ECONOMIC GROWTH FEARS: STOCK AND INTEREST RATE ADVENTURES
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In “Alice’s Adventures in Wonderland”, Lewis Carroll declares: “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.” (Chapter I, “Down the Rabbit-Hole”)

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OVERVIEW AND CONCLUSIONS

History reveals that sustained rises in United State government interest rates generally (eventually) are bearish for the US stock marketplace. The United States Treasury 10 year note yield made a major bottom on 7/6/16 at 1.32 percent, an important interim low on 9/8/17 at 2.01pc, and a critical high in early October 2018 at 3.26pc. Japan’s 10 year government note yield peaked around then, on 10/4/18 at .17 percent. Germany’s 10 year government note rate established an interim high at .58pc on 10/10/18 (having built an earlier top at .81pc on 2/8/18). China’s 10 year central government note’s yield high occurred earlier (4.04pc on 11/22/17), but its lower yield high at 3.71pc on 9/21/18 connected with those in America, Japan, and Germany.

The S+P 500 attained its summit around the same time as the yield highs in the UST 10 year note, constructing a double top on 9/21/18 at 2941 and 10/3/08 at 2940.

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Subsequent yield declines in the UST 10 year note and the 10 year government debt of other key global realms such as Germany, Japan, and China accompanied a slump in the S+P 500 and many other benchmark stock indices. The Federal Reserve, European Central Bank, and other central bank engineers initially were fairly complacent. However, around mid-December 2018, the rate for the UST 10 year decisively retreated beneath about 2.80 percent. Also around then, the S+P 500, after tumbling from 2800’s temporary high (12/3/18), cratered beneath 2650 (a ten percent fall from the autumn 2018 high). Note the subsequent change in direction for Fed policy orations and actions.

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These fearful events (and other variables) portended weaker real GDP growth (and maybe even a recession) in America and other advanced nations, and an undesirable slowdown in China and other key emerging marketplaces. Stock owners (especially investors) and their investment banking and media allies in the United States and elsewhere screamed, troubled by the prospect of a twenty percent or more decline (satisfying a classic definition of a bear trend) in the S+P 500. Many politicians around the globe screeched, expressing concerns about economic dangers (more quietly, some worried about potential for increased populist pressures).

This unsettling scenario sparked the trusty Federal Reserve to halt its Federal Funds rate-raising policy (part of its normalization scheme), to underline that it would maintain a hefty balance sheet laden with debt securities, and to preach a much-welcomed sermon that for the near term it will be “patient”. The European Central Bank and other devoted central banking comrades promised continued easy money programs.

Some might wonder if the Fed and its friends in central banking (and in some political corridors) nowadays are aiming to produce an updated version of the joyous days (“irrational exuberance”, perhaps) of 2006-07 during the Goldilocks Era.

In any case, the central bank easing rhetoric and policy shift helped to rally equities and boosted confidence in growth prospects. The S+P 500 hit a floor on 12/26/18 at 2347 (20 percent fall from the autumn high equals 2353) and thereafter rose sharply. Many other global stock marketplaces established troughs around then, rallying dramatically in first quarter 2019. The UST 10 year yield touched 2.54 percent on 1/4/19. It thereafter climbed to 2.80pc on 1/18/19 (2.77pc high 3/14/19).

Given the reappearance of lower UST rates and the sunny prospect of continued benevolent Federal Reserve policy, arguably some of the feverish rally in the S+P 500 and other international stocks since around end December 2018/early January 2019 has reflected not only hopes of further (adequate) economic expansion, but also a frantic hunt for suitable returns ("yield") outside of the interest rate securities field. The time of the broad S&P Goldman Sachs Commodity Index ("GSCI")'s bottom neighbored that in the S+P 500, 12/26/18 at 366. Note also the price rally in US dollar-denominated emerging marketplace sovereign debt securities.

