# 

### INVESTING IN A HIGH RATE WORLD

# By: Renato Leonard Capelj renato@physikinvest.com

1 - Eastern alobal powers seek to "seek to roll back US power and alliances so they can build sprawling spheres of influence and create a multipolar world." writes Hal Brands of Bloomberg. In a response to reduce reliance and hedge against sanctions risks, in the next few years, China, Saudi Arabia, and the GCC are pursuing "energy cooperation, ... and oil [in exchange] for development," said China's Xi Jinping at the China-GCC Summit. "No funding would happen in US dollars. Instead, China will buy more oil at big discounts, and it will do so "in renminbi over the next three to five years, ... which GCC countries will be able to decumulate" through investments and development, as well as convertibility to gold via exchanges in Shanghai and Hong Kong, and mechanisms that involve the use of CBDCs "interlinked to facilitate interstate payments 'off the Western system."

Read: The Chinese renminbi is speeding up in expanding its global use, China completes first yuan-settled LNG trade, China's yuan replaces the US dollar as the most traded currency in Russia, and China meets with Bridaewater, Goldman Sachs, and more.

- 2 The Financial Times' Rana Foroohar said "the recycling of petrodollars by oil-rich nations" fueled "several emerging market debt crises" and prompted "the creation of a more speculative, debt-fueled economy in the US." That trend is set to reverse, Foroohar added, a nod to Pozsar's comments on the impact of the broader efforts to de-dollarize (e.g., the creation of a "commodity-weighted neutral reserve asset that encourages members to pledge their commodities to the BRICS 'cause"), all the while more drilling does less and less to boost the supply oil and gas. For context, BRICS refers to the economies of Brazil, Russia, India, and China, among others, with the potential for significant growth in the future.
- 3 By encumbering commodities in strict supply, nations can boost their weights in currency baskets. This may keep inflation and interest rates elevated for longer. Monetary policymakers are not well-equipped to fight this trend.
- 4 Stemming inflation via supply-side economics alone is folly, said Damped Spring Advisors' Andy Constan. "The most destructive things to future prosperity are the tendencies that have developed over the last five years, like Brexit, the border wall, and the war in Ukraine. Comparative advantages, which globalization is essential for, generate uninsured supply chains, and now we're spending money on insurance."
- 5 Kai Volatility's Cem Karsan unpacked why Powell's "Volker Moment" is misguided and destined to fail.
- 6 The dollar maintains 60% of the world's currency composition. The dollar is unlikely to lose its dominance in the global economy anytime soon.

History is likely to show the next World War has started.

That's what Philippa "Pippa" Malmgren, an accomplished entrepreneur and economist who served alongside presidents as an advisor, said when she <u>appeared</u> on a March 2023 Macro Voices podcast. This World War won't be like the others, however; instead, WWIII is a technological and "Invisible War" with which will come a nasty <u>transition</u> to multipolarity[1], and the potential <u>unwind</u> of some trends that lent to the creation of a speculative and debt-fueled US economy.[2]

Why war? Largely, the West and East are warring over ideology (i.e., every time the East is prosperous, "the West changes the rules") and ownership of assets.

The ones who encumber[3] more assets, as well as rule inflation and interest rates, will better control stocks and wealth. That's an idea shared by the likes of Zoltan Pozsar (ex-Credit Suisse Group AG), who, in some widely-publicized notes, claimed the pillars of the low inflation world (i.e., globalization[4]) are changing, and the only recourse for monetary policymakers is asset price deflation. Some, including Kai Volatility's Cem Karsan, elaborate on monetary policymakers' limits. Karsan said that trends favoring high beta portfolios for the past forty years are now reversing. The Federal Reserve is unlikely to have much influence in addressing the issues of inequality and the populist movement it generates. The situation will persist until a shift in public demand and the political climate regarding populism.

As a validation, we look to the Federal Reserve's response to inflation in the early 2020s. In short, they've only transitioned from creating demand to absorb surplus supplies of low-priced items to structurally restricting demand in response to shortages, Pozsar <u>explained</u>. Consequently, the economy is on an L-shaped <u>trajectory</u> (i.e., a drop in activity via recession and flatline for a period as rates remain high to prevent another inflation surge). Eventually, neo-QE, fiscally-funded, industrial-type policies will emerge. This is good news for the economy but bad for financial-type assets like stocks. This regime change has yet to be priced, and at <u>stake</u> is the tenability of the dollar and US Treasury liquidity[6]. An optimal portfolio may consist of fewer stocks and more cash, bonds, commodities, and, in some cases, volatility.

