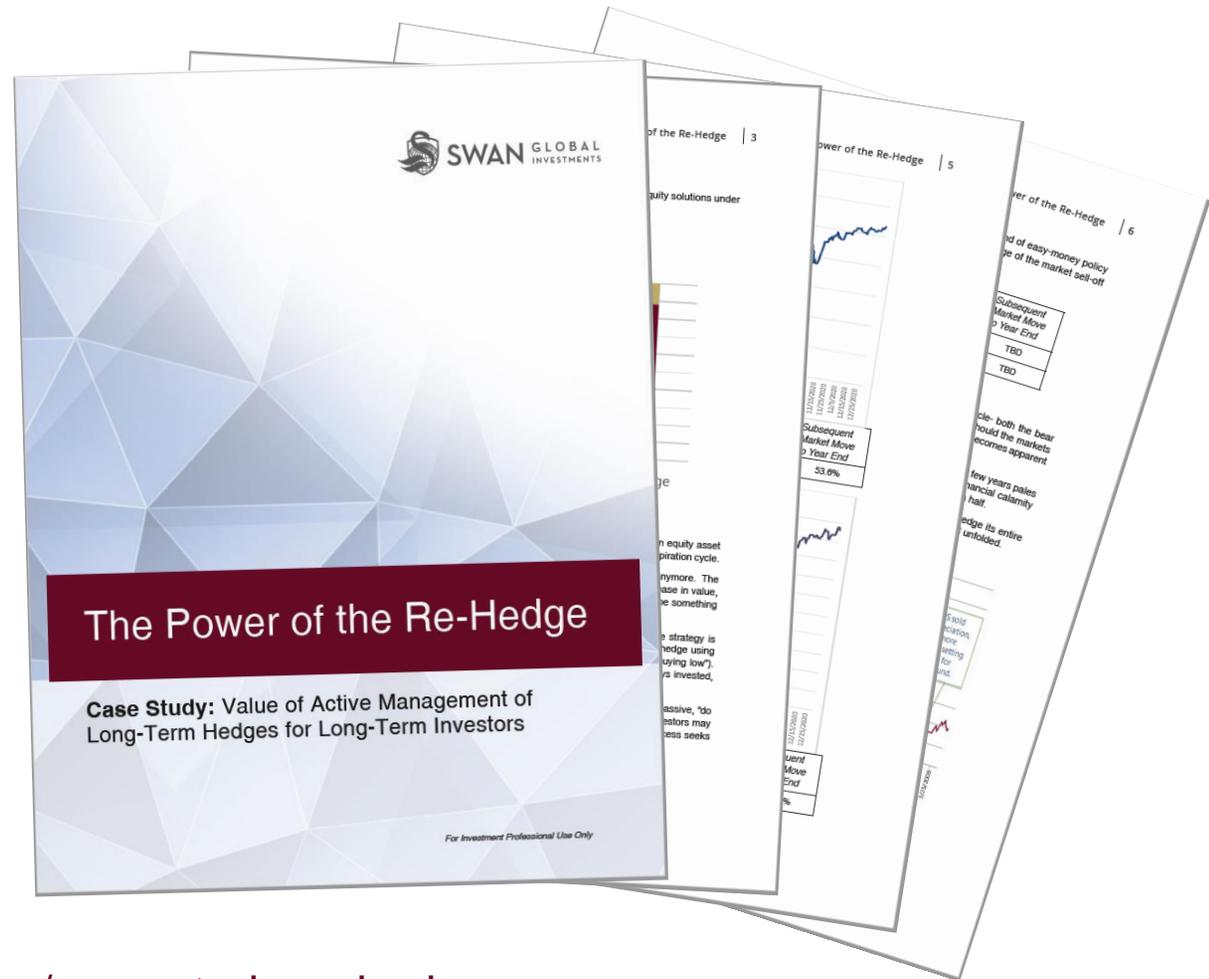
# “Power of the Re-Hedge”

**Case Study:** Value of Active Management of Long-Term Hedges for Long-Term Investors

Request a copy using the *webcast ‘Chat’ feature.*

Or access the case study here:

[content.swanglobalinvestments.com/case-study-re-hedge](http://content.swanglobalinvestments.com/case-study-re-hedge)



# Market Conditions and Options Review

- Down-trend remains intact for S&P 500 (SPX).
- Down-trend channel with resistance at 4050 and support 3400.
- 200-day moving average (3990) remains “line in the sand.”
- Markets should turn more attention towards earnings and less focus on rate hike cycle.

