MARKETPLACE TRENDS AND ENTANGLEMENTS
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Bob Dylan says in "The Times They Are A-Changin'":
"There's a battle outside and it is ragin'
It'll soon shake your windows and rattle your walls
For the times they are a-changin'"

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CONCLUSION

Marketplace history of course is not marketplace destiny, whether for one financial realm or the relationships between assorted domains. Although traditions and the analytical time horizon and the scope of allegedly relevant variables remain critical, the cultural past in its major fields such as economics and politics need not repeat itself, either completely or even partly. Yet sometimes current and potential economic and other cultural situations apparently manifest sufficient important similarities to "the past" so that many observers can perceive patterns helping to explain "the present" and to forecast future probabilities. Thus from the standpoint of many subjective perspectives, marketplace history (like other history) often does recur to a substantial extent. Such alleged historical similarity, as it is not objective (scientific), also consequently permits a great variety of competitive storytelling about it.

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The 2022 landscape for the United States dollar, the US Treasury 10 year note, commodities "in general", and the S+P 500 resembles that of around early 2020. The United States dollar currently hints that it may have established an important peak or that it will soon do so. The real Broad Dollar Index's height (see the Federal Reserve Board, H.10) borders its March/April 2020 highs. Arguably commodities in general began a notable decline in early 2022. Using the broad S&P GSCI as a benchmark, the spot/physical/cash (as well as the nearest futures continuation) commodities complex (including the key petroleum arena) peaked in early January 2020 alongside a strengthening US dollar. A pattern of increasing US Treasury yields (take the 10 year note as the signpost) preceded the early 2020 stock pinnacles (S+P 500 on 2/19/20; emerging marketplaces in general on 1/13/20) as well as the commodities one. Marketplace chronicles unveil a significant yield increase in the UST 10 year note (and other important debt security benchmarks) prior to (and following) the S+P 500's very significant high (perhaps a major top) 1/4/22 at 4819. As in 2020, the 2022 highs in stocks and commodities entangled with both rising yields and a strong dollar.

In summary, although their future levels and trends admittedly are cloudy and uncertain, what are probable trends for these marketplaces? The United States real Broad Dollar Index probably has attained its pinnacle or will do so in the near future. Commodities in general (spot; nearest futures basis) probably made a major high in early March 2022 and will continue to retreat. Although it is a difficult call, the S+P 500 likely peaked in January 2022, and it probably will venture beneath late February 2022's 4115 low. Over the long run, given the American (and global) inflation and debt situation, the yield for the US Treasury 10 year note will ascend above its recent high around 2.55 percent, although occasional "flights to quality" and thus interim yield declines may emerge.

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Arguments in marketplaces and elsewhere in cultural life that "this time is different" are inescapable and often persuasive. Of course the coronavirus pandemic played a major role in the

first quarter 2020 collapse in global stocks and commodities. However, the rising interest rates and strong dollar variables still played an important part in those 2020 marketplace declines. And the American and international inflation and debt troubles of 2022 ("nowadays") far exceed those existing around January 2020. The Russian invasion of Ukraine obviously makes aspects of the recent commodities situation different from 2020; global petroleum prices, for example, though "high" prior to the Russia/Ukraine conflict, probably would not have skyrocketed in its absence. And in regard to historic and potential future marketplace relationships and related risk assessments, we should not forget 2007-09, the ending of the Goldilocks Era and its dismal aftermath, the global economic disaster. The S+P 500's summit (October 2007) diverged for several months from the peak in commodities in general (July 2008), although the trends of those two financial sectors thereafter converged. Also, as US and other stocks began their terrifying descent in spring 2008 until March 2009, the dollar rallied.

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Previous essays discussing key stock, interest rate, currency, and commodity marketplaces and their relationships, as well as the political scene, include "Marketplace Relationships: Life During Wartime" (3/7/22); "Paradise Lost: the Departure of Low Interest Rates" (2/9/22); "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).

THE US DOLLAR: TWISTS AND TURNS

Many marketplace phenomena and their relationships, as well as their implications, often appear unclear or ambiguous. The New Testament states in 1 Corinthians 13:12: "For now we see through a glass, darkly…."

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History reveals complicated and dynamic relationships between the United States dollar, and American stock and interest rate marketplaces (and other important global equity and debt battlefields) and commodities arenas. Convergence and divergence (lead/lag) patterns between marketplaces and other "economic" phenomena can change or transform, sometimes dramatically.

Recall that during the global economic crisis of 2007-09, America's real Broad Dollar Index (Federal Reserve, H.10) rallied from a low at 86.8 in April 2008 (87.2 May 2008) to 101.6 in March 2009. The US dollar rally coincided with the S+P 500's drop from its important 5/19/08 interim top at 1440 (S+P 500 peak occurred 10/11/07 at 1586) and its major bottom at 667 on 3/6/09. Thus back then, a strengthening dollar paralleled a big stock marketplace slump.