- 7 Most missiles use an inertial navigation system or INS. GPS systems, along with radio, infrared, and optical sensors, can correct errors in the INS.
- 8 In a digital world, opinion becomes part of the war zone, and tools like TikTok are powerfully divisive influencers. Malmgren suggested the Chinese balloon over the US was the ultimate staged TikTok event, creating internal conflicts and diminishing government authority.
- 9 "if you're worried that the US and Russia are accelerating towards a nuclear conflict, you want to know what is happening on those bases. What better way than to have a balloon above the air traffic lanes, but below the radar of NORAD, which is the entity responsible for incoming nuclear weapons," Malmgren says on the balloon incident. "You can hover and get footage which you can run through facial recognition and ... [identify] the state of mind" of our US military.

What Made WWIII A Very Real Thing: Conflicts began in space and the sea; there is ongoing <u>satellite warfare</u>, alongside a race to build the first military <u>base in space</u>, as well as <u>sea-based warfare</u>.

Superpowers are "destroying their satellites to create debris fields" and deny access to critical orbits, a threat to the weapons systems that depend[7] on satellites for guidance, Malmgren said, adding that the Russians have <u>tried</u> this "very physical denial of service attack." There are also incidents of cutting under-sea Internet connections near Svalbard, Taiwan, and the Faroe Islands.

"The thing that kicked off the conflict we're in now wasn't when the tanks from Russia rolled into Ukraine. Many weeks before that, there was this incident in the Arctic Circle on this tiny island controlled by Norway called Svalbard, which has the fastest Internet connection in the world. Somebody cut the Internet connection there, [where] the highest altitude satellites connect to Earth, ... including the International Space Station." Since then, "someone cut the key subsea Internet cable for Taiwan, and we've seen the main subsea Internet cable for Europe and transatlantic also between Scotland and the Faroe Islands" targeted, Malmgren added. "That's where nuclear submarines from Russia would have to pass through to get into the Atlantic to become a strategic threat to the United States."

WWIII Turns Into A Public Spectacle: Irredentism, which involves protecting one's nationals outside of their border, is the original reason for "rolling into Ukraine," Malmgren explained.

The ongoing conflict involves air-, sea-, and land-based operations. Notwithstanding, the latter, which has havocked inflation on the civilian populations of the West, is mainly limited to Russia and Ukraine; WWIII is not yet kinetic between the West and East. Most warfighting, like "the shot across the bow" in Svalbard, is conducted in the shadows. Additionally, owing to the air and sea nature of the conflicts, the public[8] remains mostly unaware, barring the occasional scare, such as the Chinese balloon potentially gathering[9] intelligence on US missile launch sites and, more recently, China's drills near Taiwan.

Russia-Ukraine An 'Intelligence-Gathering Exercise': Look beyond the Russia and Ukraine conflict, which leaked documents suspect will <u>spill</u> into 2024 and, at the extreme, other <u>small regions</u> of the world. A kinetic WWIII between the West and East will not happen anytime soon.

10 - In February, Bloomberg reported that Russian President Vladimir Putin has announced that Russia will suspend its observation of the New START Treaty with the US, citing his country's military operation in Ukraine as a reason. The move could mean the US loses access to inspections and monitoring data about the number of deployed Russian nuclear warheads, as well as the land- and sea-based vehicles used to launch them.

11 - On April 28, 2022, the Integrated Test Team of Eglin Air Force Base and the Air Force Research Laboratory successfully showcased a new cost-effective method for neutralizing maritime threats through an air-based delivery system. This innovative capability was demonstrated by effectively obliterating a full-sized surface vessel in the Gulf of Mexico.

12 - New photos show China's artificial islands are highly developed military bases.

China does not want to go to war with the US. China is elevating alertness and provoking, leveraging its confrontational member (i.e., Russia) and positioning itself as the broker of deals. Russia is paying the price of China's support. When Russia makes a move, China can observe and gain valuable intelligence.

What is more, today's proxy conflicts are about demonstrating power, be it nuclear (e.g., the US, UK, Japan, and Australia teaming up on nuclear while Russia <u>abandons</u> START[10] and, allegedly, loads weapons on submarines) or not (e.g., the US's "Quicksink" <u>JDAM[11]</u> and China's <u>stationary</u> aircraft carriers[12]), as well attrition. By constantly surrounding Taiwan with fighter jets and naval vessels and cutting off internet cables, China forces the US to spend a lot of money and resources on maintaining a high level of alertness. Taiwan is an expensive undertaking that could break the back of the West.

Despite Malmgren's assertion that a physical conflict is unlikely, the US has moved from conducting military drills to preparing for actual combat, which enhances the confidence of the younger soldiers who will be on the front lines. Additionally, <u>leaked intelligence</u> indicates that China is developing more effective methods to breach US defense systems.

SVB, The Pentagon, Innovation, And Neo-QE: Silicon Valley Bank or SVB was too essential to let market forces resolve.