## S&P 500 Index



- 2022 VIX average = 25.60. 10-year average = 17.90.
- “Spot up vol up” dynamic.
- Fear of missing upside and the use of shorter-dated options fueling violent counter-trend rallies.

### Largest Daily % Increase in VIX with Positive S&P 500 (1990-2022)

Rank	Date	VIX	VIX % Change	S&P % Change	Rank	Date	VIX	VIX % Change	S&P % Change
1	3/8/1993	16.22	15.2%	1.9%	11	2/25/2019	14.85	9.9%	0.1%
2	5/5/1997	20.13	15.0%	2.1%	12	12/31/1991	19.31	9.5%	0.5%
3	12/30/1991	17.63	12.3%	2.1%	13	12/12/2022	25.02	9.5%	1.4%
4	3/20/1992	16.31	11.9%	0.4%	14	12/5/1995	11.65	9.3%	0.7%
5	3/14/1994	16.61	11.7%	0.2%	15	4/10/2017	14.05	9.2%	0.1%
6	4/12/1990	19.8	11.7%	0.7%	16	12/6/1995	12.7	9.0%	0.4%
7	2/15/2017	11.97	11.5%	0.5%	17	2/25/1991	22.86	8.8%	0.4%
8	7/8/1991	20.29	10.6%	1.0%	18	10/4/1993	12.85	8.6%	0.0%
9	3/31/1994	20.45	10.0%	0.0%	19	9/3/1996	18.47	8.6%	0.4%
10	5/31/1995	13.77	10.0%	1.9%	20	11/26/1990	22.76	8.5%	0.4%



- VIX has remained firm even during rallies because of high short-term realized volatility.
- VIX “should” decline when markets rally, however, speed and magnitude of moves have kept option implied volatility firm.

### S&P 500 5 and 10-Day Historical Volatility



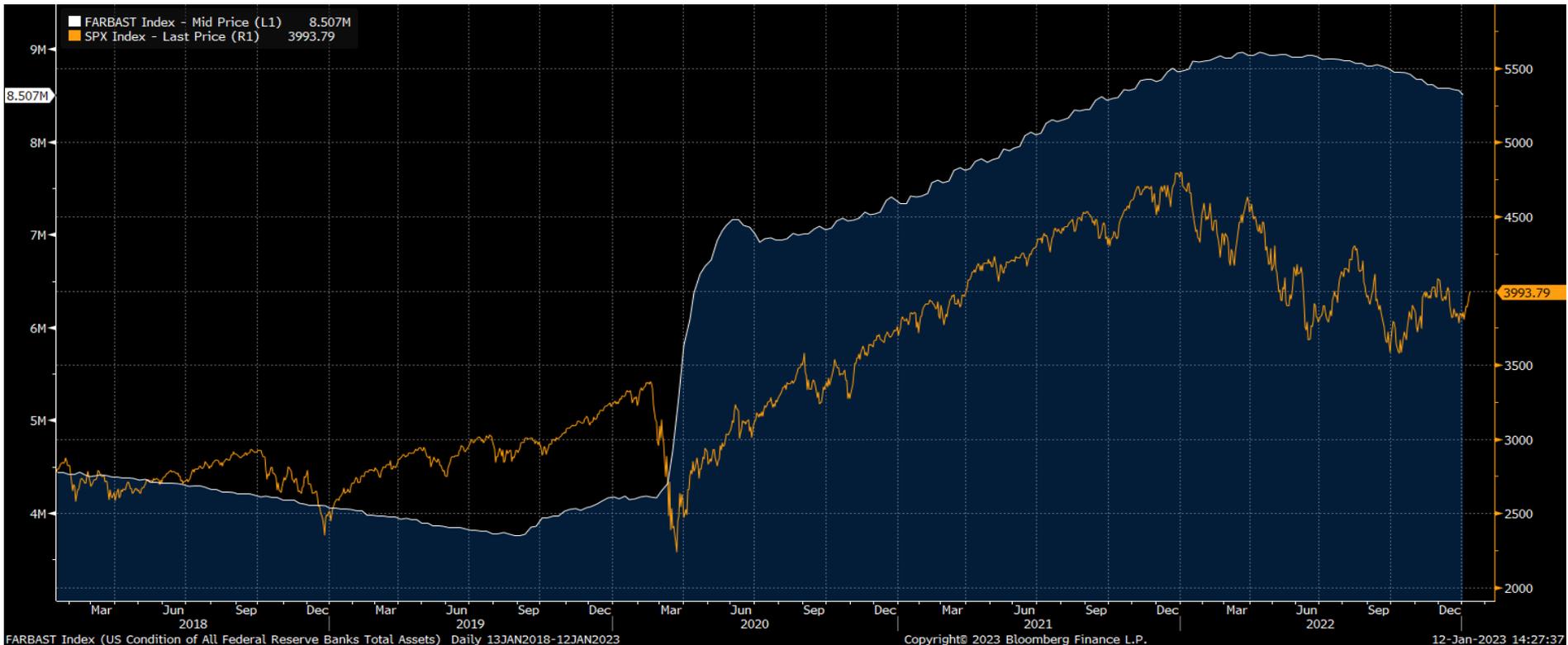
- Skew continues to trend lower.
- Rising interest rates increases forward value and thus increases calls and decreases put values.
- Put-spread collar structures have placed extreme amount of pressure on “deeper” OTM puts.

