SUMMERTIME BLUES, MARKETPLACE VIEWS

© Leo Haviland

Leo.Haviland@gmail.com

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In "Summertime Blues", The Who complain: "Well, I'm gonna raise a fuss I'm gonna raise a holler 'Bout workin' all summer Just to try to earn a dollar."

OVERVIEW AND CONCLUSION

Within and regarding marketplaces and other economic realms, as in other cultural domains, diverse storytellers create and promote competing perspectives, explanations, and forecasts. In this process, the selection and weighing of variables ("facts", data, evidence, and factors) differs, sometimes considerably. Thus rhetorical crosscurrents and a range of marketplace actions in stocks, interest rates, foreign exchange, and commodities battlegrounds inescapably exist. And since opinions can persist or change, so can significant marketplace trends and relationships, sometimes dramatically.

In today's entangled global financial marketplaces, battling viewpoints frequently involve assessments of inflation (especially in consumer price measures) and fears regarding recession (or at least stagflation).

Long run American marketplace history shows that substantially rising United States interest rates in key benchmarks such as the United States Treasury 10 year note leads to bear marketplaces in the S+P 500 and Dow Jones Industrial Average. UST 10 year yields began rising in early March 2020, accelerating upward following 8/4/21's 1.13 percent trough as American (and worldwide) consumer price inflation became very significant. The S+P 500 peaked 1/4/22 at 4819, plummeting almost 25 percent collapse to its mid-June 2022 low.

A "too strong" US dollar also interrelated with (encouraged) ongoing price weakness in both emerging marketplace equities and dollar-denominated sovereign debt securities (both emerging marketplace equities and debt prices peaked in first quarter 2021). The very strong dollar and price slumps in emerging marketplace securities also helped to undermine the S+P 500. Prices for commodities "in general" climbed substantially after December 2021 (Russia invaded Ukraine 2/24/22), magnifying inflation concerns and levels and thus assisting the price decline in global stock marketplaces. Though commodities peaked in early March 2022, on balance they remained quite high until around mid-June 2022.

As prices tumbled in the S+P 500 and related financial arenas (such as emerging marketplace stocks; corporate bonds and US dollar-denominated emerging market sovereign debt), avid "searches for yield/return" transformed into fearful "runs for cover". Consumer (Main Street) and small business confidence destruction interrelated with capital destruction (loss of money) by "investors" and other owners) in stock and interest rate securities marketplaces.

However, during the past few weeks, the S+P 500 has rallied vigorously, about 14.6 percent from 6/17/22's 3637 to 8/3/22's 4167. Given the high consumer price inflation pattern as well as concerns about feeble economic growth, what intertwined factors probably played key roles in this S+P 500 ascent?

Within the context of a long run trend for increasing yields, a modest interim yield decline in the UST 10 year can help to spark a notable rally in the S+P 500. Note the timing of the recent yield top in the UST 10 year note, 6/14/22's 3.50 percent in conjunction with the S+P 500's 6/17/22 trough at 3637. Also, perhaps the renewed slide in the overall commodities field (especially the petroleum complex) since its June 2022 interim highs allayed the inflationary concerns of some marketplace participants.

Share buybacks, disappearance of substantial stock "overvaluation" in yardsticks such as price/earnings ratios, and ongoing optimism that nominal corporate earnings growth will continue over the long run (perhaps keeping pace with the Consumer Price Index) also helped to motivate an interim bull move in the American stocks. Perhaps short covering in American stocks further inflamed the ascent.

What other interrelated phenomena probably have promoted the S+P 500's summer rally, especially after the second low on 7/14/22 at 3722? The US dollar's depreciation since mid-July 2022, although not substantial in percentage terms, arguably has inspired some buyers to venture into American stock playgrounds.

Wall Street and its economic and political allies have long popularized, often as part of American Dream wordplay, the outlook that over the misty long run, American stocks in general (the S+P 500; investment grade equities) will keep rising (at least in nominal terms). Thus the roughly 25 percent slump in the S+P 500 since its majestic January 2022 pinnacle perhaps looked to many "investors" like a good buying opportunity over the misty long run, especially as the UST 10 year yield arguably fell sufficiently from its mid-June 2022 crest to mitigate (at least to some extent) concerns regarding inflation (and Fed rate-raising).

Everyone knows that the American stock marketplace is an investment realm greatly favored by Main Street retail players. Wall Street and Main Street guides and their friends in financial media diligently advise Main Street on the merits (goodness; reasonableness) of investment in United States stocks (especially over the long run) as a means of achieving economic security and wealth.