However, guidelines such as "a weak (weakening) US dollar equals (leads to; confirms) strong (strengthening) American stocks" and "strong (appreciating) US dollar means feebler American stocks" are not always true in practice. Numerous other variables matter and therefore influence financial fields and their interrelationships.

Thus a strong (bullish; high-priced) S+P 500 can associate with a lofty (bullish) dollar. One aspect of such a scenario may involve central bankers around the globe (not just the Fed) repressing policy interest rate levels (and thus government debt yields) relative to inflation. In a low or negative real return from government debt securities environment, investors and other hunt-for yield investors enthusiastically search for yield (adequate return) in stocks, lower quality

sovereign and corporate debt, and even commodities (use the broad S&P GSCI as the weathervane for commodities in general). Given their size and substantial market share, dollar-denominated securities are critical destinations for such yield-hunters; also, much of the world commodity trade occurs in dollars.

Alternatively, a peak in the S+P 500 or commodities (or both) and their subsequent weakening can interconnect with an "overly strong" US dollar, depreciation in the US dollar from an important height, or both. A "too high" US dollar can help to spark significant declines in the S+P 500, and the US dollar and stocks even may fall "together" in bear slumps. Imagine widespread central bank tightening measures involving a notable actual or highly probable sustained boost in interest rates (particularly real yields).

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Assume a long-running trend of a strong dollar (use the Fed's Broad Dollar Indices as the benchmarks) alongside a bullish pattern for the S+P 500 (and commodities in general) exists, and that the dollar finally has reached a historically rather elevated height, so that its appreciation probably has made it "too strong" (for it to easily sustain that lofty height). Thus the emergence of noteworthy weakness in the S+P 500 (or commodities, or both) can confirm the existence of an overly strong US dollar; the very strong dollar thus has helped lead to declines in stocks and commodities in general. Recall the early months of calendar 2020. Also, the US dollar eventually can weaken from its lofty height, as it did after March/April 2020.

With calendar 2020 in mind, calendar 2022 history for the dollar offers a warning sign that the bullish trends for stocks and commodities since their spring 2020 lows have ended. And the long run rise in US Treasury interest rate (and other international yields) likewise nowadays provides a related danger signal to stocks and commodities.

The nominal Broad Dollar Index made an important high at 117.7 on 3/8/22. Significantly, the broad S&P GSCI's high occurred 3/8/22 at 853.3. ICE Brent/North Sea crude oil's (nearest futures continuation) pinnacle in its astonishing climb occurred on 3/7/22 at 13913. COMEX copper (nearest futures) attained its top at 5.010 on 3/7/22. Note also the 3/7/22 timing for CBT wheat's spike high of 1425. These various commodity tops occurred in "Russia (or) Ukraine related-commodities" (for example, Russia is a big oil exporter, Ukraine a key grain exporter).

According to the NYTimes (3/4/22, ppB1, 4), America and its comrades "have weaponized the most powerful nonmilitary tool they have available: the global financial system." For example, their arsenal of sanctions froze billions of dollars of Russian assets held by their own financial institutions and removed Russian banks from SWIFT, the messaging system that enables international payments. The widespread imposition of assorted sanctions (note the oil embargo as well) on Russia by America and its allies after the Russian invasion probably assisted the stage in the dollar rally up to its early March 2022 high as well as the frantic price spike in many commodity marketplaces around then.

Russia is not a major United States trading partner. However, the Russian Ruble's cross rate trend and the timing of its recent low against the US dollar is a relevant variable in assessing whether the US real Broad Dollar Index recently became "too strong" (and probably will weaken) and whether commodities in general and the S+P 500 established major tops.

The Ruble attained a critical low around two years ago, on 3/18/20 at 82.90. That critical Ruble trough was challenged thereafter by a low on 11/2/20 (at 80.95) and by 80.41's valley on 1/26/22, but the mighty dollar did not destroy that resistance until it rallied just after the Russian invasion

of Ukraine on 2/24/22. The Ruble made an interim high against the dollar on 2/10/22 at 74.26. After an initial low near 90.00 on 2/24/22, and a minor high at 80.97 on 2/25/22, the Ruble was massacred, falling about 107.7 percent from 2/10/22's elevation to 154.25 on 3/7/22. Since 3/7/22, the Ruble has rallied sharply.

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Let's review US dollar history in greater detail to enhance the perspective on its lofty heights for early 2020 and late calendar 2021/early 2022. 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; 4/1/22 latest release). The Fed's nominal Broad Dollar Index release provides daily data (4/4/22 latest release, 4/1/22 most recent data point).