## S&P 500 1-month 95/105% Strike Skew



- US Condition of All Federal Reserve Banks Total Assets.
- Slight, steady contraction in 2022.
- 10 and 20 day realized volatility least volatile in Q1 2022.
- Changes in FARBAST have led to changing market dynamics.

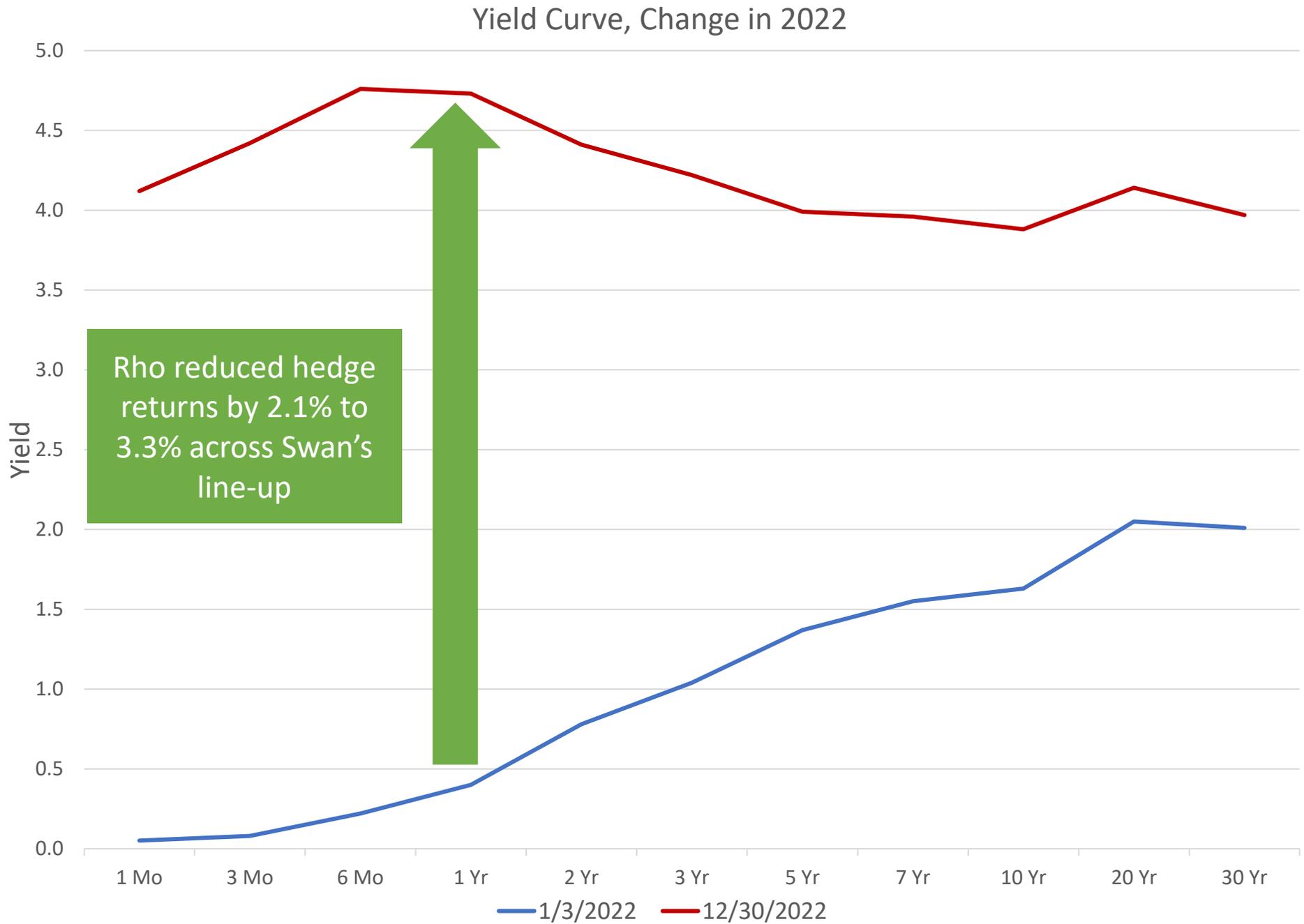
## FARBAST Index



- Down capture higher than desired in SDRIX and SDAIX
  - Put options not immune to rising interest rates
  - Premium collection/income trades challenged in swinging market