Institutional players of course play critical roles in US and stock and interest rate securities marketplaces. But retail customers have a very substantial impact on stock price levels and trends. Moreover, in contrast with the situation of several years ago, in regard to the equity securities of key US corporations in general (and many Exchange Traded Funds/ETFs), Main Street over the past few years has benefited from rapid execution (internet) and low (or no) commissions. As the coronavirus pandemic emerged in 2020 and persisted into 2021, apparently many Main Street dwellers ventured into the US stock marketplace (not just large capitalization S+P 500-type firms). Many of these Main Street adventurers (investors, speculators, traders) were new participants in the stock trading game. Also, in an era of significantly rising (and high) consumer prices (note the trend since around mid-2021), probably stocks—like homes—can be an inflation hedge for some devoted financial pilgrims. Besides, speculators and traders, not only investors, seek to identify and profit from "good bargains" in stocks (and other marketplaces).

Many regiments of Main Street inhabitants raced into the exciting cryptocurrency wonderland during the global pandemic (and after the crash in the S+P 500 and Bitcoin to their March 2020 bottoms). Though cryptocurrencies generally have not yet won the honored "investment" badge, some believe cryptocurrencies (or at least some brands of it) are a "good investment" and "worth owning for a while". In any case, many people have sought to make money by trading cryptocurrencies, usually initiating positions from the buying (long) side.

Despite America's ferocious cultural wars across numerous economic, political, and social parameters, and despite declining consumer (and small business) confidence and widespread dissatisfaction with the overall direction of the country, American consumers in general (or at least the crucial high-earning and substantial net worth segment, the "haves", have enjoyed substantial jumps in their nominal (and probably real) net worth in recent years.

The US and global stock marketplaces are far larger than cryptocurrency ones. But picture as well the noteworthy upward flight in recent weeks within another territory favored by some Main Street retail players: Bitcoin. Note the roughly similar timing shifts (trend changes) since first quarter 2020 for Bitcoin and the S+P 500. However, the impressive 40.3 percent upward march in Bitcoin from 6/20/22's 17579 (another low 7/13/22 at 18892) to its recent high on 8/1/22 at 24658 probably encouraged to some extent the price rallies in the S+P 500 (and some other search for yield marketplaces).

Despite the withering slump in the S+P 500 since its 1/4/22 top and the bloodbath in many cryptocurrencies (Bitcoin peak 11/20/21 at 69000; note interim tops on 12/27/21 at 52100 and 3/28/22 at 48236 occurred alongside highs in the S+P 500), overall US household net worth (and thus nowadays probably still remains quite high. Thus "buying power" remained available from a substantial portion the Main Street (general public).

Some of this Main Street (retail) buying power, even in the face of notable CPI inflation and recession concerns, probably enthusiastically jumped from the sidelines into action in the S+P 500 (and other US equities) and some related playing fields, including Bitcoin, in recent weeks.

Institutional buying surely assisted the price rallies in the S+P 500 from its June 2022 and July 2022 troughs. But did institutional (Wall Street) money (insight and action) "lead" Main Street players into buying the S+P 500 around then? Probably not in a major way. Note the gloomy economic outlooks of the World Bank and International Monetary Fund released at that time. In addition, see the "dire" pessimism of "259 fund managers responsible for more than \$700 billion in investments" [in other words, institutional/Wall Street types] manifested via a survey conducted between 7/8 to 7/15/22 by the Bank of America (cited on 7/19/22 by the NY Times website).

According to that Bank of America monthly review, optimism about global growth staggered to a record low, beneath levels in the immediate aftermath of the 2008 Lehman Brothers collapse. The share of respondents who believed a recession was likely was the highest since April 2020 (as the coronavirus pandemic emerged).

However, these institutional investors apparently were holding the most cash since October 2001, (after the 9/11 attacks), over 20 years ago. Consequently Wall Street (institutional) influence probably decided to put some of that extra cash to work and thus assisted (jumped aboard) the S+P 500's rally from its June/July 2022 valleys.

Although the current rally in the S+P 500 may persist for a while longer, the downtrend which commenced in January 2022 probably will resume. The S+P 500's June 2022 low probably will be challenged.

Despite growing concerns about a United States (and global) economic slowdown or slump, and despite potential for occasional "flights to quality" into supposed safe havens such as the United States Treasury 10 year note and the German Bund, the long run major trend for higher UST and other benchmark international government yields probably remains intact. And even if the UST 10 year yield remains beneath its June 2022 high for an extended period, marketplace history depicts that the S+P 500 (Dow Jones Industrial Average) can keep declining following such a yield peak.

Illustrious central bank guardians such as the Federal Reserve finally have started raising rates to fight persistent dangerously high inflation. The vigilant Fed and its central banking comrades are playing catch-up relative to inflation levels and so probably will continue to raise their policy rates. Current CPI inflation measures obviously remain well above central bank interest rate signposts such as the Federal Funds rate and the US Treasury 10 year note. Although "overall" commodities prices have declined from their peak, so-called "core" US and OECD consumer price inflation measures (including those excluding food and energy) remain high. On a year-over-year basis, yardsticks such as America's CPI-U likely will remain fairly high at least for the next few months. Nominal wage growth has accelerated. The US July 2022 unemployment rate of 3.5 percent matches the low achieved in February 2020, before the start of the coronavirus pandemic (compare April 2020's towering 14.7pc; Bureau of Labor Statistics; 8/5/22). In America and many other countries, high current national debt levels and predictions of substantial further growth over the next several decades in the public debt burden probably encourage higher yields.

