

A QUANT'S VIEW

Fed interest rate hikes

(and the effect of geopolitical conflicts)



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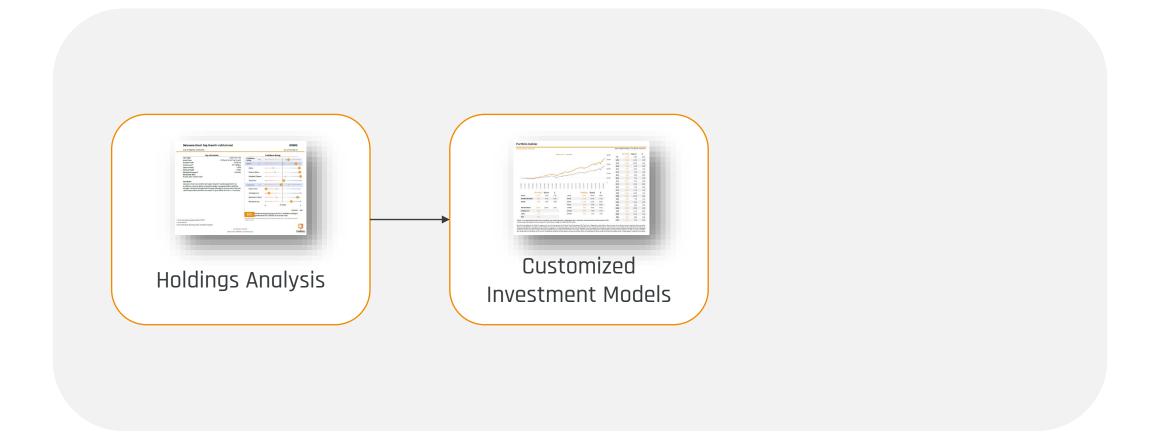


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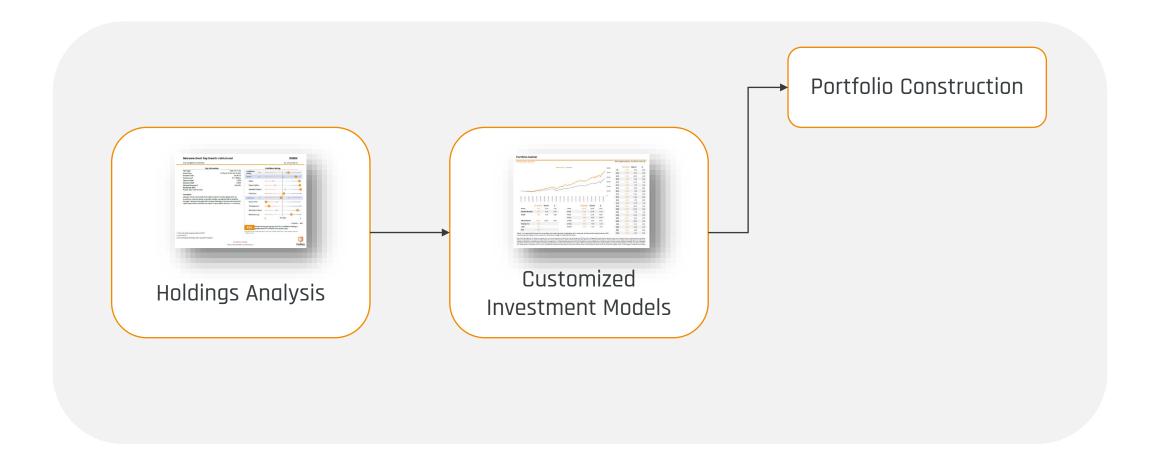
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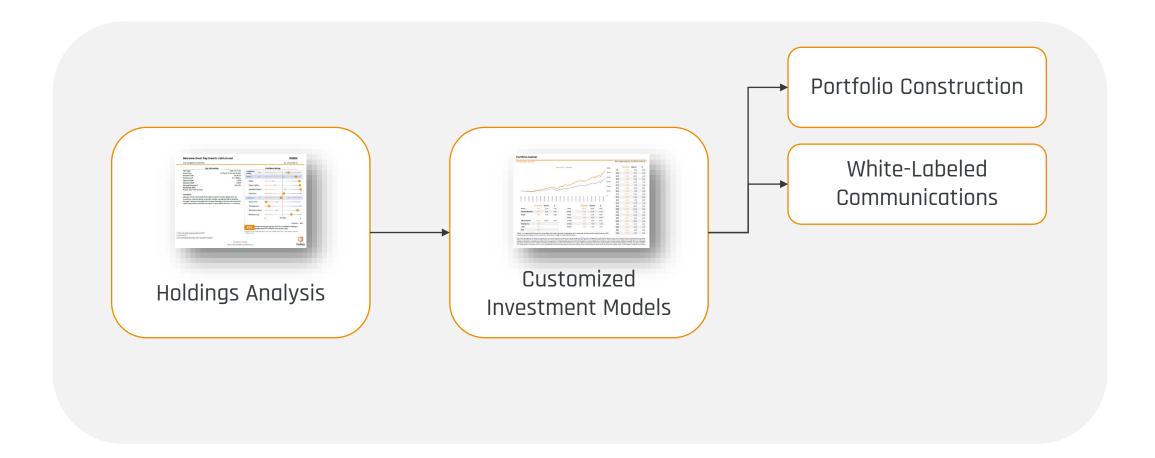
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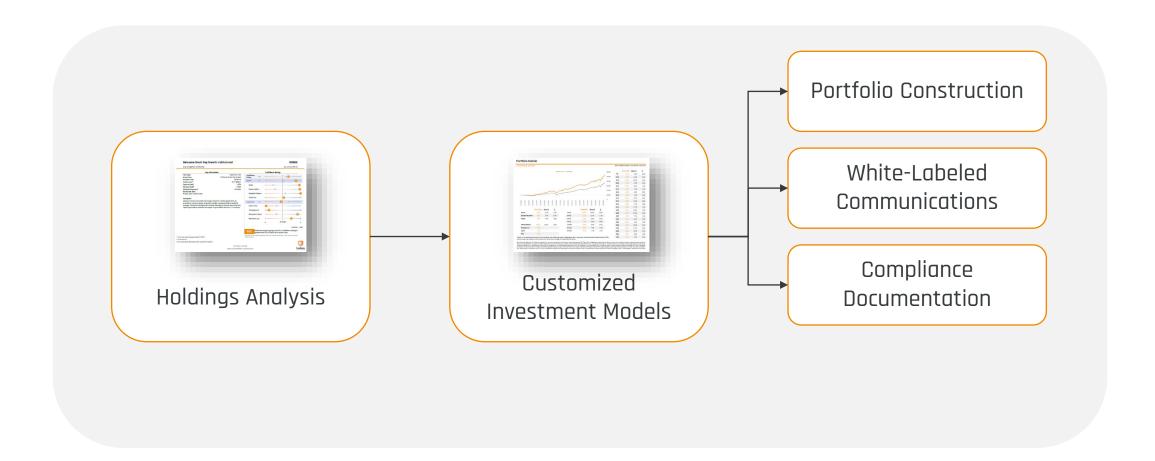