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

Note the significant run up in the real BDI in the final stage of its bull trend from February 2020's 107.9 to March 2020's 111.8 and April 2020's 113.4. For the entire 2006 to the present time span, April 2020's elevation is the high. It also exceeds December 2016's lofty top at 110.0. Thus the April 2020 height represents a very (and probably too) strong dollar.

But the real BDI, as it is a monthly average, does not tell the whole story of the last chapter in that US dollar 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 at 3394, 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 high) at 2192. Recall the timing of the price trends in other stock marketplaces as well as in emerging marketplace sovereign debt and US dollar-denominated corporate securities.

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What do the following and current horizons on the US dollar reveal? Dollar depreciation ensued for a while. The real BDI fell to 103.2 in January 2021 (compare March 2009's global economic disaster pinnacle at 101.6). However, the dollar's bullish climb resumed, with the high since then March 2022's 111.4, a noteworthy appreciation of 7.9 percent. In addition, from a long run historical perspective, March 2022's real Broad Dollar Index level is very strong, and arguably "too high". It neighbors the April 2020 pinnacle and exceeds December 2016's summit.

This strengthening US dollar pattern and the current high BDI elevation represent a fearsome risk for emerging marketplace sovereign and corporate debtors, particularly for those with substantial US dollar-denominated debt, and more especially within an overall trend of rising interest rates for dollar (and other) debt securities. The ongoing weakening trend in emerging stock marketplaces since February 2021 partly reflects this noteworthy dollar advance. In part due to the interconnections of global stock and other financial marketplaces, especially given a trend of increasing worldwide interest rates, these factors eventually encourage declines in the S+P 500.

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.	1Q20 High (date)	Key Low Level (date)	Percent Fall from 1Q20 High	Next High (date)	PC Rally from 2021 Low
Nominal Broad Dollar Index	126.1 (3/23/20)	110.9 (1/6/21) 110.5 (6/1/21)	12.4pc	117.7 (3/8/22)	6.5pc

The nominal Broad Dollar Index recently broke through its 11/29/21 minor top at 116.6, attaining 117.7 on 3/8/22. The price appreciation in the real and nominal Broad Dollar Indices since around January (June) 2021 up to March 2022 is comparable in distance terms, though not as fast from the speed parameter, 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 not only assisted weakness in emerging marketplace stocks, but it also warned of significant price falls in the S+P 500 and various advanced nation stock marketplaces linked to it. The still-high BDI level (4/1/22's close was 115.6) probably remains a bearish omen for emerging marketplace stocks and the S+P 500 as well as commodities in general.

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Did other currencies in addition to the Ruble make lows against the dollar in early March 2022? The currency cross rate against the US dollar for several important US trading partners did. Following the Russian invasion of Ukraine, the Euro FX fell from 2/24/22's 1.131 height to 3/7/22's 1.081, not far from its 3/23/20 bottom at 1.064. The Mexican Peso has rallied since 3/8/22's trough at 21.47; the Canadian Dollar's low against the US dollar was 3/8/22's 1.290.

However, monitor other currencies as well. The British Pound holds slightly above its 3/15/22 trough at 1.300, and the Japanese Yen's cross low against the dollar to date occurred even later, on 3/28/22 at 125.1. The Chinese Renminbi has appreciated against the dollar for quite some time; its recent high was 2/28/22's 6.304. A resumed and sustained Renminbi rally from its interim lows at 6.386 (3/15/22) and 6.387 (3/28/22) would help to push the Broad Dollar Indices downhill.

A feeble US dollar does not mandate high gold prices. COMEX gold's high to date occurred on 3/8/22 at 2072, alongside peaks in the nominal Broad Dollar Index and assorted commodities.

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Over the long run, does recent America's sanctions regime against Russia encourage some nations to diversify away from the dollar as a reserve or trading currency, thus assisting long run dollar depreciation? America's substantial inflation, long run public debt problems, and ongoing wide-ranging cultural divisions also may make dollar-denominated securities holdings (especially in an era of rising US Treasury yields) relatively unappealing to many governments, Wall Street, and Main Street players.

COMMODITIES: CONVERGENCE VERSUS DIVERGENCE

Not long after July 2008's major peak in crude oil prices, the European Central Bank President, Jean-Claude Trichet, declared that "predictions of the future prices of commodities are probably the most difficult exercise you can imagine." ("Introductory Remarks with Q&A", 8/7/08)

The Doors sing in “Roadhouse Blues”: “The future’s uncertain and the end is always near.”

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The various commodities of course have their own supply/demand profiles. That of the petroleum complex often is particularly important for conversations regarding the “overall” commodities situation and trend.

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The following table covering first quarter 2020 to the present enlists the S&P broad GSCI index as a guide to commodities in general, although it is heavily petroleum-weighted. ICE Brent/North Sea and NYMEX crude oil are the nearest futures continuation contracts. The huge 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 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 and NYMEX crude oil (nearest futures continuation).