The United States dollar remains very strong and UST 10 year note yields remain fairly near their mid-June 2022 highs, which helps weaken emerging marketplace dollar-denominated sovereign (and corporate) debt securities and stocks. Note the relatively minor rally in emerging marketplace stocks in comparison to that in the S+P 500 since mid-July 2022.

In America, consumer and small business confidence have been trending down, signaling (confirming) a weaker economy and pointing to lower stock marketplace prices. Also, in an environment of high consumer price inflation, US real GDP fell in both of the first two quarters of calendar 2022.

Since US midterm elections loom in November 2022 (and the 2024 Presidential election campaign, though relatively distant, still beckons), the nation's uncompromising partisan leaders probably will not enact significant new rounds of deficit spending to boost GDP growth anytime soon. The vigilant Federal Reserve watchdog, currently awakened to and determined to combat ongoing substantial consumer price inflation, has embarked on an interest rate-raising program. Thus the Fed, so long as the American economy does not weaken very substantially, will not resume substantial money printing (quantitative easing) to rescue it (and support the US stock marketplace).

LOWER GROWTH, HIGHER INFLATION, INCREASING DEBT

In "Cash, Culture and Violence", Rancid sings: "The sword, the jewel, imagination Cash, culture and violence Violence, wealth and knowledge Cash, culture and violence"

The International Monetary Fund's July 2022 "World Economic Update" (7/26/22) forecasts world GDP will increase 3.2 percent in 2022 and 2.9pc in 2023, down sharply from 2021's 6.1pc expansion (compare 2020's dismal -3.1pc slump). Whereas US output grew 5.7 percent in 2021, the IMF envisions it will climb only 2.3pc in 2022 and 1.0pc in 2023. These updated July 2022 GDP predictions thus slashed those the IMF made only two months previously. The IMF reduced its April 2022 WEO estimate for calendar 2022's global output by .4 percent (lowered America's by 1.4pc), cutting 2023's by .7pc (US GDP estimate reduced by 1.3pc).

The World Bank's "Global Economic Prospects" (6/7/22) worries that: "Rising inflation and slowing growth raise concerns that the global economy is entering a period of stagflation reminiscent of the 1970s." Though the World Bank states that important differences with the 1970s exist, it nevertheless fears: "The current juncture resembles the 1970s in several key aspects." For example, "supply disruptions driven by the pandemic and the recent supply shock dealt to global energy prices by the war in Ukraine resemble the oil shocks in 1973 and 1979-80." Also, "global growth is decelerating sharply, with the current slowdown even more pronounced that the one following the 1975 recession." Both "then as now, monetary policy was highly accommodative in the run-up to these shocks, with interest rates negative in real (inflation-adjusted) terms for an extended period." Substantial emerging marketplace debt troubles the World Bank too; rising global borrowing costs "may trigger financial crises, as it did in the early 1980s". (Figure 1.12 and p30). The potential dangerous consequences of massive government debt levels in the United States and many other advanced nations probably also should worry the World Bank.

What are the Federal Reserve's relatively recent predictions regarding US real GDP growth for 2022? The midpoint of the Fed's Central Tendency for 2022 growth (Economic projections, Table 1, 6/15/22) is only 1.7 percent, a notable downward revision from its March 2022 conjecture of slightly less than 2.8pc. Its 2023 Central Tendency midpoint outlook is for sluggish growth (about 1.7pc), with that for 2024 about the same (up almost 1.8pc).

According to America's Bureau of Economic Analysis, although real GDP grew 5.7 percent in calendar 2021, the first two quarters of calendar 2022 dropped: 1Q22 at a 1.6pc annual rate, 2Q22 at .9pc annually (Table 1; 7/28/22).

OECD inflation as measured by the Consumer Price Index for June 2022 spiked to 10.3 percent year-on-year, the greatest price increase since June1988 (8/3/22), thus continuing the ongoing substantial inflationary trend. Remember that the OECD's average year-on-year inflation rate for calendar 2020 was merely 1.4pc, with that for calendar 2021 4.0pc. Excluding food and energy, the OECD's June 2022 CPI inflation leaped 6.7 percent.

The US consumer price index (CPI-U, all items; Bureau of Labor Statistics; see Tables 1 and 5; 7/13/22) soared 9.1 percent year-on-year in June 2022 (May 2022 flew up 8.6pc year-on-year), the largest 12 month increase since that ending over 40 years ago in November 1981. This inflation indicator's disturbing climb has exceeded five percent year-on-year since May 2021. Compare December 2020's meager 1.4pc increase. In June 2022, the CPI-U excluding food and energy May 2022 ascended a hefty and worrisome 5.9 percent (May 2022's rose 6.0pc relative to May 2021). Personal consumption expenditures rose at a 7.1 percent annual rate in both 1Q and 2Q 2022 (Bureau of Economic Analysis, Table 4; 7/28/22).

