PARADISE LOST: THE DEPARTURE OF LOW INTEREST RATES
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Kenneth Burke remarks in "A Grammar of Motives": "And so one can seek more and more money, as a symbolic way of attaining immortality."

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CONCLUSION AND OVERVIEW

In both stock and debt marketplace domains (and especially in stock arenas), securities owners (particularly "investors") and their central banking, political, and media allies adore bullish price trends and employ artful rhetoric to promote them. Bullish enthusiasm for low yields in debt marketplaces of course has its limits. Central bankers (and stock investors and Wall Street and Main Street) do not want recessions or deflation and consequently "too low" interest rates, which are "bad" for (reflect or portend feebleness in) "the economy" and equities. But sometimes even negative nominal yields for government debt of leading advanced nations (such as Germany) allegedly are reasonable and praiseworthy. Moreover, for stock marketplaces, bull moves almost always are joyful and good!

All else equal, for equity realms such as America's S+P 500, low (but not overly depressed) arithmetic interest rates and widespread faith that this rate pattern probably will persist for the foreseeable future tend to give birth to and sustain bullish stock trends. Over the past several years (and despite the horrifying stock price crash in first quarter 2020), ongoing and successful yield repression (enhanced by money printing and fortified by accommodative sermons) by the revered Federal Reserve Board and its trusty friends, and often aided by massive government deficit/"stimulus" spending, encouraged major bull climbs in the United States stock marketplace. In addition, low interest rates (often negative in real terms) in advanced countries such as the United States inspired financial pilgrims avidly searching for adequate "yield" (return) to purchase corporate debt securities and other "asset classes" such as commodities.

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Previous essays discussed key stock, interest rate, currency, and commodity marketplaces and their relationships, as well as the political scene. See essays "Emerging Marketplaces, Unveiling Danger" (12/2/21); "Hunting for Yield: Stocks, Interest Rates, Commodities, and Bitcoin" (11/7/21); "Rising Global Interest Rates and the Stock Marketplace Battlefield" (10/5/21); "America Divided and Dollar Depreciation" (9/7/21); "Great Expectations: Convergence and Divergence in Stock Playgrounds" (8/14/21); "Financial Fireworks: Accelerating American Inflation" (7/3/21); "Marketplace Rolling and Tumbling: US Dollar Depreciation" (6/1/21); "American Inflation and Interest Rates: Painting Pictures" (5/4/21); "Financial Marketplaces: Convergence and Divergence Stories" (4/6/21); "Truth and Consequences: Rising American Interest Rates" (3/9/21).

Several months ago, that analysis concluded that the signpost United States Treasury 10 year note yield had established a major bottom. Essays emphasized, in contrast to the opinion of the majority of central bankers, the likelihood that substantial global inflation likely would persist. Higher inflation alongside massive and increasing international debt burdens probably would encourage higher interest rates around the world.

Also, long run United States interest rate history (use the UST 10 year note as a benchmark) reveals that noteworthy yield increases lead to peaks for and subsequent declines in American stock benchmarks such as the S+P 500 and Dow Jones Industrial Average.

Investigation pointed to rising rates for high-quality government debt outside of the United States, as in Germany. A pattern of higher yields in the United States corporate sector as well as in lower quality emerging marketplace sovereign debt appeared. Thus a rising rate environment has become a global phenomenon. Given not only the upward march of yields in the UST 10 year note, but also the international trend of rising rates, the probability of a peak in the S+P 500 and related leading nations increased.

America's S+P 500 and stocks in other advanced nations soared to new highs after February 2021 while emerging marketplace equities have marched downhill (price divergence). However, the chronicle of those two broad marketplace realms at least since the Goldilocks Era of the mid-2000s reveals that their price and time trends tend to coincide. Over the long run, these landscapes are bullish (or bearish) "together". In the current constellation of rising American and international yields, in both government and corporate areas, that warned of eventual price convergence between the S+P 500 and emerging marketplace stocks. The S+P 500's record high in early January 2022 occurred near in time to interim highs in developing nation equities.

"Emerging Marketplaces, Unveiling Dangers" (12/2/21) concluded: "These intertwined patterns warn that the S+P 500 probably has established a notable top or soon will do so".

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The longer run viewpoints of "Emerging Marketplaces, Unveiling Dangers" and related recent essays remain intact. The paradise of low interest rates in the United States and around the globe will continue to disappear. This ominous upward yield shift in the UST 10 year note and elsewhere endangers the heavenly bull move in the S+P 500 and related stock marketplaces. The S+P 500's stellar high, 1/4/22's 4819, probably was a major peak; if its future price surpasses that celestial height, it probably will not do so by much.

The UST 10 year note yield probably will ascend to at least the 2.50 to 3.00 percent range, with a substantial likelihood of achieving a considerably higher elevation. The Federal Reserve and other high priests of central banking probably will not engage in substantial actions to rescue the S+P 500 unless it tumbles around twenty percent or more from a prior pinnacle.

OMINOUS SIGNS: INFLATION AND DEBT

In "The Clouds", an ancient Greek comedy by Aristophanes, the philosopher Socrates asks:
"What did you come for?"
Strepsiades replies: "To learn to speak. I am wracked and ruined and dispossessed
By most malignant debts and usury."
Socrates: "How could you fall into debt without knowing it?
Strepsiades: "It was the galloping consumption, a voracious plague.
But teach me the other of your Logics, the nonpaying one.
Whatever your fee is, I swear by the gods I'll pay it."

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Sustained low interest rates tend to create a low interest rate culture (belief system). This bolsters widespread expectations for continued low yields, and encourages fierce economic and political efforts by those who significantly benefit from such depressed yields to maintain them.

If nominal interest rates offer little or no (or negative) real return relative to inflation, this can inspire ardent hunts for yield in stocks as well as other "asset" realms such as low-grade government and corporate debt and commodities "in general". Consequently, when growing inflationary fears and rising benchmark interest rates substantially assault this low rate and search for yield culture, they can halt or reverse bullish trends in these related marketplaces. Enthusiastic hunts for yield (adequate return) transform into worried runs for cover in hope of capital preservation.