"There's a <u>headline</u> that reads SVB demise drew a quick response from Pentagon, particularly the Defense Innovation Unit," said Malmgren. "The Defense Innovation Unit understand that [depositors] are all their partners for building the technological infrastructure required to deal with modern conflict."

Security organizations are involved in commercial tech because technological superiority is critical in modern warfare. The line between what is strategic and what is commercial is blurred; almost everything can be used for both purposes (e.g., 3D printers are the <u>metal stirrup</u> of our generation; they can be used to produce buildings, prosthetics, and <u>drones</u> quickly). Take China's 'Little Giants' <u>strategy</u>, which involves creating companies aligned with the government. In China mingling with its businesses, it hedges national security risks.

13 - More fiscal funding can lead to an increase in interest rates. Fiscal funding refers to government spending that is financed through borrowing or the issuance of bonds. When the government borrows money to fund its spending, it increases the demand for credit, which can lead to an increase in interest rates. Higher demand for credit puts upward pressure on interest rates because lenders seek to earn a higher return to compensate for the increased risk of lending money. This means the government must pay higher interest rates on its bonds to attract investors. In addition, when the government increases its borrowing, it also increases the supply of bonds in the market. If demand for bonds remains the same, the increased supply can push bond prices down and yields up, leading to higher interest rates. More fiscal funding can lead to higher interest rates as it increases the demand for credit and the supply of bonds. This can affect the broader economy, as higher interest rates can make borrowing more expensive for businesses and consumers, potentially slowing down economic growth. Likewise, in a higher interest rate environment, stocks may be less enticing for investors.

14 - Central banks use quantitative easing to stimulate the economy by increasing the money supply and lowering interest rates. In this process, the central bank purchases large amounts of government bonds or other securities from commercial banks, injecting money into the economy and increasing the cash banks have available to lend. One of the impacts of auantitative easing on bond vields is that it tends to lower them. This is because when the central bank buys large amounts of bonds, it drives up demand for them, and thus their price goes up, and the yield or return on these bonds goes down. This effect is particularly pronounced for long-term bonds. The impact of quantitative easing on stock market prices is more complicated. On the one hand, the increased liquidity in the economy can lead to more borrowing and investment, boosting economic growth and corporate profits and leading to higher stock prices. On the other hand, the lower bond yields resulting from quantitative easing can make stocks a more attractive investment relative to bonds, and this can cause some investors to shift their money out of bonds and stocks bonds, putting upward pressure on stock prices. Overall, the impact of quantitative easing on stock market prices depends on various factors, including the specific conditions of the economy and financial markets at the time, as well as investors' expectations about future economic growth and rates.

15 - Recall that petrodollars "accelerated the creation of a more speculative, debt-fuelled economy in the US, as banks flush with cash created all sorts of new financial 'innovations,' and an influx of foreign capital allowed the US to maintain a larger deficit. A dedollarization is not even remotely imminent. As Brad McMillan of Commonwealth Financial Network explained, it's not easy. Say the US dollar is Amazon and the Chinese yuan is Walmart. Unless tens of millions of people suddenly decide to switch, the dollar's position as the alobal reserve is secure. According to the Center for Strategic and International Studies economists have identified two questions underlying the de-dollarization debate: high-threshold internationalization - whether the renminbi can overtake the dollar worldwide to end dollar dominance - and low-threshold internationalization - whether China can encourage enough trade settled in renminbi to reduce reliance on the US dollar. The former is unlikely as it would require significant changes to China's economy, while the latter is already happening. The success of low-threshold internationalization depends on whether the renminbi can achieve sufficient network effects for transactions not involving

Additionally, one way to push cash into the economy is through defense innovation spending. Malmgren, in another <u>conversation</u>, explained that fiscal funding[13] would be the new quantitative easing or neo-QE[14]. It's also not subject to audits and falls under the guise of "civilian tech" innovation which "we are seeing the results of" in the air, space, and sea. For instance, Amazon and SpaceX <u>heading</u> to space to provide satellite-based WiFi, which could be used for "strategic support" during military <u>operations</u>, and China <u>pulling</u> satellites out of orbit; we live in a James Bond <u>movie</u>.

Multipolarity Bad For Risk Assets: Pozsar argues investors who only read the speeches of central bankers and not statesmen will be behind the curve as the world shifts from unipolar to multipolar.

In a past <u>note</u>, he elaborated, adding alliances as powerful as those <u>struck</u> in 1945 between the US and the Middle East are starting to <u>form</u>. These new alliances, "built not by G7 heads of state but by the 'G7 of the East' (the BRICS heads of state"), may birth the petroyuan. After achieving peak economic <u>integration</u>, China is steadily reducing its reliance on the West and hedging sanctions risks by pursuing all-dimensional energy cooperation, including buying more oil (i.e., encumbering it) at considerable discounts in renminbi over the next few years, which its partners will decumulate through investments and development, as well as convertibility to gold via exchanges in Shanghai and Hong Kong. The rehypothecation, re-export, or sale of these encumbered commodities for premiums will result in inflation and higher interest rates for longer.