What about America's nominal wage growth? Although nominal wage growth has lagged CPI-U inflation in recent months (and thus real wages have declined), the acceleration of nominal wages signals the risk that an increasing wage pattern may help to sustain CPI-U and other inflation measures. According to the Atlanta Fed's "Wage Growth Tracker", the three month moving average of median (hourly; overall unweighted) nominal wage growth in June 2022 reached 6.7 percent. Compare May 2021's 3.0pc. June 2022's elevation represents the high for the data series, which goes back to 1997.

Let's glance at the current and long run United States federal debt situation. Of course much can change over the next few decades. Yet large and growing credit demand, all else equal, tends to increase interest rates. Higher interest rates over time can boost deficit burdens.

According to the Congressional Budget Office, the US budget deficit for fiscal 2022 was -3.9 percent of GDP (forecast -3.7pc for 2023). However, the CBO's baseline viewpoint predicts the federal deficit will increase by an annual average of -5.1 percent annually from 2023-32, -7.4pc annually from 2033-42, and -10.0pc annually over 2043-52 ("The 2022 Long-Term Budget Outlook", Table 1-1; 7/27/22. See also the CBO's "The Budget and Economic Outlook: 2022 to 2032"; 5/25/22).

Federal debt held by the public as a percentage of GDP greatly expanded in recent years, and especially during the coronavirus pandemic (2020 budget deficit -15.0 percent of GDP, 2021 deficit -12.4pc). Though the American economy expanded and the annual budget deficit shrunk dramatically in fiscal 2022, the CBO still prophesies that debt as a percentage of GDP will stand at a massive 98 percent of GDP at the end of 2022 (down only slightly from both 2020 and 2021's near 100pc of GDP). Contrast the debt as a percentage of GDP of 35.2pc in 2007 (around the end of the Goldilocks Era) and the 79.0pc for fiscal 2019. Under current law, debt as a percentage of GDP begins to rise in 2024, surpassing its historical high in 2031 when it reaches 107 percent. The CBO predicts it will jump to 110 percent of GDP at end 2032, leap 140pc at end 2042, and skyrocket to 185pc by 2052.

THE INTEREST RATE PICTURE

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).

Marketplace history is not marketplace destiny, either entirely or even partly. Relationships between marketplaces and variables can change, sometimes dramatically. Very long run history

nevertheless shows that significantly climbing United States interest rates have preceded noteworthy peaks in key stock marketplace signposts such as the Dow Jones Industrial Average and the S+P 500.

Sustained rising US (and global interest rate) yields led to the peak in the S+P 500 in January 2022.

	1Q20 Yield Bottom	Spring 2020 Yield Low	Later 2020 <u>Yield Low</u>	1Q21 <u>Yield High</u>	Aug 21 Yield Low	Recent Yield <u>High</u>
UST 10	.31 pc	.54pc	.50pc	1.77pc	1.13pc	3.50pc
Year	(3/9/20)	$(4/\overline{2}1/20)$	(8/6/20)	(3/30/21)	(8/4/21)	(6/14/22)

The UST 10 year yield eventually broke above late March 2021's interim high, 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).

Russia's invasion of Ukraine briefly 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. Reflecting its safe haven status, the UST 10 year's yield increase trend paused, descending to 3/7/22's 1.67pc. 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 6/14/22's 3.50pc (compare 10/9/18's 3.26pc high).

The UST 10 year recently attained a yield trough at 2.51 percent on 8/2/22, a one year anniversary relative to 8/4/21's 1/13pc interim low and a two year calendar month timing parallel versus 8/6/20's .50pc trough.

All else equal, high (rising) inflation tends to lead to increases in US Treasury and other yields.

The Fed's Economic projections for the Federal Funds rate at the end of a given calendar year (Table 1, 6/15/22) give a midpoint of about 3.4 percent for 2022, 3.9pc for 2023, and about 3.3pc for 2024. Suppose the 10 year US Treasury note offers a real return of 50 basis points at year end 2022 relative to these Fed Funds level projections. Then it will yield around 3.9 percent, higher than current levels. However, suppose CPI-U inflation remains at four percent or higher (recent months, even if one excludes food and energy, decisively exceed four percent). Then probably the US 10 year yield will march above four percent, and perhaps by a noteworthy amount (recall 6/13/07's yield top at 5.32pc).