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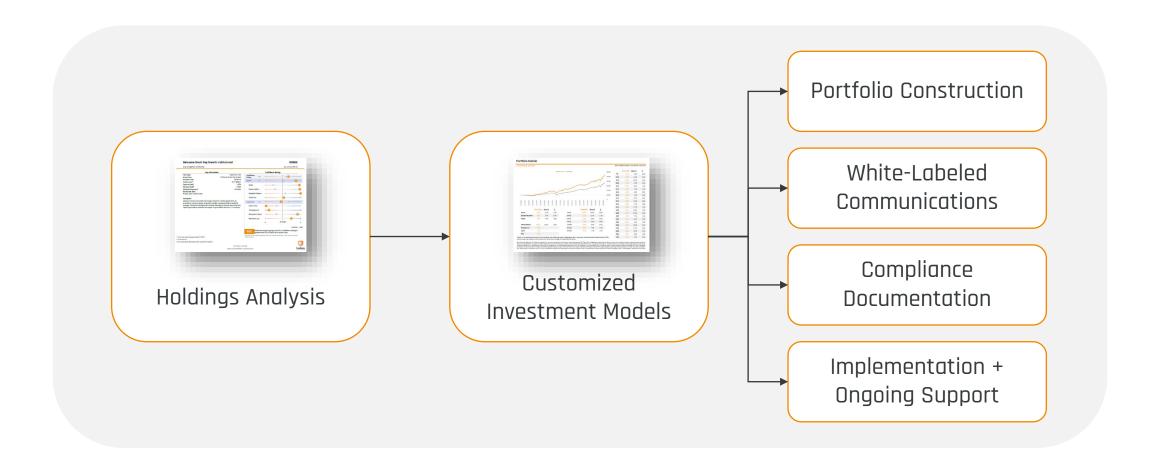
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Helios is the smartest option for asset management

In-house Models
"Free" Research

TAMP Models

Model Marketplace

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Model Marketplace

High Control

Practice Branded

Differentiated Story

Cost Effective

High Effort

High Compliance Risk

Basic Strategies

Low/Not Tech Focused



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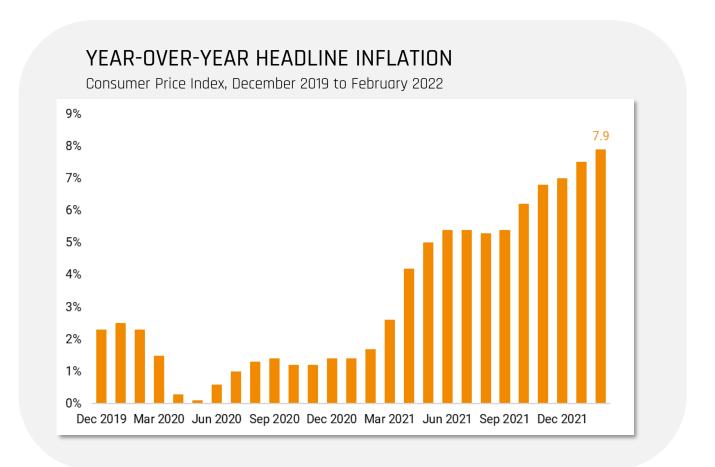