"Whoever encumbers commodities and controls the factories rules inflation, whoever rules inflation controls interest rates, and whoever controls interest rates controls the level of the stock market and financial wealth more generally," Pozsar <u>posited</u>, <u>adding</u> central banks will increase interest rates to over 5% and maintain them at high levels as they try to address the inflationary consequences of geopolitical tensions, resource nationalism, and the activities of BRICS. However, the markets are currently driven by liquidity and a focus on inflation targets and have not yet factored in this potential shift. The petroyuan could reinforce the dollar's <u>weakness</u> and counteract the effects of petrodollar recycling [15].

Consequently, the "Great Power conflict, <u>BRICSpansion</u>, 'BRICS coin,' and commodity encumbrance ... portends nothing good for [the] 60/40 portfolio." By the end of 2023, the solution may be quantitative easing (QE) under the guise of yield curve control[16].

16 – Under Yield Curve Control or YCC, a central bank sets a target level for a specific government bond yield and then buys or sells bonds in the market to keep the yield at the desired level. This contrasts with traditional monetary policy, which involves setting a target for a short-term interest rate and adjusting that rate to achieve the desired economic outcomes. YCC is typically used during economic stress or to support certain policy objectives, such as keeping long-term borrowing costs low or maintaining price stability.

17 - In a high-interest rate environment, the value of a long-duration asset may decline due to higher discount rates, making it less attractive to investors. Long-duration assets generate cash flows or benefits over a long period, requiring a longer time horizon for investors to realize their total value. Examples of long-duration assets include bonds, real estate, and infrastructure projects. In general, long-duration assets are associated with higher risk and higher potential returns, but their future performance may be uncertain.

18 - Short-duration assets are investments with a maturity or holding period of fewer than three years and are less sensitive to changes in interest rates. Examples include short-term bonds, money market funds, CDs, and T-bills, considered low-risk investments due to their high liquidity and low likelihood of default. Short-duration assets can be used by investors to manage their short-term cash flow needs or as a "parking spot" for cash while providing a small return on investment. Additionally, short-duration assets are often used as a hedge against interest rate risk since they are less sensitive to changes in interest rates than longer-duration assets.

19 - Short-stock exposure is a strategy that involves borrowing shares of a stock and selling them, with the hope of buying them back at a lower price to profit from the difference. However, when interest rates rise. the cost of borrowing those shares increases, which can eat into the potential profits of the strategy. One alternative to short-stock exposure in a rising interest rate environment is to use deep-in-the-money put options. A deep-in-the-money put option gives the holder the right to sell the underlying stock. By purchasing these options, the investor can achieve a similar profit potential to shorting the stock, but without the cost of borrowing, among the other risks associated with shorting. When interest rates rise, the cost of borrowing money to purchase the put options also increases. However, the cost of borrowing is usually lower than the cost of borrowing shares for shorting, making the use of deep-in-the-money put options a more attractive alternative for investors seeking to profit from a bearish outlook on a particular stock or the broader market. Additionally, owning put options provide a defined risk profile and limits the potential loss to the premium paid for the options.

In the context of dysfunction in the Treasury markets, policymakers may implement a QE to regulate swap spreads at high-interest rates instead of reducing yields and inflating risk assets.

Stock Investing In A High-Rate World: One may want less exposure to long-duration[17] assets and more exposure to short-duration[18] assets.

"60/40 won't cut it anymore," Pozsar <u>explained</u> in a note published in January. Portfolios should be "20/40/20/20 instead, with the weights representing cash, stocks, bonds, and commodities."

This view is not shared by all, however. For instance, <u>The Ambrus Group's Kris Sidial</u>, <u>Simplify Asset Management's Michael Green</u>, and <u>Kai Volatility's Cem Karsan</u> think investors can get away with weighty allocations to volatility, which can be used to speculate on or hedge against directional movements, in addition to cash, T-bills, and loan structures similar to the latter.

Volatility Is An Underappreciated Tool: To validate the view differing from Pozsar's, let us revisit 2022 when volatility was not profitable. Before the market downturn in 2022, investors anticipated a similar decline to the one in 2020. As a result, they protected themselves against inflation and policy actions by heavily investing in commodities and options. When the decline did occur, investors sold off their stocks and volatility positions, putting pressure on the latter's pricing. This pressure was concealed by measures like the put-to-call ratio, inflated by stock loan desks replacing short-stock exposure with deep-in-the-money put options due to rising interest rates[19].