Regarding trends for the commodities complex going forward, note the similar timing of their early March 2022 peaks in the context of the nominal Broad Dollar Index 3/8/22 high at 117.7.

.	**1Q 2020 High (date)**	**1Q 2020 Low (date)**	**Nov 2020 Take-Off Low (date)**	**Recent Take-Off Points**	**High (to date)**
Broad S&P GSCI	453.2 (1/8/20)	218.0 (4/21/20)	333.1 (11/2/20)	509.1 (12/2/21) 522.3 (12/20/21) 595.2 (1/24/22) 627.7 (2/9/22) 632.1 (2/18/22) 648.0 (2/25/22)	853.3 (3/8/22)

.	**1Q 2020 High (date)**	**1Q 2020 Low (date)**	**Nov 2020 Take-Off Low (date)**	**Recent Take-Off Points**	**High (to date)**
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)	6572 (12/2/21) 6928 (12/20/21) 8504 (1/24/22) 9012 (2/18/22) 9600 (2/25/22)	13913 (3/7/22)

.	1Q 2020 High (date)	1Q 2020 Low (date)	Nov 2020 Take-Off Low (date)	Recent Take-Off Points	High (to date)
NYMEX Crude Oil	6565 (1/8/20) 5450 (2/20/20) 4866 (3/3/20)	-4032 (4/20/20)	3364 (11/2/20)	6243 (12/2/21) 6604 (12/20/21) 8190 (1/24/22) 89.03 (2/18/22) 9006 (2/25/22)	13050 (3/7/22)

[NYMEX RBOB/gasoline (nearest futures) peaked on 3/7/22 at 3.890; NYMEX diesel's crown occurred 3/9/22 at 4.671.]

				Recent Take-Off Points	High (to date)
NYMEX Intramarket Crude Oil Spread (June 2022 contract price less June 2023 contract price)				242 (12/3/21) 777 (1/24/22) 894 (2/18/22) 999 (2/24/22) 1248 (3/1/22)	2758 (3/9/22)

The broad GSCI collapsed 20.4 percent from its 3/8/22 top to 3/15/22's 679.3. Its subsequent high is 3/24/22's 789.7. Brent/North Sea crude oil cratered 30.3 percent to 9693 on 3/16/22; 3/24/22's 12374 is the following high. NYMEX crude oil plummeted 28.3pc to 3/15/22's 9353. Its high thereafter is 3/24/22's 11664. The explosive increase in the backwardation (nearby month higher than distant month) in the NYMEX crude oil June 2022 less June 2023 intramarket crude oil spread since late 2021 was amazing, as was the absolute arithmetic level achieved on 3/9/22. After a bloody fall to 3/16/22's 1247 trough, this intramarket crude oil spread likewise rallied, reaching a lower interim high on 3/24/22 at 2461. However, that spread has since tumbled sharply lower.

Given the very high commodity price levels for early March 2022 from the long run historical perspective, it is unlikely that a bear marketplace trend finished in only one week. Keep in view the recent oil sales strategies by the US and others from their strategic petroleum reserves. And all else equal, over the long run, very elevated oil prices tend to encourage incremental production and diminish demand. Will there be a successful resolution of the Iran nuclear situation and thereby increased supplies from that nation?

In times where supply interruption fears prevail, many commodity inventory holders choose to hold some extra supply (increase coverage) "just-in-case" (as opposed to low inventory level needs of a "just-in-time" attitude). The explosive price spike and subsequent rapid and substantial price drop in petroleum and many other commodities evidences that the global

supply/demand and inventory picture for commodities briefly entered a "have-to-have" ("buy at any price") situation, and thereby probably enabled the establishment of an extraordinary yet nevertheless final price peak. The behavior of the NYMEX intramarket June 2022 less June 2023 crude oil spread (and the May 2022 less July 2022 CBT wheat spread) confirms this viewpoint.

Venture back about two years ago to 2020 regarding the issue of historically massive intramarket crude oil spread moves and related "extreme" spread levels in the context of assessing current and predicting future trends for outright (flat) price petroleum trends. As NYMEX crude oil plummeted in its horrific bear market trend of first quarter 2020, a shocking mammoth contango developed in the NYMEX intramarket crude oil spread for December 2020 less December 2021, with the December 2020 contract price slumping to about six dollars per barrel beneath the December contract 2021 price on 4/21/20 (around the date of the huge negative price for nearest futures continuation contract). Underscore that a major bull marketplace commenced after the huge negative price level in NYMEX crude oil (nearest futures continuation) and that awesome contango. As the 2022 pattern for NYMEX crude oil (nearest futures) and a key intramarket spread (lofty price, extreme backwardation) is the reverse of that of the 2020 situation, a notable bear marketplace for crude oil (nearest futures continuation basis) probably appeared recently.