The broad real trade-weighted US dollar's rally from its January 2018 bottom at 94.6 (Federal Reserve, H.10; goods only; monthly average, March 1973=100) established a high in December 2018 at 103.2 (recall the major top of 103.4 (December 2016)/103.2 (January 2017). The dollar's stop in its bull charge and its slight decline thereafter (about 1.4 percent) probably has helped to inspire the stock marketplace rally and related quests for returns in other landscapes. The combination of the drop in US government yields and the cessation of the US dollar's upward march probably (especially) encouraged the recent price climbs in the stocks and government notes of many emerging marketplaces.

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For the S+P 500, the lower tax rates legislated via America's end-2017 corporate tax "reform" spiked US corporate earnings and encouraged massive share buybacks. Although the tax reform will continue to support earnings to some extent, substantial year-on-year growth for (at least most of) 2019 earnings currently looks unlikely. Suppose marketplace enthusiasm generates a forceful challenge to the S+P 500's autumn 2018 high occurs. The September/October 2018 elevation probably will not be broken by much, if at all. A one percent breach of 2941 gives 2970, a five percent advance over it equals 3088.

If further notable share buybacks and determined digging around for yields ("good returns") are playing critical roles in the recent S+P 500 (and other stock) rallies, perhaps the S+P 500's recent strength does not reflect the darkening vista for the American economy. US and other stock marketplace climbs from current levels do not preclude increasing economic feebleness in America and elsewhere.

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Despite the recent wordplay and actions by the Federal Reserve Bank and its allies, despite the majestic spike in the S+P 500 and many other stock marketplaces since around end-year 2018, United States and global growth likely will be lower than generally forecast. A recession in the US (and Europe and Japan), either in calendar 2019 or not long thereafter, is more likely than most prophets proclaim.

Given the significant importance of America in the globalized economy, its real GDP performance substantially will influence outcomes elsewhere. The renewed decline in American and global debt yields in very recent weeks probably signals such eventual weakness. The UST 10 year note rate is under important resistance at 2.65/2.80 percent. German and Japanese 10 year government note yields are negative again. For many advanced nations, suffering ongoing

"insufficiently high" inflation probably points to the potential for feebler growth than predicted. The Chinese economy, a mighty engine for global GDP growth, has slowed.

Particularly given the magnificent duration of America's glorious real GDP expansion, examine two other danger signs hinting that a recession (or at least very mediocre growth) looms. Survey yield spread relationships in the context of American economic growth and recession cycles. The credit spread trend between lower-grade United States corporate bonds and the ten year US Treasury note has generally widened over the past year. The US government yield curve has flattened substantially (moved toward a negative slope/inversion). See the NY Fed's statistics for the 10 year note less the three month T-bill relationship.

US trade (tariff) wars with China, the European Union, and Canada/Mexico (NAFTA) persist, with peaceful solutions likely to be more cosmetic than substantive. The American fiscal situation, worsened by tax reform is ominous. Global debt levels are lofty (and more of a problem than at the end of the glorious Goldilocks Era in 2007), including in the corporate sector. US corporate earnings growth prospects for at least the first three quarters of 2019 have dimmed substantially relative to the 2018 year-on-year growth rates. Assorted valuation measures for US equities tell diverse and sometimes competing tales, but some suggest "overvaluation". The broad real-trade-weighted dollar remains sufficiently strong to undermine prices of emerging marketplace stocks and debt securities.

Other bearish signs regarding America's economic growth are on the horizon. Economic, political, and other cultural divisions in America are significant. Prior to the beckoning 2020 elections, there is little chance of reducing hostilities between warring camps. Concerns about the quality of US Presidential leadership remain widespread. US consumer confidence (Conference Board), though it remains high, peaked in October 2018 at 137.9 and dipped from 131.4 in February 2019 to March 2019's 124.1.

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The next two sections ("Global Stocks: the Wheel Turns" and "Taking Notes: 10 Year Government Yields Since Mid-2016") contain tables for and a discussion of key American and other stock and interest rate yardsticks. The analysis unveils trends for individual marketplaces, as well as relationships within and between the equity and debt territories, since first quarter 2016. Note the convergence (and divergence) patterns (and lead/lag relationships). Foreign exchange and commodity playgrounds and other variables of course also influence trends for and relationships between interest rate and stock arenas.