"One-year variance swaps or implied volatility on an at-the-money S&P 500 put option would trade somewhere in the neighborhood of 25 to 30%," Green <u>recalled</u>. "That implies a level of daily price movement that is difficult to achieve."

Investors disappointed with the poor performance of longer-dated volatility shifted their exposure to shorter-dated volatility with less time until expiration. Goldman Sachs Group Inc (NYSE: GS) strategists <u>noted</u> that trading volume in the <u>S&P 500</u> (INDEX: SPX) is now centered around options with "24 hours - 1 week" to expiration. Most activity in these short-term options is divided between hedging, directional trading, and selling out-of-the-money (OTM) options to generate yield.

20 – Realized volatility measures the actual or historical volatility of an asset's price over a specific period. It is calculated by measuring the standard deviation of the asset's returns over that period. Realized volatility is often compared to implied volatility, which is a market estimate of the expected future volatility of the asset. Realized volatility can provide valuable insights into an asset's price movements, including how volatile it has been in the past, how it has responded to economic events, and how it may perform in the future. It is often used in options trading as a way to assess an option's value relative to its implied volatility and to determine whether it is overpriced or underpriced.

21 – Options gamma is a measure of the rate of change in the delta of an options contract relative to a change in the price of the underlying asset. Delta is the sensitivity of an option's price to changes in the underlying asset's price, and gamma is a measure of how quickly delta changes in response to those price movements. Essentially, gamma measures the acceleration or deceleration of an option's delta, and it is a critical component in assessing an option's risk profile and potential profitability. High gamma options are more volatile and can offer greater returns but come with a higher risk of loss.

22 - Implied volatility is a measure of the market's estimate of the future volatility of an underlying asset's price, as reflected in the price of an options contract. It is based on the current market price of the option and other relevant factors such as the strike price, time to expiration, and current market conditions, Implied volatility is often expressed as a percentage and represents the level of uncertainty or risk that the market associates with the future price movements of the underlying asset. Higher implied volatility typically means that the market expects larger price swings in the underlying asset, while lower implied volatility indicates a lower expected level of price fluctuations. Implied volatility is a crucial component of options pricing models and is used by options traders to assess the relative value of different options contracts and to manage their risk exposure.

23 - Options volga (i.e., vomma or volatility gamma) is a measure of the rate of change in an option's vega in response to changes in the implied volatility of the underlying asset. It is a second-order derivative of the option's price with respect to changes in volatility and is sometimes referred to as vega convexity. The volga of an option represents the expected change in an option's vega for every 1% change in the implied volatility's volatility (volatility of volatility). The higher the volga, the more sensitive the option's vega is to changes in the volatility of volatility, and the greater the potential for a change in implied volatility to impact the option's price. Options traders use volga as a risk management tool to assess an option's sensitivity to changes in volatility and its potential impact on the option's profitability.

24 - Options vega is a measure of an option's sensitivity to changes in the volatility of the underlying asset. It represents the expected change in an option's price for every 1% change in the implied volatility of the underlying asset. Implied volatility is a market estimate of the future volatility of the underlying asset, and it is a critical factor in determining an option's price. Options with higher vega are more sensitive to changes in implied volatility, and their prices will increase when implied volatility rises and decrease when it falls. Vega is an essential risk metric for options traders and can help them manage their portfolio's exposure to changes in volatility.

This focus on short-term options, which expose investors more to realized volatility (RVOL[20]) and gamma[21] (i.e., change in market movement), increases the potential for volatile situations. Short-term options exposures can quickly turn sour and lead to cascading market events, often called gamma squeezes.

Meanwhile, longer-dated volatility is considered relatively inexpensive in terms of implied volatility (IVOL[22]), which is the expected volatility of an asset based on the supply and demand of options. Some traders believe these options may experience significant repricing and outperform those with less time to expiry. Past events have demonstrated that the IVOL of an out-of-the-money option can increase by a multiple more significantly than the underlying asset's single-digit percentage movement, as seen in the 2020 market decline and the 2021 meme stock craze, via the volga[23] effect (i.e., change in vega[24] in response to change in IVOL of underlying grows in OTM options). Long-term options exposures can compound a volatile situation, exacerbating cascading market events by turning gamma squeezes into gamma + volga squeezes, though others use different names often to refer to the latter; at the end of the day, it's a squeeze by way of significant movement and IVOL repricing dramatically higher.

Indeed, volatility prices can experience extreme movements, cluster together, and revert to the mean for extended periods, as Sidial <u>explained</u> in a recent interview. While counterparties may appear less exposed within a particular range, unexpected news, and fundamentals can shake the market, amplifying movements in the underlying and its options. This can result in a feedback loop where traders and hedgers (i.e., customers) respond by buying or selling options, causing counterparties to step in, bid, store the options inventory, and sell underlying stock or futures to hedge.