The 700-pound gorilla in the room is inflation



"Houston, we have a problem"

INFLATION HAS PROVEN TO BE ANYTHING BUT "TRANSITORY" AS FIRST EXPECTED

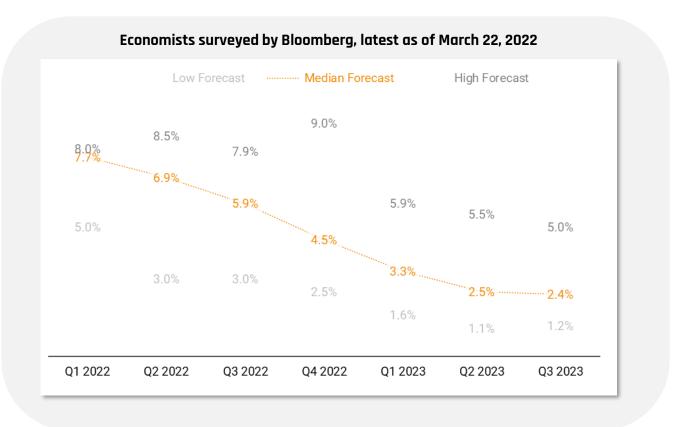


Source: Bloomberg, US Bureau of Labor Statistics

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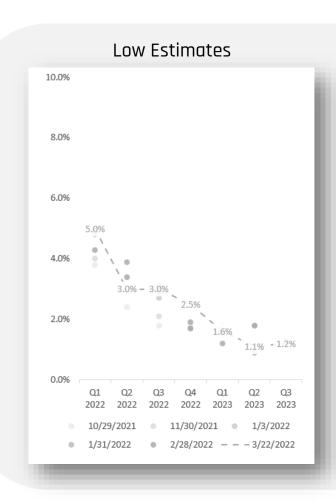
FORECASTS HAVE CONSISTENTLY UNDERESTIMATED INFLATION OVER THE LAST 2 YEARS



Source: Bloomberg



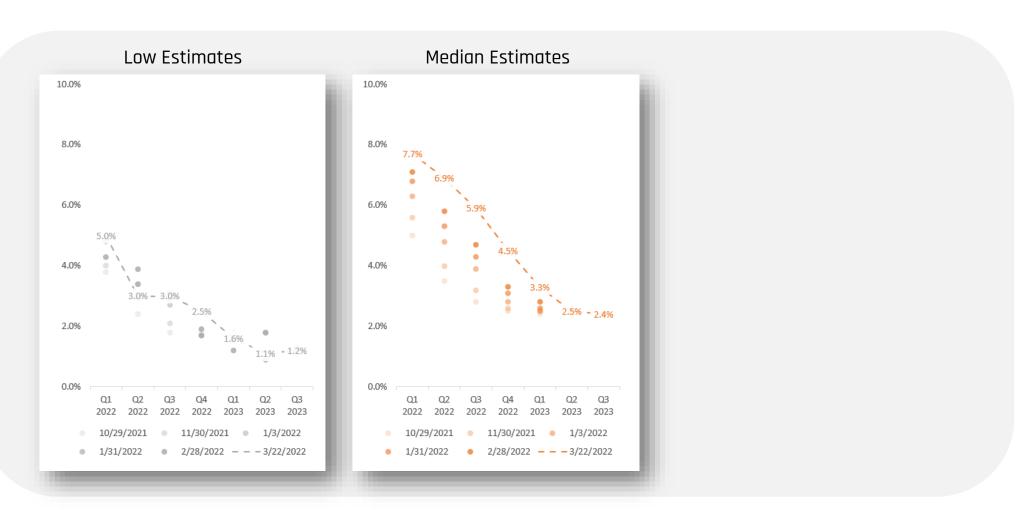
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Source: Bloomberg survey of economists, latest as of the date referenced