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Significant inflation and massive government debt are important variables generating the rising United States and global interest rate outlook. Compare interest rate yields in America and elsewhere with consumer price index and similar measures. Sustained high inflation relative to current debt instrument yield heights warns of persistent and noteworthy interest rate yield climbs. All else equal, a negative real return situation (which encourages borrowers and debtors but thereby cheats savers and creditors) tends to make UST ownership unattractive for many marketplace participants.

Highlight the spike of American inflation measures such as the Consumer Price Index. For several months, US CPI-U inflation has surpassed five percent. America's CPI-U (all items) soared 7.0 percent year-on-year in December 2021, the largest 12 month increase since the period ending in June 1982. The November 2021's CPI-U advanced 6.8 percent year-on-year, accelerating from the sharp rise of 6.2 percent in October 2021, and also from the lofty year-on-year trend of between 5.0 and 5.4pc for the months of May, June, July, August, and September 2021. Compare the paltry 1.4pc year-on-year rise in December 2020 (Bureau of Labor Statistics, 1/12/22).

The OECD's December 2021 CPI (all items, Table 1; 2/3/22) for the OECD countries rocketed upward 6.6 percent year-on-year, the highest rate in 30 years (since July 1991). November 2021's leaped 5.9 percent year-on-year. This rising inflation trend for the OECD as a whole has existed for several months. The OECD's year-on-year CPI measure ascended 5.2 percent in October 2021, 4.6 percent in September 2021, 4.5pc in August 2021, and 4.6 percent in July 2021. Compare the 1.2 percent climb of December 2020.

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Marketplace and other cultural history need not repeat itself, either entirely or even partly. Just because inflation has moved upward, that does not make it destined to continue to do so. Neither is it fated to fall substantially. Subjective perspectives on marketplace variables and their relationships and relative importance can and do change.

However, given the dramatic current flight of American consumer price inflation toward seven percent, examine a couple of past episodes from supposedly ancient times when it soared to around that level. In August 1973, the US CPI-U year-on-year trend advanced to 7.4 percent from July 1973's 5.7pc year-on-year rate; June 1972's trough was 2.7pc year-on-year. From that level around seven percent, inflation flew up to December 1974's 12.3pc year-on-year. The CPI-U retreated to 4.9 percent in December 1976 versus the prior year period. It thereafter steadily walked higher, reaching 7.0pc year-on-year in May 1978. The CPI-U thereafter ascended further, reaching a celestial peak celestial peak of 14.8 percent in March 1980 (Bureau of Labor

Statistics). During this inflationary era, the US Treasury 10 year note peaked at 15.84 percent on 9/30/81.

The heavenly UST 10 year note yields of fifteen percent (or even ten percent) during this high-inflation epoch astonish many observers nowadays. However, since UST and other debt owners desire a real return relative to inflation, sustained lofty inflation tends to produce lofty UST yields.

Looking forward, perhaps US CPI-U inflation will not climb much above seven percent. But suppose CPI-U inflation seems likely to remain around seven percent year-on-year (December 2021's level). Then the UST 10 year note yield probably will not stay around the current level around two percent; it will rise substantially. Even if the CPI-U rate plummets to four percent year-on-year, that obviously exceeds a two percent UST yield. Therefore the UST 10 year rate will climb quite a bit; a 50 basis point real return relative to four percent inflation gives a yield of 4.50 percent.

Examine the watchful and benevolent Fed's target (central tendency) for Personal Consumption Expenditure inflation for calendar 2022 of 2.2-3.0 percent (2.0pc for the misty "longer run"; Economic Projections, Table 1; 12/15/21). The midpoint of the current central tendency for 2022 is 2.6 percent. The Fed oracle has repeatedly declared that it seeks inflation over two percent for a while to make up for the long span in which it rested beneath its beloved two percent target. Even if there is no real return relative to that central tendency inflation, the UST 10 year yield motors up to 2.6 percent. Or, even in comparison to the Fed's gospel that longer run PCE inflation belongs around two percent, a 50 basis point real return via the UST 10 year pushes its yield up to 2.50pc, above current yields.

Do the Fed and other central bankers ever blame themselves for helping to create high inflation by means of their extravagant money printing? The Fed next assembles 3/15-16/21, so perhaps this clairvoyant will adjust upward for at least calendar 2022 its PCE inflation forecast. In any case, central bankers finally have confessed that notably high inflation (significantly over the Fed's two percent target) is not transitory, temporary, or merely the result of special factors such as supply bottlenecks. Inflation is no longer confined to so-called asset classes such as stocks and homes, but has spread to provinces such as consumer prices. That inflationary ascent portends increasingly vigorous efforts by these shepherds to contain the risks of sustained substantial inflation growth.

Maybe America and the world will not have the astonishing "runaway" CPI-U inflation of the era of the 1970s/1980's discussed above. But the US and other nations still can have sustained historically high inflation, and thus relatively lofty interest rates.

Let's look at US inflation and UST 10 year yield trends in another epoch. Venture back to the magnificent Goldilocks Era, which unfortunately ended in 2007-09's astonishing global economic disaster. During the glorious Goldilocks Era, America's CPI-U inflation attained its trough with October 2006's 1.3 percent year-on-year climb. The CPI-U established an initial crest with November 2007's 4.3pc year-on-year ascent (near in time to the S+P 500's 10/11/07 major high at 1576), obviously well under December 2021's CPI-U (and that of several months prior to December 2021). The UST 10 year note yield peaked on 6/13/07 at 5.32 percent, which of course is far above its current level. By comparing the current CPI-U pattern and the UST 10 year's elevation around 2.00 percent with that of the Goldilocks Era, it looks probable that the UST 10 year yield eventually will climb substantially.

As a footnote, remember that the CPI-U's pinnacle during the Goldilocks Era occurred at 5.6pc in July 2008, alongside stratospheric summits in the petroleum complex (Brent/North Sea crude oil nearest futures peak 7/11/08 at 14750). Yet although the UST 10 year yield slipped after its June 2007 zenith, it rebounded to make an interim top on 6/13/08 at 4.27pc, still substantially above the present-day height.