For example, if negative news causes the market to drop, traders who previously sold put options may rush to cover (i.e., buy back those options) while new traders buy put options. Counterparties assist in walking-up options prices further, warehouse inventory, and selling the underlying stock and/or futures to reduce the risks of holding this inventory. This was evident during the market downturn in early 2020 when overexposed traders rushed to protect themselves, intensifying the speed of the drop.

25 - Box spreads are a solution to lend or borrow cash and earn or pay a competitive interest rate. Per the OCC, boxes allow market participants to structure a loan similar to a Treasury bill, a "discount" instrument purchased at a price lower than its face value. When the bill matures, the face value is returned. One could purchase a 90-day T-bill with a \$1 million face value of \$998,000 and, after 90 days, receive the face value of \$1 million, earning a \$2,000 discount as interest. The interest rate on this transaction can be expressed as an 80 basis point or 0.80% discount yield, calculated as (360/90) x (\$2,000/\$1,000,000). Similarly, the effective rate on a box is represented as a discount yield, akin to a quoted T-bill rate. Briefly, box spreads allow traders to earn a favorable interest rate. For instance, one could trade box spreads expiring at the end of June by purchasing the \$4,000/\$5,000 call spread for \$22,365,00 and simultaneously buvina the \$5,000/\$4,000 put spread for \$76,620. This trade costs \$98,985.00, and by lending this amount on April 21, 2023, the trader will receive \$1,015.00 upon maturity.

26 - Portfolio margin is a risk-based margining system that considers the overall risk of a portfolio of financial instruments rather than calculatina marain requirements for each instrument in isolation. Under portfolio margining, the margin requirement for a portfolio is based on the potential risk of loss under various market scenarios. This is done using complex mathematical models that consider factors such as the correlation between different assets, implied volatility, and the potential impact of market shocks. Portfolio margin is typically used by sophisticated investors, such as hedge funds and institutional traders, who have extensive and complex portfolios that require a more nuanced approach to risk management. It can allow traders to take on larger positions with less margin, potentially increasing their returns. However, it also comes with higher risk, as losses can be magnified in the event of market movements not anticipated by the models used to calculate margin requirements.

Trade Structuring In This High-Rate World: There's an alternative approach that may enable one to maintain the spirit of Pozsar's trade suggestion, particularly with commodity exposures not likely to perform as well as they did in 2022 due to inflation moderating or not rising at the same pace.

One could invest a substantial portion of their capital in low-risk assets such as high-yield savings accounts, money market funds, T-bills, or <u>box spreads[25]</u> that offer a yield of 5% or more per the current interest rates in April 2023. The remaining capital can be allocated to directional volatility exposures but in a lesser proportion. This approach minimizes the potential for nominal losses as the principal will likely be returned at maturity, barring any unforeseeable catastrophic events. Furthermore, the leverage potential can help investors avoid losses in real terms.

According to a well-timed <u>post</u> by Pat Hennessy from IPS Strategic Capital, if one has \$1,000,000 to invest and interest rates are around 5%, they could allocate \$950,000 to investments such as U.S. Treasuries, money market funds, or box spreads, which are considered near-risk-free. With the remaining \$50,000 in cash, they could use options to gain leveraged exposure to an asset they choose. If these options expire worthless, the gain of \$50,000 from the near-risk-free assets at maturity would provide a total return of principal, meaning the value of the structure at maturity would be \$1,000,000. Such structures typically allow investors to participate in market direction by an amount comparable to a 60% portfolio allocation to long or short equities.

Using structures such as boxes to harvest a near-risk-free yield has other advantages, particularly for portfolio margin[26] investors. For boxes, the most significant possible loss across a range of prices is negligible. Hence, one's buying power is unaffected. Consequently, investors using portfolio margin and trading boxes have more buying power to allocate to other trades that are margin (and not debit) intensive, such as synthetic long stock (i.e., purchase ATM call and sell ATM put). Using options, among other derivatives, enables us to <u>stack</u> returns on each other.

For example, one could trade box spreads in the <u>European style and cashsettled</u> SPX expiring June 30, 2023. Purchase the \$4,000/\$5,000 <u>call spread</u> for \$22,365.00 and simultaneously buy the \$5,000/\$4,000 <u>put spread</u> for \$76,620.00. This trade costs \$98,985.00, and by lending this amount on April 21, 2023, the trader will receive \$1,015.00 on June 30, 2023. Notwithstanding the cash outlay, the buying power reduction using portfolio margin is negligible, and a trader could allocate the \$98,985.00 in buying power to other margin-intensive trades.