The beloved Federal Reserve and its central banking teammates finally recognized that consumer price inflation is not a temporary or transitory phenomenon and elected to raise policy rates (end, or at least reduce, yield repression) and shrink their bloated balance sheets. Yet inflation probably will not drop significantly for some time. Besides, how much faith exists that the Federal Reserve will (or can) control and even reduce consumer price inflation anytime soon? How much trust should we place in the Fed's abilities and propaganda? The Fed helped to create inflation (and not just in consumer prices, but also in assets) via its sustained massive money printing and ongoing yield repression, and the Fed did not quickly perceive the extent and durability of consumer price inflation. In any case, the Fed currently seems inclined to rein in inflation some more, even though it is doing so only gradually relative to the CPI-U heights of past many months.

Keep in mind that if prices for assorted "search for yield (return)" marketplaces such as stocks (picture the S+P 500) and lower-grade debt securities can climb "together" (roughly around the same time), they also can retreat together.

Let's review a benchmark for United States corporate interest rates travels since first quarter 2020. Also, investigate emerging marketplace sovereign debt arenas. The Moody's seasoned Baa corporate bond yield is based on bonds with maturities of 20 years and above (statistics below from the St. Louis Fed, data through 8/4/22). The "EMB" ETF, from iShares (BlackRock)/J.P. Morgan, provides 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. Keep price trends for the S+P 500 and other stock marketplaces in view.

The Baa established an early 2020 yield low (price high) on 3/6/20 at 3.29 percent. The EMB attained its price highs (yield lows) around then, on 2/21/20 at 117.20 and 3/4/20 at 117.08. Their prices crashed alongside global stock marketplaces to their March 2020 major bottoms.

See the UST 10 year's 8/4/21 interim yield low at 1.13 percent. Note the rising yields in the Baa and EMB following summer/end year 2021.

	1Q20 Price <u>Low</u>	Price <u>High</u>	Interim Price <u>Low</u>	Price <u>High</u>	Price <u>Low</u>	Summer 2021 (and Later) Price <u>Highs/Yield Lows</u>	Recent Yield <u>High</u>
Baa		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)	5.48pc (6/14/22)

On the day of Russia's invasion of Ukraine, 2/24/22, the Baa yielded 4.20pc. After fluctuating for the next few weeks, the Baa yield increased rapidly from 4/1/22's interim low at 4.20pc. The Baa's yield high since summer 2021, 6/16/22's 5.48 percent, decisively broke through 3/18/21's 3.88pc barrier, and it also exceeds 3/20/20's yield top.

Following 6/14/22's top, the subsequent low is 8/1/22's 4.98pc. Compare the time and price movements of the UST 10 year.

	1Q20 Price <u>Low</u>	Price <u>High</u>	Interim Price <u>Low</u>	Price <u>High</u>	Price Low	Summer 2021 (and Later) Price <u>Highs/Yield Lows</u>	Recent Yield <u>High</u>
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)	81.87 (7/14/22)

105.83 (2/2/22) 103.51 (2/16/22) 98.41 (3/17/22) 92.62 (5/27/22)

The EMB collapsed 29.5 percent from 1/4/21's 116.09 to 7/14/22's low. Note the EMB's pattern of lower interim price highs since January 2021, which resembles the picture of emerging marketplace stocks in general, which peaked in mid-February 2021. The EMB advanced 8.7 percent from 7/14/22's trough to 8/4/22's 88.99 high.

The rising yield trend in US corporate as well as emerging marketplace sovereign US dollar-denominated bonds since summer 2021, when interpreted in the context of the UST 10 year note's similar pattern (and American and international inflation jumps), reflected a major and sustained climb in overall global interest rates. The dangerous climbing yield (falling price) linked to the bear moves in the S+P 500 and other key stock marketplaces.

The strong (or "too strong") US dollar, especially in an era of ascending interest rates for US dollar (and other) debt securities probably has assisted price weakness in emerging nation (and other foreign marketplace) corporate and sovereign debt denominated in US dollars. In this context, higher yields in emerging marketplace debt help to weaken emerging marketplace stocks.

The Federal Reserve releases a real Broad Dollar Index (H.10; January 2006=100; monthly average; 8/1/22 release) as well as a nominal Broad Dollar Index (daily data; 8/1/22) covering both goods and services.

•	1Q20 <u>High (date)</u>	Key Low Level (date)	Percent Fall from 1Q20 High	Next <u>High (date)</u>	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	124.1 (7/14/22)	12.3pc

Note the initial nominal BDI low in early January 2021 (1/6/21) occurred close in time to the EMB price high (yield low) on 1/4/21, as well as the emerging marketplace stocks pinnacle on 2/16/21.

Sometimes (but not always) the Broad Dollar Index has attained key marketplace tops alongside important bottoms in the S+P 500. For example, recall the real Broad Dollar Index peak at 101.6 in March 2009 in connection with the S+P 500's major low on 3/6/09 at 667. The S+P 500 bottomed on 2/11/16 at 1810 (1/20/16 at 1812); compare the real BDI's January 2016 interim high at 107.5 (final top at 110.0 in December 2016, though). The S+P 500 made a significant trough on 12/26/18 at 2347; November 2018's real BDI interim top at 107.8, though not a final high in the major bull move of the real BDI, was not exceeded by much for quite a few months (September 2019 minor high at 108.6) until March 2020/April 2020. Many on Wall Street and Main Street surely recognize that the nominal Broad Dollar Index's 3/23/20 pinnacle coincided with the S+P 500's 3/23/20 major low at 2192.