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Largely due to rapid consumer price inflation, overall United States compensation in real terms has dipped in real terms over the past several months. How long will workers tolerate this situation? Higher wages probably not only will help to sustain the overall entrenched significant inflationary trend in the consumer price index and similar yardsticks, but also to reduce corporate earnings.

The US Employment Cost Index for civilian workers, which includes wages and benefits, increased 4.0 percent year-on-year in nominal terms in December 2021 (Bureau of Labor Statistics; 1/28/22). See the ECI's "Historical Listing- Volume IV" Table 4 for constant dollar (real) data. For the 12 months ending in December 2021, the real ECI slumped 2.9 percent year-on year; for the 12 months ending in September 2021, it eroded 1.6 percent, with June 2021's index down -2.4pc versus June 2020. The BLS's real average hourly earnings decreased 2.4 percent year-on-year in December 2021 (Table A-1; 10/13/21).

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Government debt levels as a percentage of GDP in America and many other key countries were substantial and very elevated from the historical perspective prior to the early 2020 advent of the coronavirus pandemic. Gargantuan government deficit spending (fiscal stimulus) thereafter by many nations (demand for credit) further assists yield ascents.

Spotlight the international debt assessment by the International Monetary Fund's "Fiscal Monitor" ("Foreword", page ix; 10/7/21). "Debt--issued by governments, nonfinancial corporations, and households--in 2020 reached $226 trillion and increased by $27 trillion. Both the level and the increase in debt are unprecedented. High and growing levels of public and private debt ae associated with risks to financial stability and public finances."

Though the IMF's Fiscal Monitor does not directly address the overall global debt situation for governments, nonfinancial corporations, and households combined for calendar 2021, it probably has improved little if at all for that year. For the global general government gross debt as a percentage of GDP category, IMF statistics show little change.

According to the International Monetary Fund's scoreboard (Table 1.2), the world's general government gross debt (which includes not only national debt, but also regional/local obligations) as a percentage of GDP leaped from 83.6 percent in 2019 (recall the much lower levels prior to the 2007-09 global economic disaster) to 98.6 percent in 2020, with 2021's height forecast at 97.8pc (and 2022's at 96.9pc).

For advanced economies, 2019's general government gross debt of 103.8 percent of GDP spiked to 122.7 percent in 2020; the IMF predicts 2021's will remain near that, at 121.6pc, with upcoming years from 2022 to 2026 hovering around 119.0, a still-mountainous elevation ("Fiscal Monitor"; 10/7/21; Table A7). For the United States alone, as federal stimulus spending ballooned, general government gross debt soared from 108.5 percent of GDP in 2019 to 133.9pc in 2020, with 2021's forecast at 133.3pc and 2022's at 130.7pc.

For “Emerging Market and Middle Income Economies” (Table A15), general government gross debt as a percentage of GDP has motored substantially higher from 2012’s 37.1 percent (China’s was 34.4pc of GDP that year). It expanded to 54.7pc in 2019 (China’s grew to 57.1pc), racing to 64.0pc in 2020 (China’s flew up to 66.3pc). The IMF predicts 2021’s emerging market government debt will grow only slightly, to 64.3 percent (China 68.9pc), with 2022’s edging up to 65.8pc (72.1pc for China). Its 2026 estimate is 69.8pc. The IMF clairvoyant declares that China’s government debt continues its steady climb, reaching 80.1pc in 2026.

Suppose government and corporate interest rates yields rise significantly. All else equal, that tends to put pressure on substantial debtors and corporate profitability.

US GOVERNMENT INTEREST RATE HISTORY AND STOCKS

The Duke of Gloucester concludes in Shakespeare’s Henry VI, Part II (Act II, Scene 4):
“Thus sometimes hath the brightest day a cloud;
And after summer evermore succeeds
Barren winter, with his wrathful ripping cold:
So cares abound, as seasons fleet.”

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Looking forward over the long run, United States Treasury yields probably will continue to rise. So will yields for government debt in Germany and other advanced nations. In general, yields of emerging market sovereign debt securities probably will keep climbing as well. US dollar-denominated corporate debt yields will ascend.

Increasing yields for this array of debt securities around the globe have led to an important top in (and probably are leading to bear trends for) the American stock battlefield and related advanced nation stock territories. Rising interest rates also led to a pinnacle in emerging marketplace stocks in general, and ongoing yield increases will continue to weaken them.

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Tapering (reduced buying) of UST and agency mortgage-backed securities by the Federal Reserve reduces demand for them, thus helping interest rates to increase. The Fed’s tapering program and its related preaching of impending Federal Funds increases foretell higher rates across the United States Treasury yield curve and elsewhere. Watch for tightening action by the European Central Bank and other central banks, not just the Fed. Ongoing yield repression by the Federal Reserve (its huge UST buying assists this) and other countries helped to delay substantial UST yield increases, despite the advent of notable consumer price inflation. Yet looking ahead, the worrisome inflation situation in the US and OECD nevertheless indicates that a future quest by leading central banks to significantly repress yields is doomed.

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A major yield increase trend in the United States Treasury marketplace (use the UST 10 year note as a benchmark) started with 3/9/20’s .31 percent bottom, which the lows at .54 pc on 4/21/20 at .54 pc and 8/6/20 at .50pc on 8/6/20 confirmed. An important interim UST 10 year note yield high was 3/30/21’s 1.77 percent. However, the UST 10 year note yield ascended sharply since 8/4/21’s 1.13pc low, breaking through its late March 2021 summit, reaching 1.97 percent on 2/8/22.

The German Bund's yield pattern in recent years broadly has resembled that of the UST 10 year note, even though it spent a long time beneath zero (negative yields). After reaching its early August 2021 valley, the Bund yield advanced to -.07 percent on 10/29/21. After a retreat to -40pc, the resurrection of the Bund yield has carried it into positive territory, touching .27 pc on 2/8/22.