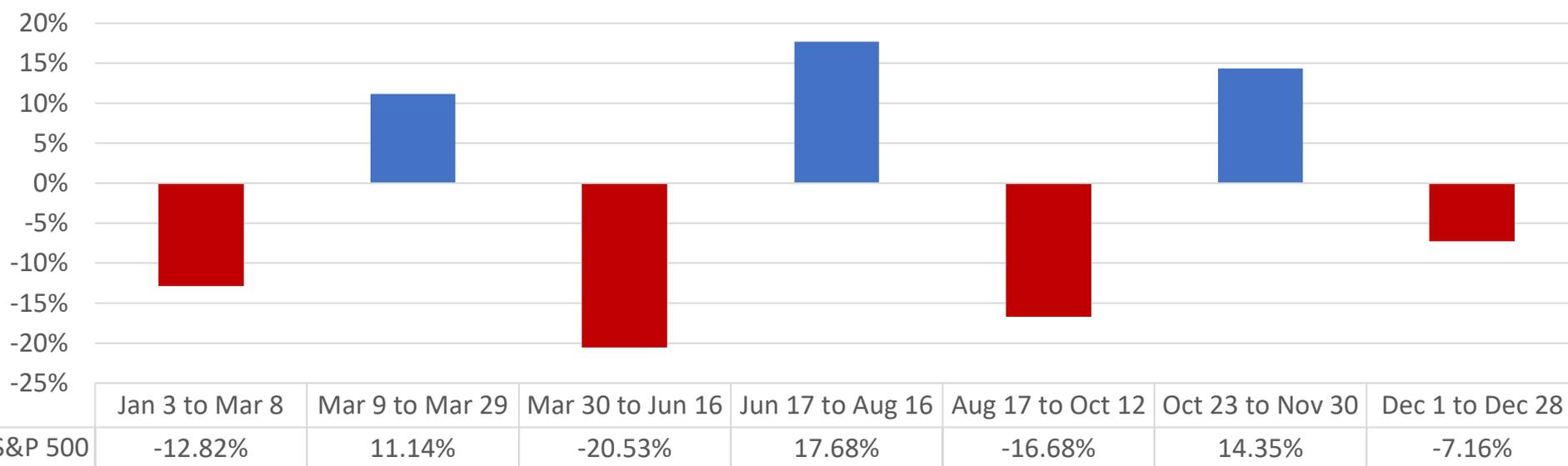


# The Bad: Rho

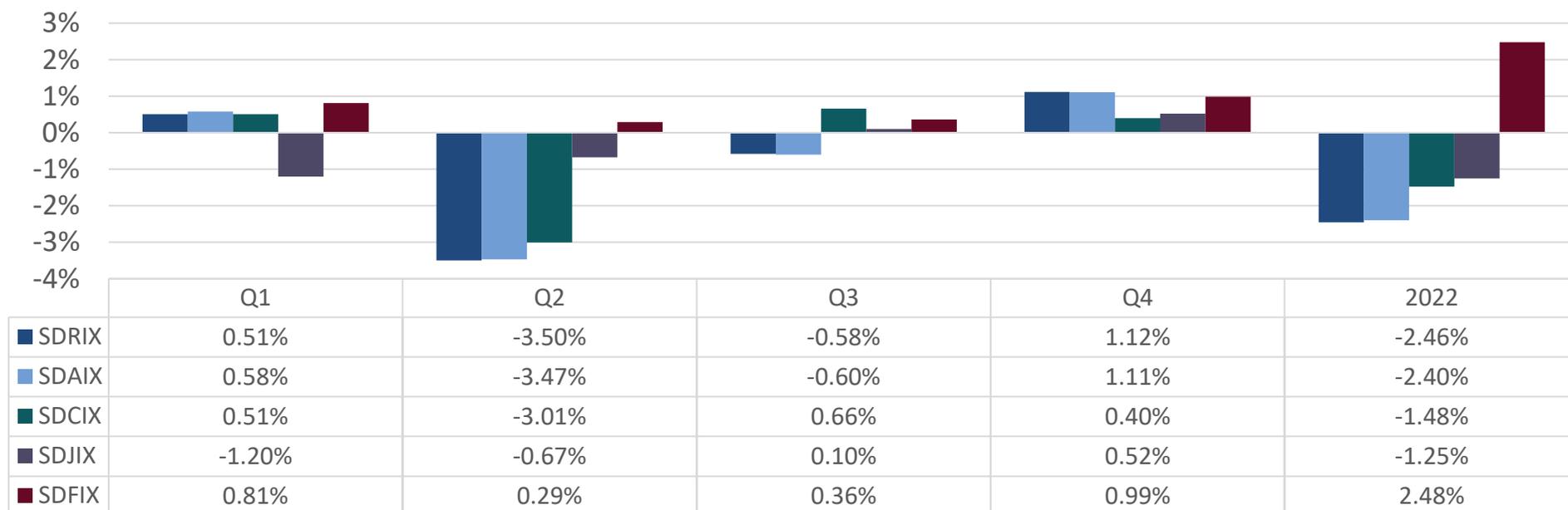


# The Bad: Premium Collection Negative in Most Products

## Bear Markets and Bear Market Rallies



## Supplemental Trade Returns

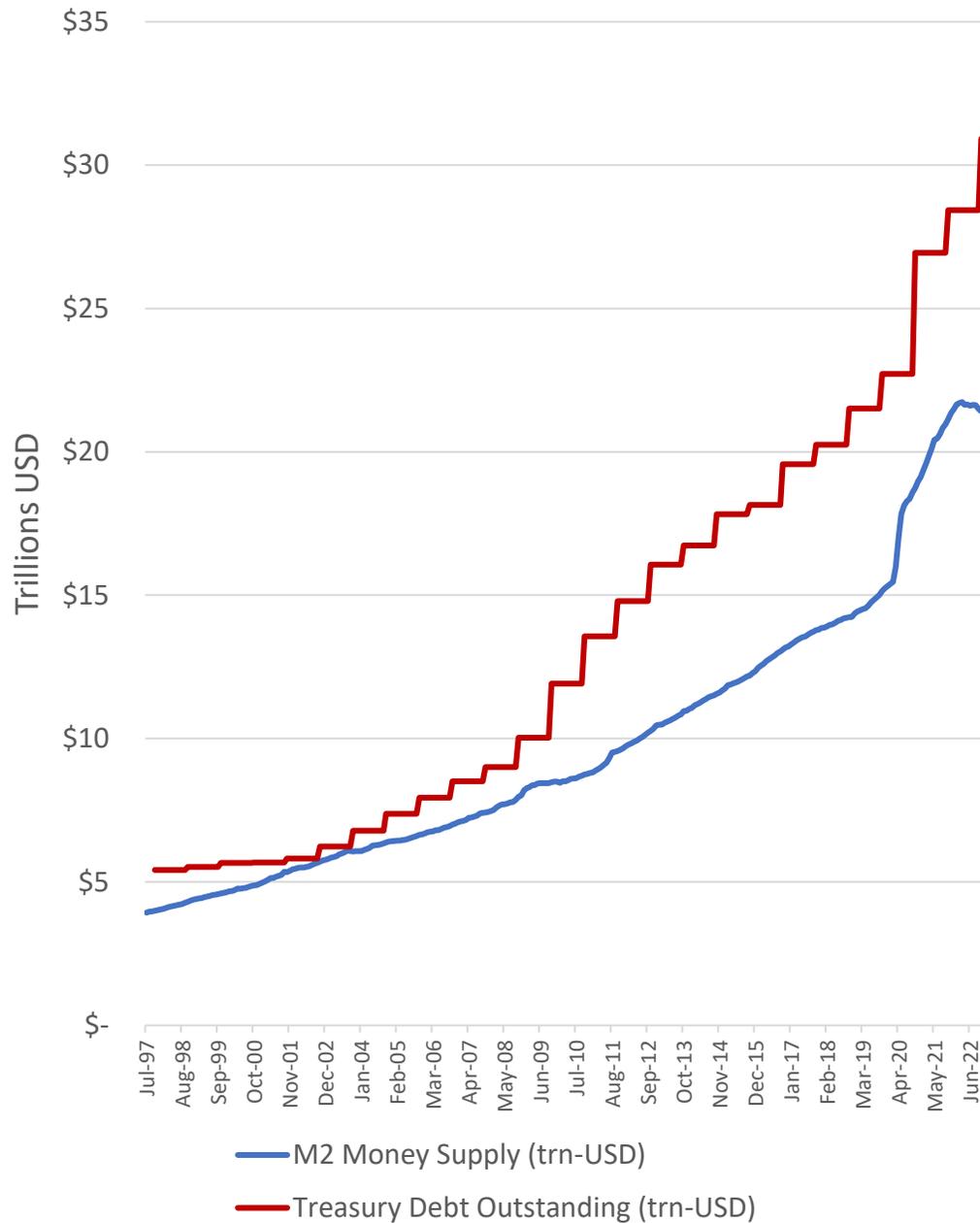


- “Free money” era is over
- Stocks and bonds down concurrently
- Bull case is dependent upon Fed “sticking the landing”
- Bear case has many more potential problems



# The Ugly: Concurrent Losses in Equities and Bonds

## The Money Flood



# “Rising Inflation & Interest Rates: Culprits Behind Market Turmoil”



## The Villains of 2022’s Horror Show

A deeper look into these bear market culprits and how investors can prepare for 2023.

Request a copy using the *webcast ‘Chat’ feature.*

Or the article here:

[swanglobalinvestments.com/rising-inflation-and-interest-rates/](https://swanglobalinvestments.com/rising-inflation-and-interest-rates/)

## Rising Inflation & Interest Rates: Culprits Behind Market Turmoil

The Villains of 2022’s Horror Show



## The “Dual Dilemma” Realized

S&P 500	Bloomberg Agg	2022
100%	0%	-18.11%
80%	20%	-16.90%
<b>60%</b>	<b>40%</b>	<b>-15.79%</b>
40%	60%	-14.76%
20%	80%	-13.83%
0%	100%	-13.01%