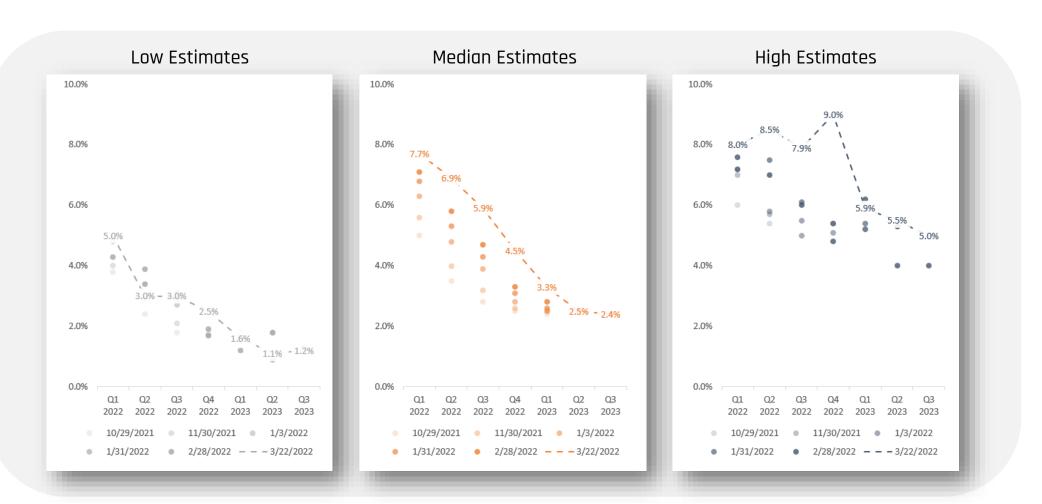
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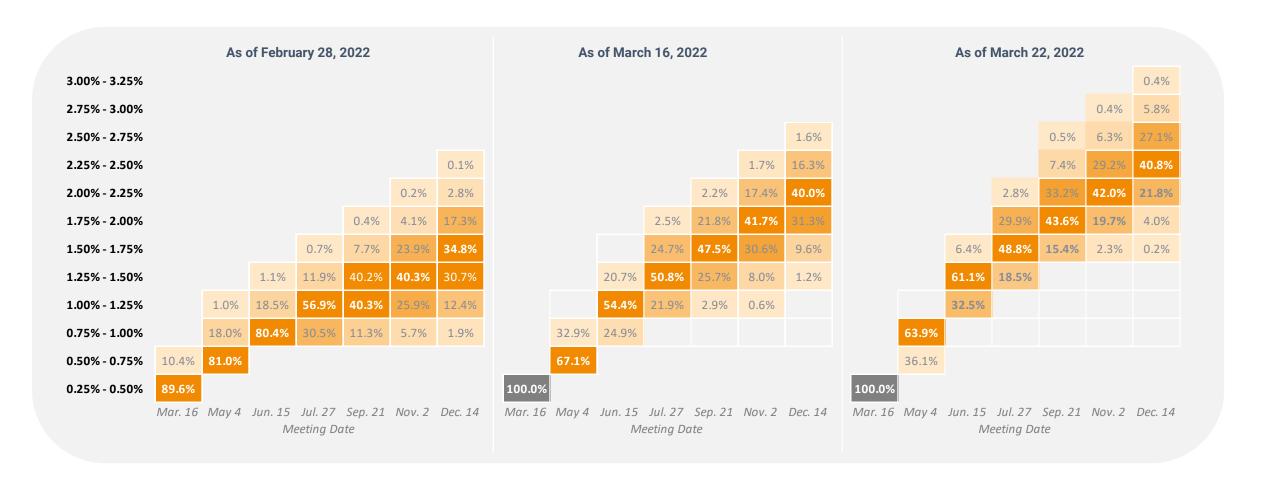
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Everyone is guessing about inflation right now



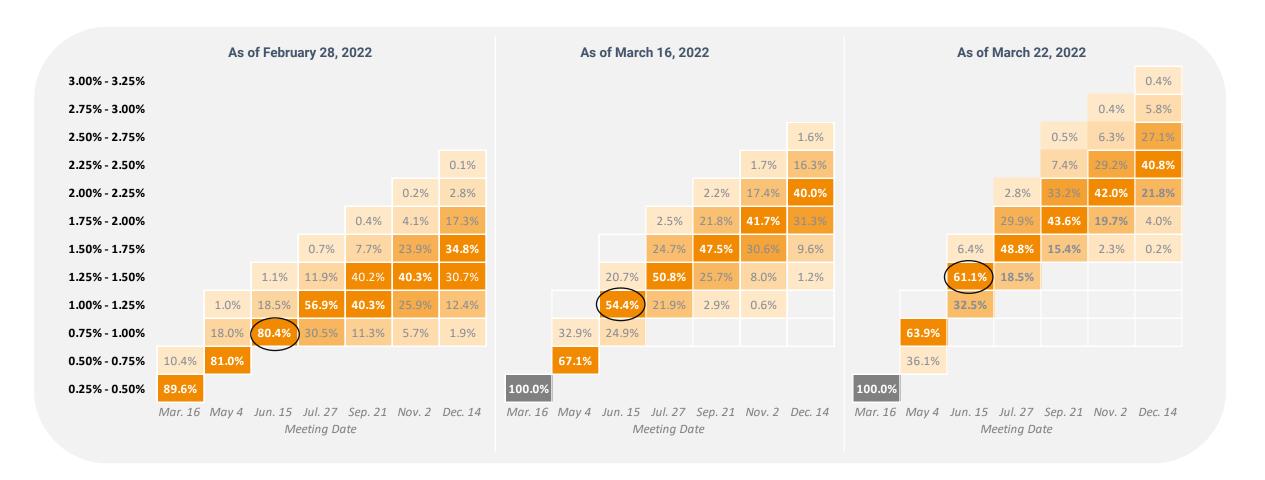
IN GENERAL, RATE EXPECATIONS ARE INCREASING OVER TIME - CREATING MORE UNCERTAINTY