	1Q20 Yield Bottom	**Interim Yield Spike**	**Spring 2020 Yield Low**	**Later 2020 Yield Low**	**1Q21 Yield High**	**Aug 21 Yield Low**
UST 10 Year	.31 pc (3/9/20)	1.27pc (3/19/20)	.54pc (4/21/20)	.50pc (8/6/20)	1.77pc (3/30/21)	1.13pc (8/4/21)
Ger Bund	-.91pc (3/9/20)	-.14 (3/19/20)	-.59 (5/5/20)	-.67 (11/4/20)	-.07 (5/19/21)	-.52pc (8/5/21)

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At times, perhaps increasing fears regarding the strength of the global economy will spark occasional "flights to quality" and buying of UST and thus reduce yields. Such searches for safe havens may be inspired by factors such as dramatic global equity declines, increased coronavirus worries, or soaring petroleum prices. However, looking forward over the long run, given current substantial inflation levels (and huge debt burdens in America and the advanced nations in general), United States Treasury yields probably will continue to rise. So will yields for government debt in Germany and other advanced nations. In general, yields of emerging marketplace sovereign debt securities probably will keep climbing as well. US dollar-denominated corporate debt yields will ascend.

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Convergence and divergence (lead/lag) patterns between marketplaces can change or transform, sometimes dramatically. Marketplace history does not necessarily repeat itself, either entirely or even partly. But marketplace history nevertheless provides guidance regarding the probabilities of future relationships.

"History on Stage: Marketplace Scenes" (8/9/17) and subsequent essays updating it (such as 3/9/21's "Truth and Consequences: Rising American Interest Rates", "Financial Marketplaces: Convergence and Divergence Stories" (4/6/21), and "American Inflation and Interest Rates: Painting Pictures" (5/4/21) emphasized: "Marketplace history need not repeat itself, either entirely or even partly. Yet many times over the past century, significantly increasing United States interest rates have preceded a noteworthy peak in key stock marketplace benchmarks such as the Dow Jones Industrial Average and S+P 500. The yield climb sometimes has occurred over a rather extended time span, and the arithmetical (basis point) change has not always been large."

The US Treasury marketplace has been an important standard for this analysis. The 10 year UST note is a key weathervane. In the worldwide global debt securities marketplace, yield climbs and declines in various other high-quality sovereign debt securities such as those of Germany often roughly parallel and thus confirm UST trends.

In first quarter 2020, the coronavirus problem and related economic weakness obviously inspired a hellish economic slump and a diabolical crash in the S+P 500 and other stock marketplaces (as well as price drops in many search for yield territories such corporate bonds. Yet keep in mind that before the coronavirus problem became increasingly severe during first quarter 2020, the UST 10 year note yield climbed from 1.43 percent on 9/3/19 to 1.97pc on 11/17/19 (1.95pc on

12/19/19; 1.90pc 1/9/20). The EEM emerging marketplace index peaked on 1/13/20 at 46.32, with the S+P 500's pinnacle not long thereafter, on 2/19/20 at 3394.

The current UST 10 year note yield not only borders its late 2019/early 2020 highs achieved just prior to the coronavirus pandemic and the first quarter 2020 S+P 500 peak. It also neighbors 12/18/08's worldwide economic crisis low at 2.04pc. The UST 10 year's decisive advance above this resistance probably will weaken the S+P 500 and related marketplaces further.

RISING INTEREST RATES: LOWER QUALITY US DEBT SECURITIES

Let's review United States corporate interest rates travels over the past two years. The rising corporate yield trend since summer 2021, when interpreted in the context of the UST 10 year note's similar pattern (and US and international inflation jumps), reflects the substantial probability of a major and sustained climb in overall global interest rates.

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"HYG" designates the iShares iBoxx US dollar-denominated "high yield" corporate bond ETF. "LQD" is the iShares iBoxx US dollar-denominated "investment grade" corporate bond ETF. The Moody's seasoned Baa corporate bond yield is based on bonds with maturities of 20 years and above.

	Early 2020 Price High/ Yield Low (date)	**Subsequent Price High/ Yield Low (date)**
HYG	88.53 (1/15/20); 88.49 (2/14/20)	88.16 (9/23/21)
LQD	134.53 (3/6/20)	139.38 (8/7/20)
Baa	3.29 percent (3/6/20)	3.11pc (12/31/20)

Recall the UST 10 year's 8/4/21 interim yield low at 1.13 percent. Note the rising yields in the HYG, LQD, and Baa since summer 2021.

	1Q20 Price Low	**Price High**	**Interim Price Low**	**Price High**	**Price Low**	**Summer 2021 (and Later) Price Highs/Yield Lows**
HYG	67.52 (3/23/20)	85.40 (7/31/20) 85.39 (9/2/20)	82.56 (9/24/20)	87.79 (2/12/21)	85.65 (3/19/21)	88.10 (7/7/21) 88.16 (9/23/21) 87.61 (11/8/21) 87.32 (12/27/21)
LQD	104.95 (3/19/20)	139.38 (8/7/20)	133.72 (10/30/20)	138.52 (11/30/20) 138.22 (12/31/20)	127.91 (3/18/21)	136.78 (8/4/21) 136.26 (9/14/21) 135.31 (11/9/21) 133.41 (12/28/21)

Baa	5.15pc (3/20/20)	3.12 (8/6/20)	3.52 (10/5/20)	3.11 (12/31/20)	3.88 (3/18/21)	3.15 (8/2/21) 3.15 (9/14/21) 3.13 (11/9/21) 3.16 (12/3/21)

The HYG's recent price low (yield high) is 2/4/22's 83.20, with that in the LQD 125.11 on 2/4/22. Significantly, these prices fall under the March 2021 depth. The Baa's yield high since summer 2021 is 2/8/22's 3.87 percent, thus bordering 3/18/21's 3.88pc crown.

Watch interest rate credit spread trends, such as those between high-quality and low quality sovereigns, or between high-grade sovereign debt and lower-quality corporate debt. Sharply widening credit spreads probably will be a danger signal warning of (confirming) weakness in key emerging stock marketplaces and the S+P 500. For the Baa less US Treasury 10 year spread, the 167 basis point differential on 11/8/21 represents the recent low. As of 2/7/22, it had widened to 193bp.