27 - Volatility skew is a term that describes the difference in implied volatility (IV) between options at different strike prices on the same underlying asset or security. Typically, in a regular market, options with lower strike prices have higher implied volatility than options with higher strike prices due to market participants being more concerned about downside risk than upside potential. This results in a skew or asymmetry in the implied volatility surface, with the implied volatility of OTM puts being higher than that of OTM calls. However, in some market conditions, such as during periods of extreme uncertainty or speculation, the volatility skew can become more pronounced or even reverse, with OTM calls having higher implied volatility than OTM puts.

28 - An option's delta measures the change in the price of an option relative to a change in the price of the underlying asset. The delta of a call option ranges from 0 to 1, and the delta of a put option ranges from 0 to -1. A delta of 1 means that the option's price will move in lockstep with the price of the underlying asset. For example, if the underlying asset rises by \$1, a call option with a delta of 1 will increase in value by \$1. Conversely, a delta of 0 means that the option's price will not move at all in response to changes in the price of the underlying asset. For example, an at-the-money option with a delta of 0.5 will increase in value by \$0.50 if the underlying asset rises by \$1. It's important to note that delta is not a fixed value and can change depending on various factors, such as changes in the price of the underlying asset, changes in volatility, and changes in time to expiration.

How To Express Your Bullish Opinion: In line with the idea of allocating most capital to low-risk assets and a smaller portion to high-risk assets, if the market sentiment is bullish, one option could be to invest in <u>call spreads</u> (i.e., buying an option at a strike price and selling one or more options at a higher strike price). This structure can use persistently elevated call skew[27], partly due to <u>rising</u> interest rates and the recent FOMO-inspired reach for upside exposure, to reduce cost at entry.

Consider a <u>Nasdaq 100</u> (INDEX: NDX) call spread with a width of 500-1000 points. One can buy the ~5 delta calls once and sell two of the ~2 delta calls with roughly 30 days till expiry. The spread can be opened with little to no debit (cost) and may offer a credit (profit) to close if the NDX immediately trades up to the ~5 delta strike after entry, assuming there is no significant repricing higher in volatility; in a spot- and vol-up market, a profitable trade like this has positive delta[28], gamma, and vega. In a typical portfolio margin account with \$1,000,000 in buying power, trading between 5 and 10 units of the spread can be done comfortably. To increase exposure, traders can buy one additional call per spread, positioned above the short options.

To validate this approach, we refer to its implementation by Physik Invest's traders in early 2023. On January 18th, there was a temporary decline in an otherwise established upward trend due to weaker-than-anticipated economic data and hawkish remarks from Federal Reserve presidents. After observing a steepening call volatility skew in the NDX, the traders placed the following position on January 20 to participate in an upward move with limited risk: they bought one \$13,500 strike call and simultaneously sold two \$14,000 strike calls for a net credit of \$5.

In the following weeks, the equity market demonstrated sustained strength, fueled by the "soft landing" narratives. The aforementioned trade yielded a peak credit (i.e., profit) of \$4,000. However, Physik Invest's traders hastily monetized the trades, considering the potential downside risks posed by mega-cap earnings reports. As a result, the trades were closed at \$1,200 and \$2,500 credits.

Ideally, the maximum profit on this 10-unit trade with zero cost would have been approximately \$40,000. This is not a perfect world; notwithstanding, this trade can be repeated in an environment wherein markets tend to move big and continue moving in the same direction over the very short term (i.e., normal distributions are inaccurate, and theory often discounts serial correlation). In an ideal world, on a \$1,000,000 account, this spread structure could have returned 4%. It didn't, but given that the trade was free to take, at least 100% of the notional was protected.

How To Express Your Bearish Opinion: If one is pessimistic about risk assets, they could consider allocating some or all of the \$50,000 to <u>call spreads</u> sold above the market and <u>put spreads</u> bought below the market, with the total risk amounting to 5% of the account's \$1,000,000 principal.

An example is a short call spread in the SPX, which is structured one-quarter-out and has a range of 50-100 points at the money (ATM) or near current prices. This approach allows for a credit of over 60% of the spread's width to be collected at the time of writing. The structure involves selling an option close to the current trading price of the SPX and purchasing one 50-100 points higher. The proceeds from this sale can then be used to invest in put spreads in products likely negatively impacted by a higher-for-longer interest rate environment. For example, NDX 100-500 wide put spreads at the 10 or 5 deltas with a one-year horizon could be considered, where one buys an option far from where the NDX is trading today and sells one 100 to 500 points lower. By selling a spread against one owned, a trader can reduce their cost and increase their overall size. It should be noted that this trade requires a higher debit investment and may involve less reliance on margin.

How To Express Your Neutral Opinion: If one has a neutral or uncertain directional view on risk assets, they may consider allocating some or all of the \$50,000 available to risk to <u>iron condors sold</u>, equidistant or skewed, as well as <u>butterflies</u> and <u>calendars</u> bought.