# Bull Case Depends on Best Case

Corporate earnings remain near record levels

Unemployment remains low

Recession avoided



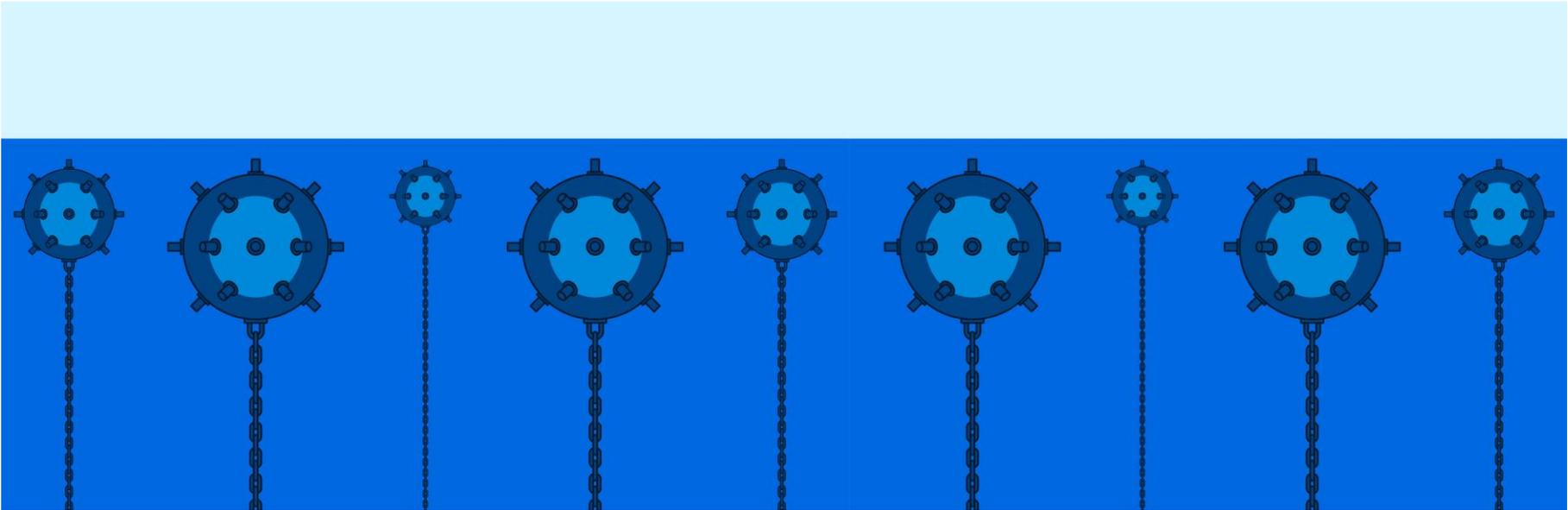
Inflation normalizes to 2%-3%

Fed cuts rates in 2023

No political or geopolitical shocks



# Bear Case Is a Minefield



- Consumers turning to debt
- Housing market yet to truly adjust
- Geopolitical risk (Russia, China, Iran)
- Political risk (Treasury default)
- *Yet consensus '23 earnings estimates is a 3.6% **gain?**\**
- Liquidity flood is now a drought
- Inflation is still high
- Yield curve is inverted
- Layoffs starting in tech and finance



## Bear Markets That Happened Around Recessions

Start of Bear	End of Bear	S&P 500 Bear Market Return	Start of Recession	Bear Ended Before Start of Recession?	Months After Recession Start That Bear Market Ended
6/15/1948	6/13/1949	-20.6%	Nov-48	No	7
8/2/1956	10/22/1957	-21.6%	Aug-57	No	2
11/29/1968	5/26/1970	-36.1%	Dec-69	No	5
1/11/1973	10/3/1974	-48.2%	Nov-73	No	11
11/28/1980	8/12/1982	-27.1%	Jul-81	No	13
3/24/2000	10/9/2002	-49.1%	Mar-01	No	19
10/9/2007	3/9/2009	-56.8%	Dec-07	No	15
2/19/2020	3/23/2020	-33.9%	Mar-20	No	0
1/3/2022	?	-24.5%	?	?	?



## When Fed Pivots, Stocks Crash by More

Recession	Stock Crash	Fed Pivot	S&P 500 Bottom	Pivot to Bottom
Great Financial Crisis	-50.1%	Aug 2007	Feb 2009	18 months
Dot-Com Bust	-38.3%	Dec 2000	Sep 2002	21 months
Gulf War Recession	-4.4%	Jun 1989	Oct 1990	16 months
Double Dip Recession	-16.5%	Jun 1981	Jul 1982	13 months
1973 Recession	-41.3%	Oct 1973	Sep 1974	11 months
1969 Recession	-18.9%	Mar 1970	Jun 1970	3 months
Average	-28.3%			14 months



- Swan's whole line-up **outperformed their benchmarks**
- Outperformance has been **greatest at the depths** of the bear market
- The **"sell high, buy low"** re-hedge process worked well
- **Hedges reset** at end of 2022
- We believe significant **downside risks** remain throughout 2023



# Questions from the Audience



# Disclosures

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