RISING EMERGING MARKETPLACE INTEREST RATES

"The thing that hath been, it is that which shall be; and that which is done is that which shall be done: and here is no new thing under the sun." Ecclesiastes 1:9 (King James Version)

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Investigate emerging marketplace sovereign and corporate debt arenas in greater detail and in the context of price trends for the S+P 500 and other stock marketplaces.

The "EMB" ETF, from iShares (BlackRock)/J.P. Morgan, offers exposure to United States dollar-denominated government bonds issued by emerging market countries. The EMB includes over 30 countries. The EMB is quoted in price terms, so falling prices reflect rising yields. "EMHY", the iShares J.P. Morgan emerging markets "high yield bond" ETF, tracks the investment results of an index composed of US dollar-denominated, emerging market high yield sovereign and corporate bonds.

Another iShares ETF product, "LEMB", tracks an index composed of local currency-denominated sovereign bonds issued by emerging market countries. "EMLC" is the VanEck J.P. Morgan emerging market local currency bond ETF; it tracks bonds issued by emerging market governments denominated in the issuer's local currency.

	Early 2020 Price High/ Yield Low (date)	**Subsequent Price High/ Yield Low (date)**
EMB	117.20 (2/21/20); 117.08 (3/4/20)	116.09 (1/4/21)
EMHY	48.12 (1/21/20); 47.99 (2/14/20)	46.73 (1/4/21)
LEMB	45.42 (12/18/19); 44.07 (1/21/20)	45.54 (1/4/21)
EMLC	34.08 (1/10/20); 33.14 (3/4/20)	33.52 (12/17/20)

Prices for both emerging marketplace stocks and emerging marketplace debt securities "in general" peaked in first quarter 2021. The price tops (yield bottoms) in key emerging marketplace interest rate instruments (around early January 2021) preceded mid-February 2021's summit in "overall" emerging marketplace equities. Emerging marketplace debt securities established interim price troughs in March 2021, and their prices thereafter rallied (yields fell) for several months. However, yields for those benchmark interest rate securities thereafter have climbed, and that has coincided with slumping prices for emerging marketplace stocks. Moreover, stocks for these developing nations have made a pattern of lower and lower interim highs since February 2021.

Significantly, and like emerging marketplace stocks in general (see the "EEM" ETF stock benchmark), prices for these emerging marketplace interest rate ETFs have not exceeded their first quarter 2021 (mid-December 2020 for the EMLC) pinnacles.

	1Q20 Price Low	**Price High**	**Interim Price Low**	**Price High**	**Price Low**	**Summer 2021 (and Later) Price Highs/Yield Lows**
EMB	85.00 (3/18/20)	114.65 (8/11/20)	109.20 (9/24/20)	116.09 (1/4/21)	106.70 (3/8/21)	113.64 (8/31/21) 111.08 (11/9/21) 109.70 (12/13/21) 108.73 (1/3/22)
EMHY	32.81 (3/19/20)	45.27 (9/3/20)	42.93 (9/24/20)	46.73 (1/4/21)	43.99 (3/8/21)	46.13 (6/11/21) 45.87 (8/31/21) 44.11 (10/27/21) 43.31 (12/13/21) 43.16 (12/30/21)
LEMB	34.53 (3/19/20)	42.79 (9/16/20)	41.21 (9/28/20)	45.54 (1/4/21)	42.15 (3/30/21)	44.59 (6/10/21) 43.82 (9/1/21) 42.22 (11/9/21) 40.76 (12/8/21)
EMLC	26.02 (3/20/20)	31.92 (7/27/20) 31.83 (9/16/20)	30.39 (9/28/20)	33.52 (12/17/20) 33.48 (1/4/21)	30.35 (3/30/21)	32.21 (6/9/21) 31.23 (8/31/21) 29.69 (11/9/21) 28.95 (12/23/21)

Importantly, recent price lows in these four emerging marketplace debt ETFs edged beneath their March 2021 troughs. The EMB's low was 103.66 on 1/18/22, the EMHY's 41.16 likewise

occurred that day. The LEMB's recent trough occurred on 12/20/21 at 38.33; the EMLC's low was 28.19 on 12/15/21. If prices for these four securities sustain their ventures underneath their March 2021 valleys, that probably will be bearish for both emerging marketplace stocks and the S+P 500.

Compare the timing of the late summer 2021 and November/December 2021 price drop off-points in these emerging marketplace debt battlefields with interim highs in the emerging stock marketplaces, including the EEM's 50.89 on 1/12/22. Rising yields in emerging marketplaces apparently helped to lead to emerging stock marketplace (EEM) highs. Note also the UST 10 year note's long run trend of rising yields since March 2020, and especially the advent of the stage beginning with early August 2021's 1.13pc. Compare these debt and EEM price and time relationships with the timing of the S+P 500's 1/4/22 peak at 4819.

This price convergence between emerging marketplace stock and debt securities probably will continue, and prices in both arenas will continue to decline.

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All else equal, rising interest rates (particularly in the US dollar domain), especially when linked with US dollar appreciation, increase burdens on emerging marketplace sovereign and corporate borrowers. The rally in the United States dollar over the past several months (see the Fed's H.10 real Broad Dollar Index) has helped to undermine prices for emerging marketplace dollar-denominated sovereign and corporate debt instruments, and thereby to weaken emerging marketplace stocks.

S+P 500 TRAVELS

In his epic poem "The Aeneid", Virgil declares: "To what extremes
Will you not drive the hearts of men, accurst
Hunger for gold! (Book III, lines 79-81)

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In recent years, low American interest rates have encouraged American corporate earnings gains and optimistic forecasts for future profits, and thus substantial price appreciation in the S+P 500. Sustained yield repression by the Fed and other central bankers not only helped to maintain low interest rates in the UST and similar advanced nation sovereign debt marketplaces, but also inspired congregations of investors and other buyers to eagerly search for yield in stocks and other appealing asset sectors. Thus, for example, mediocre or negative real return in the US Treasury marketplace cathedral relative to inflation motivated assorted investors (including many new believers/entrants) to purchase stocks, especially those represented by worthy benchmark such as the S+P 500. Based on a very long run historical perspective, many stock valuation measures indicate the S+P 500 is very high.