Source: CME FedWatch Tool, latest as of the date referenced



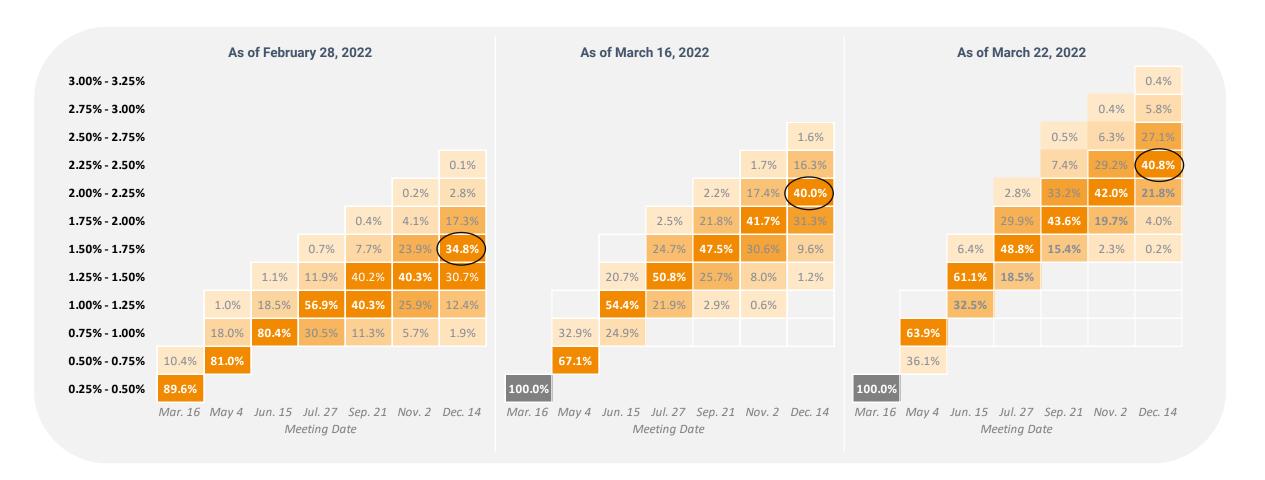
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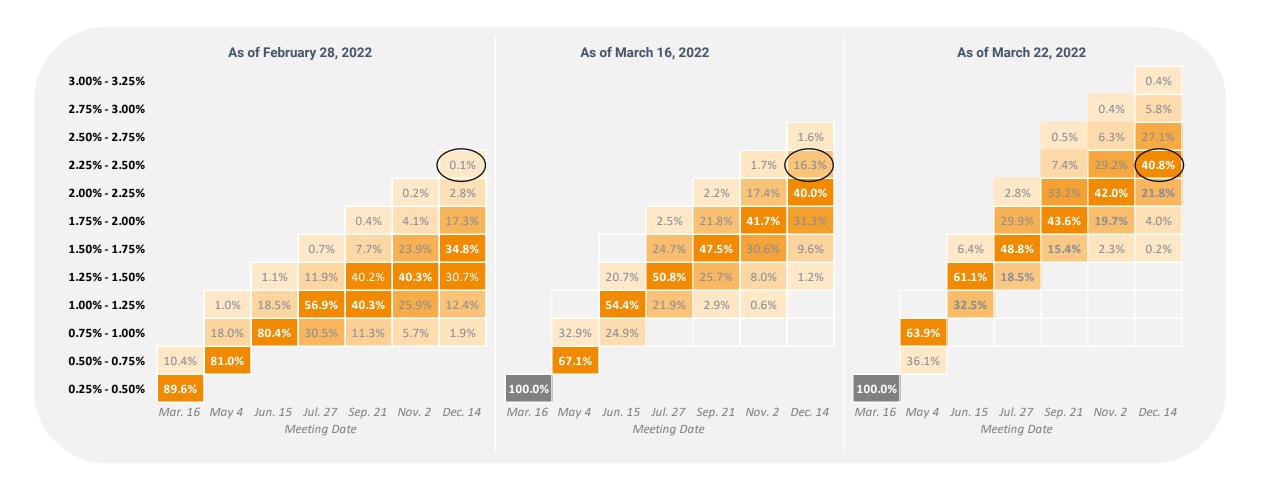
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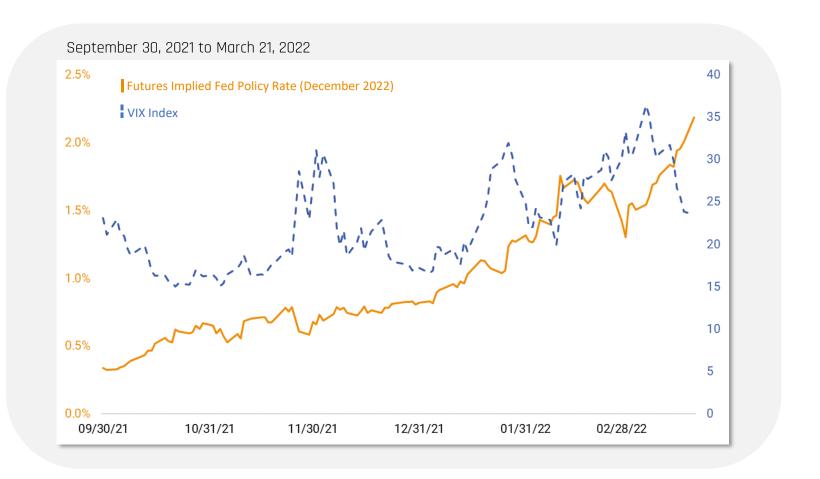