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History indicates that often major highs (major bottoms) for commodities in general (broad S&P GSCI) and the S+P 500 occur "around" the same time. Over the long run, the S+P 500 (and emerging stock marketplaces) and commodities in general tend to trade "together" (in the same direction). Long run history indicates that the price trends for the S+P 500 and commodities in general probably converge eventually even if they diverge (have notable leads and lags) for several months.

The S+P 500's 1/4/22 pinnacle preceded that of the overall commodities complex by about two months. This represents relatively modest divergence between those domains from the time parameter. Recall that in 2007-08, the high in the S+P 500 time and price pattern diverged from and preceded that in commodities by several months. At the dawn of the 2007-09 global economic crisis, the S+P 500 peaked on 10/11/07 at 1576. 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.

Also nowadays in regard to the S+P 500 and commodities convergence front, given the interim retracement highs in late March 2022 in the broad GSCI and the petroleum complex, watch to see if the S+P 500 resumes its slide from 3/29/22's 4637 (or a somewhat higher level not long thereafter). A notable slump in commodity prices in general can confirm a fall in the S+P 500 and other stock territories.

[Of course in practice, not all individual commodities necessarily trade "together". For example, note the long-running bull trend in NYMEX natural gas deferred months such as the winter 2022/23 and later calendar month strips. The NYMEX natural gas winter 2022/23 strip price closed near 6.000 on 4/4/22, significantly above its 3/7/21 high at 5.318.]

INTEREST RATE HISTORYAND RELATIONSHIPS

"Face this world. Learn its ways, watch it, be careful of too hasty guesses at its meaning. In the end you will find clues to it all." H.G. Wells, "The Time Machine"

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"History on Stage: Marketplace Scenes" (8/9/17) and subsequent essays updating it such as "Marketplace Relationships: Life During Wartime" (3/7/22), "Truth and Consequences: Rising American Interest Rates" (3/9/21), "American Inflation and Interest Rates: Painting Pictures" (5/4/21), and "Paradise Lost: the Departure of Low Interest Rates" (2/9/22) 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 benchmark.

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In first quarter 2020, the advent of the international coronavirus pandemic probably was not the only important variable encouraging weakness in global stock and commodities marketplaces. Recall 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).

In addition to previous increases in US Treasury yields, 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. The pressure of rising worldwide yields going into early 2020 helped to undermine both advanced nation stock playgrounds such as the S+P 500 as well as emerging stock marketplaces.

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Substantial ongoing inflation and gigantic government debt are crucial variables generating the current rising United States and global interest rate outlook. Compare interest rate yields in America and elsewhere with consumer price index and similar measures.

Spotlight the leap upward 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 7.9 percent year-on-year in February 2022 and 7.5 percent year-on-year in January 2022, following the considerable 7.0 percent year-on-year climb in December 2021. February 2022's inflation figure represents the largest 12 month increase since the period ending in January 1982. 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 hefty year-on-year trend of between 5.0 and 5.4pc for the months of May through September 2021. Compare the paltry 1.4pc year-on-year rise in December 2020 (Bureau of Labor Statistics, 3/10/22; next release 4/12/22).

The OECD's January 2022 CPI (all items, Table 1; 3/3/22, next release 4/5/22) for the OECD countries rocketed upward 7.2 percent year-on-year, the highest rate in about 30 years (since February 1991), continuing the trend of higher consumer price inflation. December 2021's surged 6.6 percent year-on-year; November 2021's leaped 5.9 percent year-on-year. 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.

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. Monumental government deficit spending (fiscal stimulus) thereafter by many nations (demand for credit) further assists yield ascents.

In regard to the Fed's rhetoric (opinion) that longer run personal consumption expenditures (PCE) inflation belongs around two percent, a 50 basis point real return via the UST 10 year pushes its yield up to 2.50 percent, close to its recent high. But suppose CPI-U inflation seems likely to remain around seven percent year-on-year. Then the UST 10 year note yield probably will not border 2.50 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 more; a 50 basis point real return relative to four percent inflation gives a yield of 4.50 percent.

Watch to see if worker compensation in real terms finally becomes positive and begins to catch up with inflation.

Over the long run horizon, 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 marching upward as well. US dollar-denominated corporate debt yields will ascend.

Increasing yields for debt securities around the globe have led to an important top in and probably to bear trends for the American stock battlefield (S+P 500 high 1/4/22 at 4819) and related advanced nation stock territories. Rising international 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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The 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. Lows at .54 percent on 4/21/20 and .50pc on 8/6/20 confirmed this. The UST 10 year note yield ascended sharply after 8/4/21's 1.13pc low. The German Bund's yield pattern in recent years broadly has resembled that of the UST 10 year note, although it spent a long time beneath zero (negative yields).