The real Broad Dollar Index ("BDI") for July 2022 is 118.3, about 4.3 percent over April 2020's 113.4 summit. The nominal BDI (data through 7/29/22) in mid-July 2022 recently neared its late March 2020 high.

The nominal Broad Dollar Index has edged lower since 7/14/22, falling about 1.7 percent to 7/29/22's 121.9 (most recent data point). The S+P 500's initial low occurred on 6/17/22 at 3637 (UST 10 year note's 3.50pc yield high 6/14/22), close in time to the BDI's 7/14/22 high, making its key second trough on 7/14/22 at 3722. On 7/14/22, the US dollar also attained highs in various cross rate relationships; for example, the Euro FX's low that day neighbored 1.000.

However, the US dollar remains very strong given that its depreciation since mid-July 2022 has been small.

ADVENTURES IN STOCK LAND

Iggy and the Stooges proclaim in "Gun": "People hyped up all the time Nobody is thinkin' why Money is a waste of time Course I made sure I got mine"

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."

1Q 2020	1Q 2020	Interim	Take-Off	Subsequent
<u>High (date</u>	Low (date)	<u>High</u>	Low (date)	<u>High (to date)</u>
S+P 500 3394 (2/19/20) 3137 (3/3/20)	2192 (3/23/20)	3588 (9/2/20)	3209 (9/24/20) 3234 (10/30/20)	4819 (1/4/22) 4637 (3/29/22) 4513 (4/21/22) 4308 (4/28/22) 4178 (6/2/22)

Following the S+P 500's 1/4/22 peak, focus on the descending pattern of lower interim highs. Compare related declines in US consumer confidence (increases in public dissatisfaction).

The S+P 500 low since its peak, 6/17/22's 3637, a 24.5 percent fall from 1/4/22's glorious crown, occurred only three days after the UST 10 year note's 3.50pc yield high. The S+P 500 thereafter made a very important second trough, 7/14/22 at 3722. The high since 6/17/22 is 8/3/22's 4167, a 14.6 percent climb.

"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 35.2 percent portion of the EEM (see BlackRock's iShares website, 6/30/22).

	1Q 2020 <u>High (date)</u>	1Q 2020 Low (date)	Interim <u>High</u>	Take-Off Low (date)	Subsequent Highs (to date)
EEM	46.32 (1/13/20) 44.84 (2/12/20) 42.08 (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; S+P 500 top 1/4/22) 50.11 (2/10/22) 46.78 (4/4/22) 43.23 (6/6/22)

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 encouraged further price 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 heavenly 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 7/14/22's 38.05, a vicious 34.7 percent collapse. Compare the date of the EEM's trough with the S+P 500's 7/14/22 low at 3722 and the nominal Broad Dollar Index's high that day at 124.1. The subsequent EEM rally to

7/28/22's 40.21 is only 5.7 percent, considerably less than that in the S+P 500. Thus the EEM remains rather feeble. In general, Main Street players, especially American residents, probably are more inclined (and able) to buy the S+P 500 than emerging marketplace equities.

THE COMMODITIES STAGE: THEATRICS

Assorted commodities of course have their own supply/demand profiles. Of course in practice, not all individual commodities necessarily trade "together" (in the same direction, around the same time span). Price and time trends for various commodities are not always the same. One marketplace may be in a bull trend, another in a less bullish, sideways, or bear pattern. Thus price trends over a given time horizon for a given commodity group (such as the "overall" petroleum complex) or a member within it (such as gasoline or diesel fuel) can venture further in a given direction than, or indeed have an opposite marketplace trend from, that of another commodity sector (such as agriculture "in general").

Enlist the broad S&P GSCI as a benchmark for commodities "in general", although the GSCI is heavily petroleum-weighted.

In recent years, numerous marketplace wizards have included commodities "in general" as a worthy listing in their entrancing list of asset classes.

History indicates that over the long run, the S+P 500 and commodities in general tend to travel together (in the same direction, around the same time). Often major highs (major bottoms) for commodities in general (broad S&P GSCI) and the S+P 500 occur around the same time.

Traders nevertheless must beware of price and time divergence (significant leads and lags) between commodities and the S+P 500. For example, 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 about nine months later, on 7/3/08 at 894. ICE Brent/North Sea crude oil attained its pinnacle on 7/11/08 at 14750. Yet 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.

The S+P 500 peaked in January 2022, the broad GSCI in early March 2022. The S+P 500's 1/4/22 pinnacle preceded that of the overall commodities complex (broad GSCI on 3/8/22 at 853.3) by about two months. This represents relatively modest divergence between those marketplace provinces from the time parameter. After around March 2022, the S+P 500 (note its lower interim high on 3/29/22 at 4637) and broad GSCI price trends converged, with both tending to move lower "together".