Everyone is guessing about rates right now, too



Rate policy and volatility have some correlation

RISK MANAGEMENT BECOMES CRITICAL FOR ADVISORS IN THESE ENVIRONMENTS



Source: Bloomberg

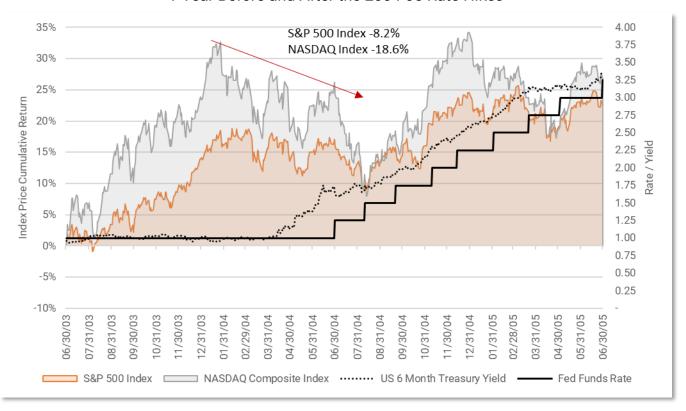


Markets often rhyme with the past

EQUITY MARKETS TEND TO BOTTOM WITHIN MONTHS OF THE FIRST RATE HIKE

Dates	Fed Funds Rate	US 10-Year Treasury Yield
06/29/04 06/29/06	1.00% 5.25%	4.69% 5.19%
730 Days	+4.25 p.p.	+0.51 p.p.
	Bloomberg US Aggregate	S&P 500
Cumulative Total Returns	6.06%	16.22%

1-Year Before and After the 2004-05 Rate Hikes



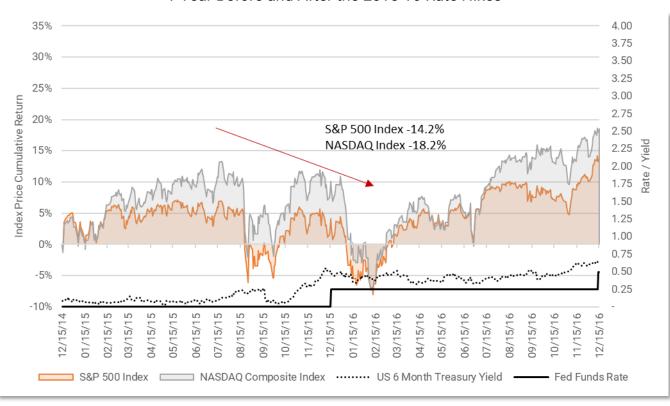
Source: Bloomberg



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1-Year Before and After the 2015-16 Rate Hikes



Dates	Fed Funds Rate	US 10-Year Treasury Yield
12/13/16	0.25%	2.47%
12/19/18	2.25%	2.75%
736 Days	+2.00 p.p.	+0.28 p.p.
	Bloomberg US Aggregate	S&P 500
Cumulative Total Returns	3.78%	14.85%

Source: Bloomberg

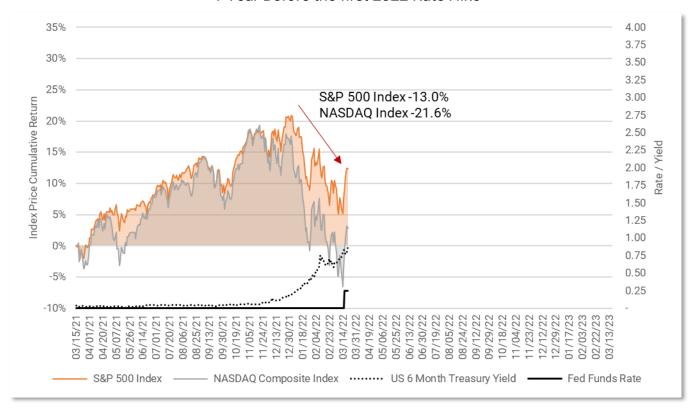


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Dates	Fed Funds Rate	US 10-Year Treasury Yield
03/15/21 03/21/22	0.00% 0.25%	1.61% 2.29%
371 Days	+0.25 p.p.	+0.68 p.p.
	Bloomberg US Aggregate	S&P 500
Cumulative Total Returns	-4.36%	13.99%

1-Year Before the first 2022 Rate Hike



Source: Bloomberg



Key takeaways from the Fed activity

HISTORY SHOWS THE RIDE MAY BE BUMPY FOR A BIT LONGER

- History is rhyming with today
- Expect continued short-term volatility into May or June
- Keep an eye on implied policy rate data if the Fed gets nervous
- "Bull markets don't die of old age, they're killed by the Fed"



What about the war in Ukraine?