	1Q20 Yield Bottom	**Spring 2020 Yield Low**	**Later 2020 Yield Low**	**1Q21 Yield High**	**Aug 21 Yield Low**	**Recent Yield High**
UST 10 Year	.31 pc (3/9/20)	.54pc (4/21/20)	.50pc (8/6/20)	1.77pc (3/30/21)	1.13pc (8/4/21)	2.55pc (3/28/22)
Ger Bund	-.91pc (3/9/20)	-.59 (5/5/20)	-.67 (11/4/20)	-.07 (5/19/21)	-.52pc (8/5/21)	.73pc (3/29/22)

The UST 10 year note yield attained an important interim high with 3/30/21's 1.77 percent. The UST 10 year yield eventually broke above that late March 2021 summit, attaining 2.06 percent on 2/11/22.

Highlight that the S+P 500 peaked during this yield ascent with 1/4/22's 4819, with lower interim tops on 2/2/22 (at 4595) and 2/9/22 (at 4590). On 2/25/22, around the time of the Russian invasion, the UST 10 year note yielded 2.01pc.

Thereafter, reflecting its safe haven status, the UST 10 year's yield increase trend paused, descending to 3/7/22's 1.67pc. The German Bund likewise established an interim yield low on 3/4/22 at -.10 (negative). The timing of the high in the nominal Broad Real Dollar on 3/8/22, as it occurred at the same day as the 3/7/22 yield low indicates that the Russian invasion and the financial sanctions response by the United States (and many other nations) inspired a race to acquire US dollars. The UST's flight to quality yield trough on 3/7/22 occurred alongside interim lows in the S+P 500 (3/8/22's 4158 and 3/14/22's 4162; these followed an earlier and slightly lower S+P 500 trough, 2/24/22's 4115) and spike pinnacles in commodities in general (broad S&P GSCI 3/8/22 at 853.3).

Yet Russia's invasion of Ukraine halted, but did not end, the major trend for rising yields in the United States Treasury marketplace which commenced in March 2020 and accelerated in early August 2021. Despite the UST 10 year note's "flight to quality" yield fall to its 3/7/22 trough, the long run pattern for increasing UST rates resumed, making a higher high with 3/28/22's 2.55 percent.

Moreover, over the long run, UST yields probably will keep increasing. Substantial inflation in America and the OECD relative to recent interest rate levels as well as globally high government (and other) debt levels will propel UST rates upward.

Previous essays pointed not only to rising rates for high-quality government debt outside of the United States, as in Germany. A long run rising yield environment is an international phenomenon. Recall the UST 10 year's 8/4/21 interim yield low at 1.13 percent. The rising yield trend since summer 2021 in both US corporate debt securities and US dollar-denominated government bonds issued by emerging market nations, 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. An overall climb in global yields, in both high and low quality debt instruments, has led to the recent weakness in the S+P 500 and other key stock marketplaces.

STOCK PRICE TRENDS AND OTHER MARKETPLACES

"Danger always strikes when everything seems fine." From the movie "Seven Samurai" (Akira Kurosawa, director)

"For, you see, so many out-of-the way things had happened lately, that Alice had begun to think that very few things indeed were really impossible." Lewis Carroll, "Alice's Adventures in Wonderland" (Chapter I)

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Prices for both emerging marketplace stocks and emerging marketplace debt securities "in general" peaked in first quarter 2021. Significantly, and like emerging marketplace stocks in general, prices for emerging marketplace interest rate ETFs thereafter have not exceeded their first quarter 2021 pinnacles. Price tops (yield bottoms) in key emerging marketplace interest rate instruments (around early January 2021) preceded (led to) mid-February 2021's summit in "overall" emerging marketplace equities. Therefore the subsequently rising yields in important emerging marketplace government (and corporate) debt instruments, as well as rising rates in the United States, helped to create the key peak in February 2021 and the ensuing downtrend for emerging marketplace stocks in general. For detailed analysis of price and time trends for since early 2020 of important emerging marketplace debt instruments (and US corporate bond yields)

and their relationships to emerging marketplace stocks, the S+P 500, and US government yields, see “Paradise Lost: the Departure of Low Interest Rates” (2/9/22) and “Marketplace Relationships: Life During Wartime” (3/7/22).