Stock marketplace prophets of profit nowadays consequently fear substantial inflation and significantly rising rates. They pray that worldwide interest rates in general and those in the United States in particular will not rise "too far", for that will risk severe damage to the blessed bull stock price trend and lofty equity prices.

Allegedly high valuations for a broad stock marketplace benchmark such as the S+P 500 (or marketplace sectors or individual equities) can remain high or become even higher. Proverbs and hymns proclaimed by bullish stock marketplace evangelists may proclaim that "this time is different"; a "new era" can develop, persist, and reasonably (rationally) justify high (even

seemingly exuberant) valuations. And substantial share buyback programs, new buy-side oriented entrants into stock marketplaces (as from Main Street as the coronavirus pandemic emerged and spread), recent and anticipated corporate earnings, and tax policies influence stock price levels and trends. A "buy and hold for the long run" attitude may become more prevalent as stock prices apparently inexorably ascend to heavenly heights. Also, the "free (readily available) supply" of stocks belonging to the S+P 500 (or in other indices) can fall.

However, consider the very substantial inflation over the past several months in America and elsewhere (and also substantial US and global indebtedness). Especially as key government and other interest rates march significantly higher or threaten to do so when stock valuations are very high, American and other stock prices probably become increasingly and significantly vulnerable to a price decline. In an era of rising interest rates, will corporate earnings turn out to be as high as many gurus currently predict?

The S+P 500's high, 1/4/22's 4819, probably was a major peak. If the S+P 500 manages to surpass January 2022's top, it probably will not do so by much. The S+P 500 descended rapidly to 4223 on 1/24/22, a 12.4 percent correction. The S+P 500 price probably will decline further and establish new lows beneath the January 2022 trough. The development of a bear trend (decline of at least 20 percent) also is probable.

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In recent decades, the economic (financial; business; commercial) world increasingly has become interconnected and thus globalized. Although the supply/demand situation can vary across equity marketplaces (and marketplace sectors and individual stocks within them), broad stock benchmarks for advanced nations (such as Germany, the United Kingdom, and Japan) generally have followed (moved together with) United States stock trends. Let's review the S+P 500 since its early first quarter 2020 peak and March 2020's major bottom.

	1Q 2020 High (date)	**1Q 2020 Low (date)**	**Interim High**	**Take-Off Low (date)**	**Subsequent High (to date)**
S+P 500	3394 (2/19/20)	2192 (3/23/20)	3588 (9/2/20)	3209 (9/24/20)	4819 (1/4/22)
	3137 (3/3/20)			3234 (10/30/20)	

The awesome 1/4/22 high skyrocketed 119.8 percent from 3/23/20's depth, and it blasts above 2/19/20's peak by 42.0 percent.

The S+P 500's glorious advance after end-October 2020 had a later acceleration point as well, 7/19/21's 4233 and 10/4/21's 4279 trough. Compare 1/24/22's 4223 low.

A five percent dip from 1/4/22's 4819 equals 4578. Many define a "correction" in stocks as a decline of ten percent or more from a notable high, with a bear move a collapse of at least twenty percent from a peak. A ten percent decline from 4819 gives 4337. The S+P 500's tumble to 4223 on 1/24/22 was 12.4 percent. A twenty percent collapse from 4819 equals 3855.

A sustained correction in the S+P 500 of greater than 10 percent, and especially a bear move of at least 20 percent, probably will devastate emerging stock marketplace prices and propel sovereign and corporate debt yields of many emerging marketplaces higher.

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At present, the Federal Reserve probably will not worry much about a correction of around ten percent in the S+P 500, though it may utter soothing orations to steady prices. However, history warns that a US stock marketplace decline of about twenty percent, and especially a sustained move beneath the twenty percent stock bear marketplace threshold (and if an economic downturn loomed), may induce strategic Federal Reserve easing actions (including resuming money printing) to support stocks (and assist the economy). However, the Fed is not almighty, so its easing actions may have limited effect (at least for quite some time), especially if substantial inflation and notably higher interest rates appear likely to persist.

Besides, the Fed already has enormously inflated its own balance sheet. So how much ability in practice does it have nowadays (in a world of high and rising inflation) to maneuver in order to protect equities and the economy by engagement in schemes such as further rounds of money printing (quantitative easing)? At present, might such Fed behavior further encourage inflationary forces, eventually boost yields higher (even UST ones), and diminish economic confidence?

SUBMERGING: EMERGING MARKETPLACE STOCKS

The Notorious B.I.G. "Mo Money Mo Problems" song raps:
"What's goin on?
I don't know what they want from me
It's like the more money we come across
The more problems we see".

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Rising yields in important emerging marketplace government (and corporate) instruments, as well as rising rates in the United States, helped to create a key peak in February 2021 for emerging marketplace stocks "in general". The higher yield pattern since around August 2021 in both advanced and emerging marketplace debt fields produced further falls in emerging marketplace stocks. Looking ahead, emerging marketplace stocks probably will continue to decline.

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"EEM" is the iShares MSCI Emerging Stock Markets ETF. It covers over 800 large and mid-size companies. Despite Mainland China's global economic power, most classify it as an emerging market nation from the economic perspective. It possesses a 32.3 percent portion of the EEM (see BlackRock's iShares website, 12/31/21).

	1Q 2020 High (date)	**1Q 2020 Low (date)**	**Interim High**	**Take-Off Low (date)**	**Subsequent Highs (to date)**
EEM	46.32 (1/13/20) 44.84 (2/12/20) 40.83 (3/3/20)	30.10 (3/23/20)	45.56 (8/28/20)	42.29 (9/25/20) 44.41 (10/30/20)	58.29 (2/16/21) 56.18 (6/1/21) 55.62 (6/28/21) 53.58 (9/7/21) 52.62 (10/20/21)

52.14
(11/15/21)
50.89
(1/12/22)

Emerging marketplace stocks, as they began to decline in mid-January 2020, "led" the decline in the S+P 500 and other advanced nation stock playgrounds. Note also the similarity in the EEM's drop-off points in mid-February 2020 and early March 2020 to those in the S+P 500.