	1Q 2020 <u>High (date)</u>	1Q 2020 Low (date)	Nov 2020 Take-Off Low (date)	Recent Take-Off <u>Points</u>	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	853.3 (3/8/22)
				(12/20/21) 595.2	825.4 (6/8/22)

(1/24/22) 627.7 (2/9/22) 632.1 (2/18/22) 648.0 (2/25/22) 679.3 (3/15/22)

Regarding increases in the US and OECD's consumer price measures since their troughs around end 2020, remember the timing of the fourth quarter 2020 take-off lows for the GSCI and especially the oil complex. Since at least around late calendar 2021, and encouraged by the threat and eventual reality of the Ukraine/Russia war, sharply rising prices for commodities in general, and food and fuel in particular, helped to accelerate consumer price inflation in the United States (see the CPI-U), the OECD, and elsewhere. Substantial price increases in the commodities theater thereby likely severely injured Main Street consumer confidence.

The broad S&P GSCI collapsed 20.4 percent from its 3/8/22 top to 3/15/22's 679.3. However, it rebounded rapidly. Thus prices for the overall commodities complex remained lofty in early June 2022. After 6/8/22's 825.4, the GSCI resumed its decline, attaining a new trough at 632.9 on 7/14/22, down 25.8 percent from March 2022's peak. Relative to the time of the GSCI's 6/8/22 interim top, note the S+P 500's 6/2/22 interim high at 4178, as well as the EEM's on 6/6/22 at 43.23. Significantly, the GSCI's 7/14/22 low thus occurred on the same day as the S+P 500's second trough (3722), the EEM's low at 38.05, and the nominal Broad Dollar Index's high at 124.1.

The GSCI rallied 11.4 percent from 7/14/22 to 7/29/22's 705.3. But it then quickly retreated, with 8/5/22's 638.6 the recent low.

Competing observers will interpret the GSCI's moves in recent months from diverse perspectives.

Perhaps the broad GSCI's substantial downward move in recent weeks encouraged some stock marketplace bulls to believe that consumer price inflation eventually will decline. Did that make buying the S+P 500 attractive?

However, the GSCI still remains above its December 2021 lows, as well as the very important 10/25/21 high at 599.9. So looking forward, if the GSCI does not sustain a significant break beneath its October 2021 high, commodities still will contribute to some extent to noteworthy year-on-year consumer price inflation (in the CPI-U and similar weathervanes).

Yet also watch GSCI price levels with memories of the 2/24/22 Russian invasion of the Ukraine. Note that the GSCI's 7/14/22's 632.9 low stands very close to its pre-Ukraine invasion take-off points (2/9/22 at 627.7 and 632.1 on 2/18/22; regard also 1/24/22's 595.2, which rests close to 10/25/21's summit).

Suppose the GSCI continues to fall significantly from its current height. Some might argue that despite inflationary signs issued from other realms (after all, commodities are not the only source of inflation; think of shelter/housing and wages), such a decline in commodities warns of

economic weakness. For example, note America's recent real GDP declines and the IMF and World Bank GDP forecasts. Does a US and global recession loom, even if consumer price inflation eventually subsides somewhat from current lofty levels?

Since over the long run, major trends in the S+P 500 and commodities in general tend to converge, further substantial bearish moves in the broad GSCI beneath its 7/14/22 trough probably will lead to (or confirm) a renewed decline in the S+P 500.

MAIN STREET NET WORTH

The rap music group, "Wu-Tang Clan" in "C.R.E.A.M." sings: "Cash, Rules, Everything, Around, Me C.R.E.A.M. Get the money Dollar, dollar bill y'all."

Everyone knows that in recent years, income and wealth inequality in America has been substantial. Economic inequality and social mobility concerns agitate many people on Main Street. And although overall American household net worth has climbed very significantly in nominal (and real terms) in recent years, not everyone has shared equally in the joyous gains. Nevertheless, these large increases in consumer (Main Street) net worth represent a reservoir of buying power. Thus nowadays, all else equal, relatively prosperous "investors" and other profit-seekers have "room" to shift incremental funds into domains such as US (and other) stocks and diverse "search for yield" marketplace sectors when a seemingly "good opportunity" appears (as arguably was the case for the S+P 500 in June/July 2022), whether to "make some money", "hedge against inflation", or both.

Let's sketch a portrait of American household net worth. According to the Federal Reserve's "Financial Accounts of the United States", household net worth at end calendar 2021 was about \$141.7 trillion dollars, a 13.9 percent jump relative to end calendar 2020's \$124.4 trillion and an 86.7pc leap relative to calendar 2013's \$75.8tr (see Z.1; 6/9/22 release, for first quarter 2022; Balance Sheet of Households, Table B.101.h). Thus over the eight years from end 2013 to end 2021, the average nominal per year net worth gain was about 8.4 percent (86.7pc/8). Compare US CPI-U consumer price inflation (using December month; 12 month percent change year-on-year; Bureau of Labor Statistics, Table 5; 7/13/22), which averaged an annual increase of only 2.3pc over that eight year span (the average for the first seven years was about 1.6pc year-over-year, with December 2021's rising 7.0pc year-on-year).