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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 analysts 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)	30.10 (3/23/20)	45.56 (8/28/20)	42.29 (9/25/20)	58.29 (2/16/21)
	44.84 (2/12/20)			44.41 (10/30/20)	56.18 (6/1/21)
	42.08 (3/3/20)				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)
					50.11 (2/12/22)

Rising yields in emerging marketplace debt securities apparently helped lead to price tops for and subsequent weakness in emerging stock marketplaces (EEM). Stocks for these developing nations built a framework of lower and lower interim highs since February 2021. The higher yield pattern since around August 2021 in both advanced and emerging marketplace debt fields produced further drops in emerging marketplace stocks. Compare the timing of the late summer 2021 and November/December 2021 price drop-off points in emerging marketplace debt provinces with interim highs in emerging stock marketplaces, including the EEM’s 50.89 on 1/12/22. Emphasize not only the UST 10 year note’s long run campaign of rising yields since March 2020, but also the arrival of the upward stage beginning with the UST 10 year’s early August 2021 trough at 1.13 percent. These debt and EEM price and time relationships intertwine with the timing of the S+P 500’s glorious 1/4/22 peak at 4819 (about one week before the EEM’s 1/12/22 interim high).

The EEM’s low in its bear move to date since 2/16/21’s 58.29 crown is 3/15/22’s 40.80, a violent 30.0 percent fall.

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Price convergence between emerging marketplace stock and debt securities probably will continue. If UST yields continue their upward move and climb substantially, that will place pressure on prices of emerging marketplace debt instruments and equities as well. Looking ahead, emerging marketplace stocks probably will remain under siege and continue to decline alongside the S+P 500.

All else equal, rising interest rates (particularly in the US dollar-denominated domain), especially when linked with US dollar appreciation, increase burdens on emerging marketplace sovereign and corporate borrowers. The rally in the United States dollar since around January 2021 (see the Fed's H.10 real Broad Dollar Index) helped to erode prices for emerging marketplace dollar-denominated sovereign and corporate debt instruments, and thereby to weaken emerging marketplace stocks. The real BDI remained strong in January, February, and March 2022.

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What about trends for the S+P 500 (and other advanced nation stock domains)?

	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 1/4/22 high skyrocketed 119.8 percent from 3/23/20's valley.

The key recent S+P 500 lows are 2/24/22's 4115, a 14.6 percent fall from 1/4/22's summit, and the March 2022 troughs at 4158 (3/8/22) and 4162 (3/14/22).

Quite some time prior to Russia's 2/24/22 attack on Ukraine, rising interest rates and tumbling emerging equity marketplaces warned that the S+P 500 probably would fall significantly. "Emerging Marketplaces, Unveiling Dangers" (12/2/21) concluded that "the S+P 500 probably has established a notable top or soon will do so". "Paradise Lost: the Departure of Low Interest Rates" (2/9/22) stated: "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 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."

The bull move in the broad S&P GSCI (see petroleum prices as well) from around early December 2021 to late February 2022 helped to undermine prices for the S+P 500 and related stock domains. ICE Brent/North Sea crude oil (nearest futures) rallied from 6572 on 12/2/21 to 10579 on 2/24/22. Growing fears regarding the potential for a Russian invasion probably played a role in the S+P 500's drop from its early February 2022 interim highs. Note the S+P 500's drop off points on 2/2/22 at 4595 and 2/9/22 at 4590 in the context of the further leaps in the broad S&P GSCI from its interim lows on 1/24/22 (595.2)/2/9/22 (627.7)/2/18/22 (632.1).

However, rising commodities prices were not the only variable helping to lead to (encourage) a decline in the S+P 500. Economic (financial, commercial, business) and political leaders and their troops in investment and other camps should not blame the S+P 500's peak and following slump since early January 2022 primarily on Russia's invasion of the Ukraine, or on fears this event would occur. Many observers were surprised by the Russian attack, or at least that it occurred "as soon and as significantly as it did."

Significantly, the time of the S+P 500's awesome 1/4/22 high at 4819 and its initial 12.4 percent correction to 1/24/22's initial low at 4223 preceded Russia's 2/24/22 invasion of Ukraine by

several weeks. Thus that attack did not initiate significant S+P 500 weakness. Other factors also inspired the S+P 500 decline from its January 2022 peak (and thereafter).

Rising American and international interest rates encouraged the decline after 1/4/22 in the S+P 500. Recall the UST 10 year note's yield climb prior to the peaks in first quarter 2020 in the S+P 500 and emerging marketplace stocks. In addition to the ascending United States (and other) yields (increasing inflation; as well as lofty debt levels and outlook), central bankers finally were admitting that rising and substantial inflation was not a temporary trend.

For quite some time following February 2021, an increasingly feeble emerging marketplace stock (EEM) price picture (note the pattern of lower and lower interim tops) substantially contrasted with and thus diverged from the S+P 500's magnificent ongoing bull charge. America's S+P 500 and stocks in other advanced nations flew to new highs after February 2021 while emerging marketplace equities marched downhill (price divergence).

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 at least the last years of the Goldilocks Era and 2007-09's ensuing global economic crisis generally have converged with those of the S+P 500. Over the long run, these stock landscapes are bullish (or bearish) "together" (have similar price and time trends). 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. The EEM attained its 1/13/20 peak at 46.32 fairly close in time to the S+P 500's major high at 3394 on 2/19/20.