Since February 2021, highlight the pattern of lower interim tops in the EEM. This increasingly feeble EEM price picture substantially contrasted with and thus diverged from the S+P 500's magnificent bull move after February 2021.

Supply-demand considerations of emerging stock marketplaces of course vary to some extent from those of advanced nations.

Yet despite the price trend divergence between the S+P 500 and the EEM from around mid-February 2021 through end December 2021, emerging marketplace stock price and time patterns since the last years of the Goldilocks Era and 2007-09's ensuing global economic crisis generally have converged (traded "together") with those of the S+P 500. For example, the EEM's Goldilocks Era major high occurred 10/31/07 at 55.83. Compare the neighboring timing of the Goldilocks Era's S+P 500 summit, 10/11/07's 1576. Also, emerging/developing nations (especially China) are very important to the intertwined international economy.

Moreover, note the price and time convergence of the EEM's interim top at 50.89 on 1/12/22 and the S+P 500's 1/4/22 summit at 4819. The EEM's low since 2/16/21's summit is 46.66, attained on 1/28/22, representing a 20.0 percent drop from 2/16/21's peak. The S+P 500 reached a trough after a bloody 12.4 percent decline only a few days before the EEM's January 2022 valley, on 1/24/22 at 4223. Thus looking forward, the S+P 500 and EEM probably will continue to trade "together". Rising global yields and sliding emerging stock marketplace prices probably are leading the S+P 500 downhill.

China's Shanghai Composite Index's price and time picture resembles that of the EEM.

	1Q 2020 High (date)	**1Q 2020 Low (date)**	**Interim High**	**Take-Off Low (date)**	**Subsequent Highs (to date)**
Shang Comp	3127 (1/14/20)	2647 (3/19/20)	3459 (7/13/20)	3202 (9/30/20)	3732 (2/18/21)
			3457 (9/3/20)	3210 (11/2/20)	3724 (9/14/21)
					3709 (12/13/21)
					3652 (1/4/22)

The Shanghai Composite fell 11.2 percent from 2/18/21's high to 7/28/21's 3313, which the 3356 low on 1/28/22 neighbors.

THE US DOLLAR THEATER

"Forewarned, forearmed." Benjamin Franklin, "Poor Richard's Almanac" (1736)

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History shows that significant trends for the United States dollar in relationship to those in American stock and interest rate marketplaces (and other important international equity and debt realms) are complex and often change. However, let's glance at a US dollar move in the context of the S+P 500's first quarter 2020 high and subsequent decline. These US dollar adventures connect not only to the S+P 500, but also to related price pinnacles and falls in other key stock arenas and "search for yield/return" debt marketplaces (such as the EMB).

The Federal Reserve (H.10) releases a real as well as a nominal "Broad Dollar Index" (including both goods and services). The US real "Broad Dollar Index" is a monthly average (January 2006=100; 2/1/22 latest release). The Fed's nominal Broad Dollar Index release provides daily data (2/7/22 latest release, 2/4/22 most recent data point).

The real Broad Dollar Index ("BDI") started a major bull appreciation from July 2011's bottom at 83.9. The rally, though it had various twists and turns, persisted for almost ten years. The real BDI peaked in April 2020 at 113.4.

The United States dollar sometime in early 2020 probably became "too strong" for many emerging marketplace sovereign (and emerging marketplace corporate) issuers of dollar-denominated debt needing to repay their dollar obligations. This probably assisted yield increases in (price falls for) not only for such emerging marketplace sovereign (and corporate) debt instruments, but also yield climbs in "related" relatively low quality sovereign and other corporate debt around the globe.

Note the significant run up in the real BDI in the final stage of its bull trend from February 2020's 107.8 to March 2020's 111.8 and April 2020's 113.4. But the real BDI, as it is a monthly average, does not tell the whole story of the final stage in the US dollar's appreciation and its interrelation with trends in international securities domains. The nominal BDI on 2/19/20, the day of the S+P 500's peak, was 116.8, close to its 3/3/20 height (it started calendar 2020 with 1/2/20's 115.0). Recall the nominal BDI's sharp appreciation (rally) in March 2020. From 3/3/20's 116.5 (the same day as the critical 3137 drop off point for the S+P 500), it blasted up to 126.1 on 3/23/20, an 8.2 percent leap in only 20 days. This US dollar spike probably led to (contributed to; confirmed) the S+P 500 and many other marketplace price crashes. The S+P 500 bottomed on 3/23/20 (the same day as the nominal Broad Dollar Index) at 2192. Keep in mind the timing of the price trends in other stock marketplaces as well as in emerging marketplace sovereign debt and US dollar-denominated corporate securities.

What does a more current horizon on the US dollar unveil? The real BDI fell to 103.2 in January 2021 (compare March 2009's global economic disaster pinnacle at 101.6). The high since then is December 2021's 110.3, a noteworthy appreciation of 6.9 percent. In addition, from a long run historical perspective, December 2021's real Broad Dollar Index level is rather strong, as is January 2022's 109.8. This represents a risk for emerging marketplace sovereign and corporate debtors, especially for those with substantial US dollar-denominated debt, and more especially within an overall trend of rising interest rates (for dollar debt securities).

.	1Q20 <u>High (date)</u>	Key Low <u>Level (date)</u>	Percent Fall <u>from 1Q20 High</u>	Next <u>High (date)</u>	PC Rally <u>from 2021 Low</u>
Nominal Broad Dollar Index	126.1 (3/23/20)	110.9 (1/6/21) 110.5 (6/1/21)	12.4pc	116.6 (11/29/21) 116.4 (12/15/21)	5.5pc

On 2/4/21, the nominal BDI was 115.2, fairly close to its end November 2021 high.

The price appreciation in the real and nominal Broad Dollar Indices since around January (or June) 2021 up to end November/December 2021 is not as substantial or rapid as the 8.2 percent rally (using the nominal BDI) during March 2020. However, when interpreted alongside rising yield trends in the UST 10 year note as well as in emerging marketplace sovereign debt and US dollar-denominated corporate securities, this BDI strength (bull move) probably has assisted weakness in emerging marketplace stocks, and it also warns of significant price falls in the S+P 500 and various advanced nation stock marketplaces linked to it.