All else equal (keeping nominal net worth levels unchanged), high consumer price inflation (as calendar 2022 to date manifests) of course erodes the real net worth of households. That of course dismays Main Street. And if inflation remains fairly high, in an environment of significantly slumping nominal net worth, that probably will greatly worry many consumers (and stock marketplace bulls).

Statistics from another Z.1 table (B.101), which includes nonprofit organizations in addition to households, indicate a slight drop in net worth (about four-tenths of one percent) from 4Q21 to 1Q22, so households probably did not endure a significant net worth decline in the first quarter of 2022. Households represent the great majority of the combined household/nonprofit B.101 net worth landscape, about 95.2pc as of end 2021. Despite the price decline in the S+P 500 and many debt securities in subsequent months, home prices continued to climb.

Thus although one must await the Fed's next Z.1 calculations for confirmation, "current" US household (Main Street) nominal net worth probably remains very high from the longer run historical perspective. A decline of ten percent in nominal net worth from end 2021's level would leave net worth of \$127.5tr, still above end 2020's height.

From the household debt perspective, at present US consumers "in general" currently are in satisfactory shape. According to the New York Fed's "Quarterly Report on Household Debt and Credit" (8/2/22), aggregate household debt balances at end 2Q22 were about \$16.2 trillion. This easily surpasses the pinnacle during the international economic disaster of 2007-09, 3Q08's \$12.7 trillion. However, US household net worth has soared since over the past decade. And the NY Fed remarks that aggregate delinquency rates remain very low.

US consumer financial obligations as a percentage of disposable personal income ("Financial Obligations Ratio"; Federal Reserve Board) peaked at 18.0 percent at 4Q07, as the Goldilocks Era ended. The FOR's subsequent low was 2Q20's 13.3pc, with that for 1Q22 (most recent statistics) at 14.2pc. The ratio has been under 15.0 for about five years, from 2Q17 on.

Inflation, all else equal, tends to help debtors by making many existing debts less costly to repay. But thus far in the US (and many other countries), consumer price inflation has outpaced nominal wage increases. And given the high arithmetical level of household debt, a recession (and even sluggish economic growth) probably will pressure many consumers, especially if inflation also remains fairly high and unemployment rises quite a bit.

CRYPTOCURRENCY (BITCOIN), MAIN STREET, AND S+P 500 PRICE TURNS

In recent years, cryptocurrency marketplaces have become another territory appealing to some search for yield participants (especially Main Street fortune-hunters). As they do in stocks and other financial domains, such retail marketplace warriors typically enter (establish) positions from the buying (long) side. Increasingly, Wall Street and the financial media (and regulators) have paid attention to cryptocurrencies. Bitcoin is a key signpost within the cryptocurrency playground.

Since around first quarter 2020, several important trend changes in Bitcoin have occurred "around" the same time as those in the S+P 500. As the coronavirus pandemic emerged, the S+P 500 made a major high on 2/19/20 at 3394; Bitcoin attained an important interim top shortly before then, on 2/13/20 at 10769. Bitcoin's major bottom on 3/13/20 at 3926 slightly preceded the S+P 500's major low on 3/23/20 at 2192.

Bitcoin's record peak occurred on 11/20/21 at 69000 occurred a few weeks before the S+P 500's major high in January 2022. Bitcoin's attained an important second top on 12/27/21 at 52100, very close in time to the S+P 500's 1/4/22 summit at 4819. What about Bitcoin's later and lower interim high on 3/28/22 at 48237? That marketplace top occurred close in time to the S+P 500's 3/29/22 interim high at 4637.

Bitcoin's important recent low, 6/20/20's 17579 (beneath 12/18/17's 19787 high), neighbored the S+P 500's 6/17/22 bottom at 3637. Again recall the S+P 500's second low, 7/14/22's 3722; Bitcoin rallied further from 7/13/22's 18892 trough, reaching 24658 on 8/1/22, a 40.3 percent

spike from its 6/20/20 depth. Main Street money (buyers) moving into both Bitcoin and the S+P 500 during June and July 2022 probably helped to rally these marketplaces.

Other essays discussing key stock, interest rate, currency, and commodity marketplaces and their relationships, as well as the economic and political scenes, include: "We Can't Get No Satisfaction: Cultural Trends and Financial Marketplaces" (7/13/22); "Gimme Shelter (and Food and Fuel" (6/5/22); "Running for Cover: Financial Marketplace Adventures" (5/3/22); "Marketplace Trends and Entanglements" (4/4/22); "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).

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