One structure useful in a sideways market is the equidistant 50-wide out-of-the-money (OTM) <u>short iron condor spread</u> in the SPX, structured one-quarter-out. By selling one call option 100 points above the market and one put option 100 points below the market, and buying one call option 50 points above the short call, and one put option 50 points below the short put, one can collect over 60% of the spread's width in credit at the time of this writing.

The revenue generated by this trade can enhance a portfolio's yield during stagnant market movement, where volatility returns to its average and clusters.

How To Express Your View On Rates: Investors who hold a pessimistic (or optimistic) view on rates in the distant future may opt to purchase an OTM call spread (or an ATM put spread) in the <a href="https://example.com/Three-month-SOFR">Three-month SOFR</a> (FUTURE: /SR3). This futures contract is a commonly used reference tool for interest rates, where the implied interest rate is derived by taking 100 and subtracting the futures price.

#### 

For instance, ones who bet on rates falling by purchasing one 96 strike call and sold one 97 strike call in the December 2023 Three-month SOFR contract, just before the March 2023 banking crisis and pivot hopium, saw their OTM spread's value increase by about fivefold or so in the weeks that followed.

The environment has changed, however, and these options are more pricey. For just about the same amount of leverage potential, one would have to push their exposure out to the 10 or 5 delta area of the distribution; rather, one should wait for pivot hopium to ebb before re-considering entry, trade the future outright using stops to manage risk or avoid this product altogether.

Summary: According to economist and entrepreneur Pippa Malmgren, the next world war has started. The battle is mainly over ideology and ownership of assets, with those who encumber more assets and control inflation and interest rates having better control over stocks and wealth.

The pillars of the low-inflation world, such as globalization, are changing. The Federal Reserve is unlikely to address issues of inequality and populism until a shift in public demand and political climate occurs. The economy is on an L-shaped trajectory, with a regime change yet to be priced, potentially impacting the future of the dollar and US Treasury liquidity. Stocks, accordingly, may resume a downward trajectory as the Fed takes "the wealth effect out of the market," to <u>quote</u> Cem Karsan of Kai Volatility.

An optimal portfolio may have fewer stocks and more cash, bonds, commodities, and volatility. Given the uncertainty and high-interest rates, investors can protect their initial investment by allocating a substantial portion of their principal to lower-risk assets and a smaller amount to risky assets with leverage potential. This approach becomes relevant as commodity exposures are unlikely to perform as well as they did in 2022 due to inflation moderating or not rising at the same pace, while normal distributions are inaccurate, and theory often discounts serial correlation.

Preserving wealth is as crucial as generating it. To receive similar updates, consider subscribing to <a href="https://physikinvest.com/">https://physikinvest.com/</a> or bookmark <a href="https://physikinvest.com/">https://physikinvest.com/</a>.

Please share feedback: <a href="https://forms.gle/82jBsN6H4qVoeU5m8">https://forms.gle/82jBsN6H4qVoeU5m8</a>

## LEGAL DISCLAIMER

Please read this disclaimer carefully before using our newsletter, financial research, or consulting services. By accessing or using our services, you agree to be bound by the terms and conditions outlined in this disclaimer. You should only use our services if you agree to these terms and conditions.

Physik Invest is not registered with the US Securities and Exchange Commission or any other securities regulatory authority. Our services are for informational purposes only and should not be considered investment advice or a recommendation to buy or sell any security or other investment. Our information is not tailored to your financial situation or investment objectives. We do not guarantee any information's accuracy, completeness, or timeliness. It would be best if you relied on something other than our services to make investment decisions or undertake any investment strategy. Trading is risky, and investors can lose all or more than their initial investment. Hypothetical performance results have limitations and may not reflect actual trading results. Other factors related to the markets and specific trading programs cannot be fully accounted for in hypothetical performance results, which can adversely affect actual trading results. We recommend that you seek independent financial advice from a licensed professional before making investment decisions.

We make no claims, representations, or warranties about the accuracy, completeness, timeliness, or reliability of any information you provide through our services. We do not take any liability for any loss or damage caused by your reliance on any information we gave. We are not liable for direct, indirect, incidental, consequential, or punitive damages arising from your use of our services or the information provided.

We don't have a professional relationship between you and us. We are not your financial advisor and do not provide personalized investment advice. Our services are provided on an "as is" basis without any warranties.

All content provided through our services is the property of our company and is protected by copyright and other intellectual property laws. You may not be able to reproduce, distribute, or use any content provided through our services without our prior written consent.

We reserve the right to modify these terms and conditions at any time. Following any such modification, your continued use of our services means you accept the modified terms.

This disclaimer is governed by the laws of the jurisdiction in which our company is located, without regard to its conflict of law provisions.

If you have any questions, call (586) 894-3874 or email renato@physikinvest.com.