But as of around early January 2022, emerging stock marketplaces had been weakening for quite some time, and their trend and that of the S+P 500 (finally) were converging (compare the timing of the S+P 500's 1/4/22 peak with the EEM's 1/12/22 interim high at 50.89), and thus helping to lead the S+P 500 downhill. Don't overlook the timing of the S+P 500's subsequent drop-off points on 2/2/22 at 4595 and 2/9/22 at 4590 alongside the early February 2022 interim top in the EEM.

From its long run historic perspective, the S+P 500's valuation in early January 2022 (and for several months before then) arguably was high.

Moreover, the strong United States dollar prior to Russia's late February 2022 attack also pointed to US stock marketplace weakness.

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The vicious price spike to their early March 2022 pinnacles in the broad S&P GSCI, petroleum, wheat, and many other commodities occurred after the Russian invasion. However, the S+P 500's low to date occurred at the time of the initial Russian assault, at 4115 on 2/24/22, a withering 14.6 percent decline from its January 2022 peak. The S+P 500 has rallied significantly following its 2/24/22 trough.

Over the long run, as price trends between commodities "in general" and the S+P 500 in general have converged, let's further examine the relationships between these marketplace sectors.

Note the 2/24/22 timing of the S+P 500 bottom at 4115 alongside the broad S&P GSCI's 2/25/22 take-off rally point at 648.0. A critical Brent/North Sea crude oil take-off stage started with 2/25/22's 9600. On the emerging stock marketplace front, the EEM's trough occurred on 3/15/22; compare the timing of minor lows in the S+P 500 at 4158 (3/8/22) and 4162 (3/14/22).

The broad GSCI made a second and lower high on 3/24/22 at 789.7. See 3/24/22's lower tops in ICE Brent/North Sea (12374) and NYMEX crude oil (11664). Compare the timing of the recent S+P 500 high 4637 on 3/29/22 with the 3/24/22 one for commodities in general. Even if the S+500 rises above its 3/29/22 high, if the convergence between commodities in general and the S+P 500 (and emerging marketplace stocks) continues, a further bear move in commodities beneath their mid-March 2022 lows (broad GSCI's 3/15/22 at 679.3; Brent/North Sea crude oil's trough was 3/16/22's 9693) probably will portend a renewed fall in the S+P 500, with new lows beneath its current support at 2/24/22's 4115.

A five percent dip from 1/4/22's 4819 equals 4578. Many marketplace wizards define a "correction" in stocks as a decline of ten percent or more from a notable high. Experts label a collapse of at least twenty percent from a peak as a bear move. A ten percent decline from 4819 gives 4337. A twenty percent plunge from 4819 equals 3855.

Will the S+P 500's glorious bull move following March 2020's dismal bottom up to January 2022's high continue, with the S+P 500 achieving new record peaks above 1/4/22's towering 4819 summit? Probably not. The S+P 500's January 2022 top probably was a major peak; if its future price surpasses that celestial level, it likely will not do so by much.

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Some bullish underpinnings for the S+P 500 of course exist. The United States and global economies still seem fairly strong. US corporate earnings still are high. And if inflation (as in the consumer price index) stays elevated, won't that (all else equal) help to raise the price of goods, services, and assets priced in nominal terms, including the S+P 500 price? And might many people purchase homes and stocks (and some commodities, especially in distant month contracts) until yields for United States Treasury instruments such as the UST 10 year note (and other key debt securities signposts) provide a decent real return relative to inflation? Share buybacks of American corporations apparently have been significant lately. If the Russia/Ukraine war ends or at least has a notable ceasefire, stocks may rally.

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However, looking forward, the S+P 500 probably will continue to retreat. In regard to the probabilities of a renewed slump in the S+P 500, underscore the rising United States Treasury yield trend, including its climb after the S+P 500's 2/24/22 low. The US dollar remains strong. These two factors will tend to weaken the S+P 500 as well as commodities in general. Do not forget the 2020 trend relationships (patterns) between marketplace domains. The global inflation and debt situation is worse now than it was in first quarter 2020, and central banks (and highly indebted governments) probably have less room to maneuver to rescue the global economy (and stocks) than they possessed in early 2020.

History indicates that the broad S&P GSCI and the S+P 500 over the long run trade together. The highs for commodities in general occurred recently and were followed by a sharp and significant but not an enormous decline, and bear moves in commodities usually do not conclude in one week (or even one month). There currently are signs (although the vista is murky) of convergence between the S+P 500 and the overall commodities complex. Thus if commodities head downward and establish new lows beneath their March 2022 depths, the S+P 500 probably will travel lower. And if commodities (nearest futures continuation) spike close to or above their early March 2022 highs, that probably will be bearish for stocks, for it probably will magnify fears regarding both inflation and an eventual recession.

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