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A few major geopolitical events since WW2

GEOPOLITICAL EVENTS DO NOT HAVE CORRELATION TO SUSTAINED AND DEEP VOLATILITY

Event	Date	1 Month	3 Months	6 Months	12 Months
Germany Invades France	5/10/1940	-19.9%	-12.7%	-4.5%	-18.7%
Pearl Harbor Attack	12/7/1941	-1.0%	-11.0%	-6.5%	4.3%
N. Korea Invades S. Korea	6/25/1950	-10.0%	1.6%	4.1%	11.7%
Cuban Missile Crisis	10/16/1962	5.1%	14.1%	20.7%	27.8%
Yom Kippur War	10/6/1973	-3.9%	-10.7%	-15.3%	-43.2%
Oil Embargo	10/16/1973	-7.0%	-13.2%	-14.4%	-35.2%
Iraq's Invasion of Kuwait	8/2/1990	-8.2%	-13.5%	-2.1%	10.1%
9/11 Terrorist Attacks	9/11/2001	-0.2%	2.5%	6.7%	-18.4%
Iraq War Began	3/20/2003	1.9%	13.6%	18.7%	26.7%
Russia Annexed Crimea	2/20/2014	1.5%	2.6%	8.0%	14.7%
Bombing of Syria	4/7/2017	1.8%	3.1%	7.6%	12.8%
Saudi Aramco Drone Strike	9/14/2019	-1.4%	5.4%	-8.8%	12.5%
Iranian General Killed in Airstrike	1/3/2020	1.9%	-23.1%	-4.2%	14.4%
US Pulls Out of Afghanistan	8/30/2021	-3.7%	2.8%	-3.6%	n/a

Source: LPL Research, Bloomberg



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Source: LPL Research, Bloomberg