COMMODITIES: INVESTMENT AND INFLATION

In Alfred Hitchcock's film, "Lifeboat", Connie Porter asks the skipper: "All right, Commissar, what's the course?"

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Although commodities do not pay dividends or interest, many marketplace wizards nevertheless label commodities "in general" as an asset class, suitable instruments for "investment".

Like stocks as well as low grade debt securities around the globe, and likewise assisted by yield repression (with UST yields low relative to inflation) and gigantic money printing, the commodities parish in recent years became a place in which investors and others seeking good (acceptable, sufficient) returns (yields) via rising prices enthusiastically foraged and bought.

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Over at least the past dozen years, price and time trends for commodities in general roughly have moved alongside those of the S+P 500 (and emerging stock marketplaces). Also, commodities in general enjoyed bull moves alongside the S+P 500 since their major bottom in first half 2020. During these time spans, the petroleum complex has tended to travel in a similar fashion to the S+P 500. So long run history and the trend since first half 2020 indicates that the S+P 500 and commodities in general probably will continue to trade "together" and converge over the long run. In general, a notable slump in commodity prices probably will occur fairly close in time (confirm) a fall in the S+P 500 and other stock territories.

The following table enlists the S&P broad GSCI index as a guide to commodities in general, although it is heavily petroleum-weighted. ICE Brent/North Sea crude oil is the nearest futures continuation contract. The explosive rallies in the GSCI and petroleum have helped to fuel consumer price inflation in the US (see the CPI-U), the OECD, and elsewhere. In regard to the recent accelerations in the US and OECD's consumer price measures since end 2020, note the timing of the November 2020 take-off lows for the GSCI and Brent/North Sea crude oil.

.	1Q 2020 High (date)	1Q 2020 Low (date)	Take-Off Low (date)	Subsequent High (to date)
Broad S&P GSCI	453.2 (1/8/20)	218.0 (4/21/20)	333.1 (11/2/20)	646.4 (2/4/22)
ICE Brent/ North Sea Crude Oil	7175 (1/8/20) 6000 (2/20/20) 5390 (3/3/20)	1598 (4/22/20)	3574 (11/2/20)	9370 (2/4/22)

Nevertheless, significant price divergence (notable leads and lags) can exist between commodities in general and the S+P 500. For example, the 2007-09 global economic disaster's major high in stocks preceded those in the GSCI and petroleum complex by many months. At the dawn of the 2007-09 crisis, the S+P 500 peaked on 10/11/07 at 1576. But trends for the broad GSCI and petroleum complex diverged from that of the S+P 500 for quite a while. The broad GSCI peaked on 7/3/08 at 894. ICE Brent/North Sea crude oil attained its pinnacle on 7/11/08 at 14750. (However, note that these July 2008 major highs in the GSCI and petroleum occurred not long after the S+P 500's final top, 5/19/08's 1440.)

Nowadays, players should not overlook 2007-08's stock and commodities marketplace divergence experience. The various commodities of course have their own supply/demand profiles, and that of the petroleum complex is particularly important for the overall commodities story. The current petroleum supply/demand situation warns of the potential for a substantial further upward move in the petroleum complex, and thus substantial divergence between it (and probably commodities in general) and the S+P 500.

The crude oil output of OPEC and its allies has resulted in substantial petroleum inventory drawdowns during the economic recovery following the coronavirus shock. Spare production capacity within OPEC and elsewhere probably is fairly low. Significant concerns about the Ukraine/Russia crisis probably have encouraged more of a just-in-case oil inventory management approach and thus reduced readily available inventory ("free supply"). The fairly substantial net noncommercial long position in the petroleum complex (see the CFTC's Commitments of Traders) probably has cut free supply to some extent. Some people may be purchasing commodities in general and oil in particular (especially via futures, forwards, and options) as an "inflation hedge" to help protect the overall value of their portfolio (against price declines in its stock and interest rate assets).

However, petroleum prices already have substantially responded to the Ukraine/Russia dispute and invasion risk. Will a direct Russian move into the Ukraine induce a major boost in oil production by Saudi Arabia and a major release in global strategic petroleum reserves? Will even higher oil prices help to ignite a global recession, and thus cut oil demand? There also has been progress in regard to the Iran nuclear problem; a solution eventually would result in increased Iranian petroleum production. In any event, a further sharp rally in petroleum probably will be bearish for the S+P 500.

The early February 2022 highs in the broad S&P GSCI and the petroleum complex occurred only a month after the S+P 500's 1/4/22 top. In the context of long run history, a divergence of about a month is not yet sufficiently long in duration to label it as significant. On balance, the trends of

commodities in general (led by petroleum) probably will continue their long run pattern of convergence with the S+P 500. Although it is a challenging call, petroleum prices and the S+P 500 probably will fall together.

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Price levels and patterns for oil and other commodities of course influence economic and political views on and conversations about “inflation in general”. And price trends for petroleum and other commodities can intertwine with and affect trends in other consumer (and producer) price domains and diverse economic and financial marketplaces.

Let’s revisit the United States Consumer Price Index (CPI-U, Table 1; Bureau of Labor Statistics; 1/12/22, next release 2/10/22). Recall that for the “all items” index, the December 2021 CPI-U increased a substantial 7.0 percent year-on-year. Many observers underline that “energy” inflation grew a massive 29.3 percent over that span.

However, the energy category possesses only a 7.5 percent share of the “all items” index. Focus on the “all items less food and energy” domain, which represents 78.5 percent of the CPI-U. Significant “inflation” is not coming merely from the petroleum (or energy) sector. The inflation sources are widespread. In December 2021, the all items less food and energy increased 5.5 percent year-on-year. This 5.5 percent inflation figure obviously significantly exceeds the current US Treasury 10 year note yield around 2.00 percent. That 3.5 percentage point differential warns of further ascents in US Treasury yields.

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