Russian impacts on global equity markets

EXPOSURE TO RUSSIA IS A ROUNDING ERROR FOR MOST INVESTORS

YTD IMPACT ON ACWI

0.30%

Allocation to Russian

Equities

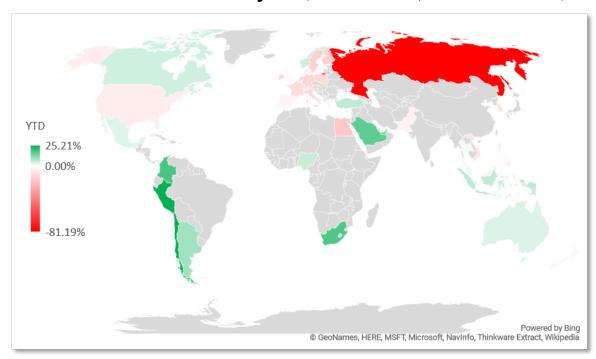
-60.94%

Russian Performance

-0.24%

Attribution to Russia

Total Returns of Selected Country ETFs, December 31, 2021 to March 21, 2022



Source: Bloomberg



The S&P 500 is focused on rates, not Russia

INVESTOR RESPONSE TO FED ACTIVITY AND COMMENTS IS MORE ALIGNED WITH MARKET PERFORMANCE



Source: Bloomberg



The S&P 500 is focused on rates, not Russia

INVESTOR RESPONSE TO FED ACTIVITY AND COMMENTS IS MORE ALIGNED WITH EQUITY PERFORMANCE

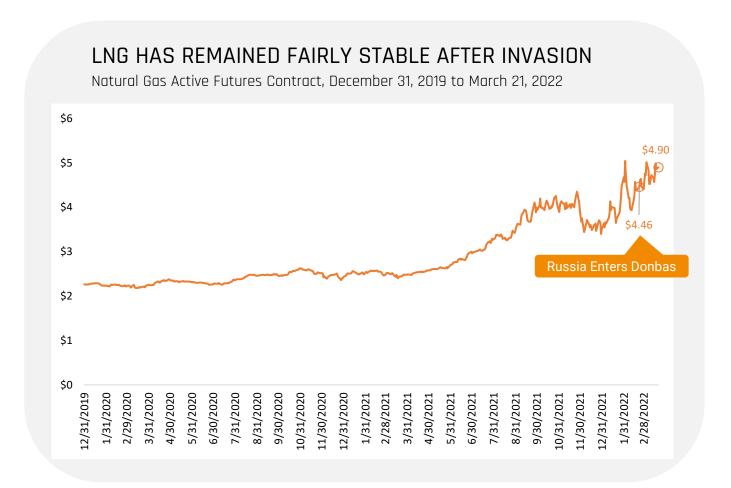


Source: Bloomberg



Purchases of LNG have had little disruption

SUPPLY CHAIN CONTINUES TO BE THE MAJOR CAUSE OF NATURAL GAS PRICE INCREASES

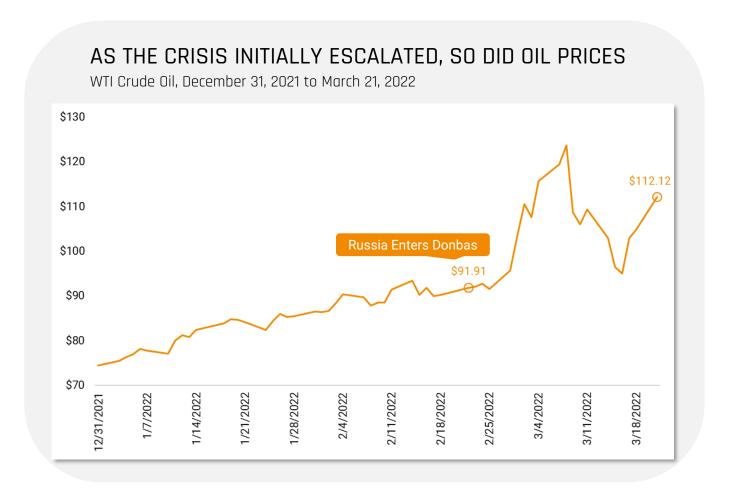


Source: Bloomberg



Oil prices have fluctuated dramatically

MOST OF THE PRICE INCREASE FROM "NORMAL" EXISTED PRE-RUSSIAN INVASION

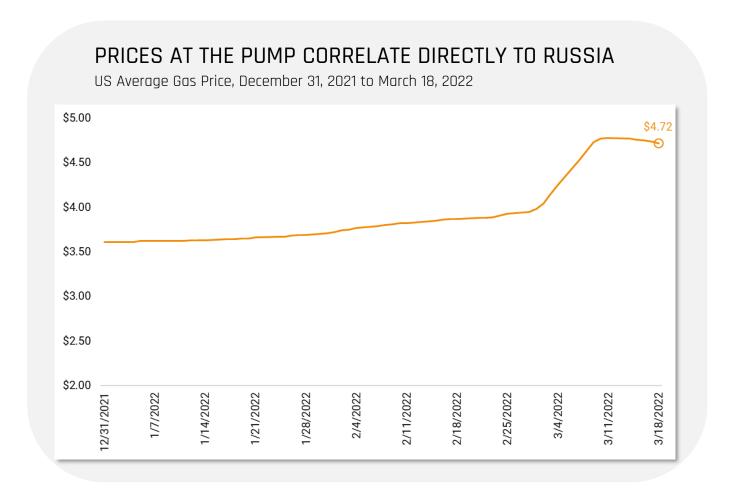


Source: Bloomberg



Pain at the gas pump is real

CONTINUED INCREASES IN THE BASIC COSTS OF LIVING WILL IMPACT THE US ECONOMY



Source: Bloomberg



The economy is healthy, but not awesome

GENERALLY, THE HELIOS SCORE FALLS BETWEEN 70% AND 40%

ECONOMIC DATA IS COMING OFF HIGHS OF THE RECOVERY December 2019 to February 2022 Consumer Sentiment **Economic Activity Economic Conditions** Employment Financial System Stress Global Leading Indicators Global Output Orders Other Leading Indicators Production Sales Services Conditions Feb 20 Mar 20 Apr 20 Jun 20 Jul 20 Jul 20 Oct 20 Oct 20 Joan 21 Feb 21 Mar 21 Jun 21 Jun 21 Jun 21 Sep 20 Sep 20 Sep 20 Jun 21 Jun 21 Jun 21 Sep 21

Source: Bloomberg, Helios Quantitative Research, Refinitiv

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Key Components to Watch

1

Inflation

As you may have guessed, this number will override every other piece of data for a long time.

2

Productivity

Productivity growth could boost economic performance, giving the Fed additional leeway to normalize monetary policy.

3

Employment

The labor market still has room to run to fully recover from COVID, the Fed may be hesitant to chase policy until this improves further.



Potential scenarios to consider

THERE ARE INFINITE SCENARIOS... MIGHT AS WELL TALK ABOUT A FEW!

BULL CASE



- Productivity
- Employment

Robust economic growth allows the Fed to reduce asset purchases and begin normalizing rate policy with limited impact to capital markets.

GROWTH + INFLATION CASE

- Inflation
- Productivity
- Employment

Fed moves to counteract inflation, but an expanded labor market helps offset impacts of tapering and rate policy changes.

STAGFLATION CASE

- Inflation
- Productivity
- Employment

Labor markets struggle, inflation continues to operate at high levels, causing the Fed to react aggressively and market volatility to expand.

BEAR CASE

- Inflation
- Productivity
- Employment

Inflation continues to be sticky while labor markets only slowly gain ground. Monetary policy changes have notable impacts on capital markets and return assumptions.



Key takeaways from the war in Ukraine

THE COMBINATION OF GEOPOLITICAL EVENTS AND ECONOMIC HEADWINDS ARE CONCERNING

- Geopolitical events alone do not correlate with sustained vol
- Most of the energy problem is a function of supply chain issues
- However, energy and other basic costs are hurting the economy
- Now is not the time to be greedy about returns

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