In the intertwined global economy, real GDP trends in advanced nations and key emerging countries significantly influence each other. And thus trends of emerging marketplace stocks and interest rates "in general" have interrelated with and often (but not always) closely resembled those of America and other leading developed nations.

The directional travels (bull and bear adventures) of America's "overall" stock marketplace have tended to parallel (converge with) stocks of other significant advanced countries and regions. But sometimes divergence has occurred. Calendar 2018 after around the end of first quarter 2018 until the S+P 500's autumn 2018 peak is an example of such divergence.

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For further marketplace analysis, see essays such as: "American Economic Growth: Cycles, Yield Spreads, and Stocks" (3/4/19); "Facing a Wall: Emerging US Dollar Weakness" (1/15/19); "American Housing: a Marketplace Weathervane" (12/4/18); "Twists, Turns, and Turmoil: US

and Other Government Note Trends" (11/12/18); "Japan: Financial Archery, Shooting Arrows" (10/5/18); "Stock Marketplace Maneuvers: Convergence and Divergence" (9/4/18); "China at a Crossroads: Economic and Political Danger Signs" (8/5/18); "Shakin' All Over: Marketplace Convergence and Divergence" (6/18/18); "History on Stage: Marketplace Scenes" (8/9/17).

GLOBAL STOCKS: THE WHEEL TURNS

"I can stop in any street
And talk with people that we meet
Goin' mobile
Keep me moving". The Who, "Going Mobile"

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The following table includes the S+P 500 and other stock marketplace benchmarks. It shows several important points in their journeys beginning with first quarter 2016. Several key highs and lows are in bold print. Prices are through 4/1/19 for the S+P 500, URTH, and MXEF.

URTH is the iShares (BlackRock) MSCI World Stock ETF covering "a broad range of developed market companies around the world". As of 12/31/18 (iShares website), the United States comprised 61.5 percent of the index, with Japan holding an 8.3pc share and the United Kingdom about 6.0pc.

As a guide to emerging marketplace stocks "in general", let's enlist the MSCI Emerging Stock Markets Index (from Morgan Stanley; "MXEF"). MXEF price trends in recent years often but not always have moved similarly to those of the United States and other key advanced countries.

	S+P 500	**URTH**	**Emerging Market Stocks MXEF**	**China Shanghai Composite Index**
1Q16 Bottom	**1812**	60.81	**687**	**2638**
	(1/20/16)	(1/20/16)	**(1/21/16)**	**(1/27/16)**
	1810	**60.52**	708	2639
	(2/11/16)	**(2/11/16)**	(2/12/16)	(2/29/16)

[Although the United States Treasury 10 year government note's major bottom occurred in July 2016, it made an important interim trough at 1.53 percent on 2/11/16, near in time to these stock marketplace bottoms.

Commodity prices trends frequently fit those of the S+P 500 and other equity prices. Note the GSCI's major low on 1/20/16 at 268.

The historical relationship between the US dollar and the stock and debt marketplaces of America and those of other advanced nations as well as emerging countries is complex. Convergence and divergence (lead/lag) patterns can switch, sometimes significantly. Sustained movements in the dollar (especially the broad real trade-weighted dollar) above or below its key support and resistance levels can have substantial consequences for stocks and other financial marketplaces.

Scan the broad real trade-weighted dollar's ("TWD"; Federal Reserve Board, H.10; goods-only measure; monthly average) at key junctions within the period from early 2016 to the present.

The powerful bull campaign in the broad real trade-weighted United States dollar ("TWD"; Federal Reserve Board, H.10; March 1973=100; monthly average) commenced at 80.2 in July 2011. It made an important top in January 2016 at 101.2, alongside the bottoms in various international stock marketplaces. The January 2016 high flew over March 2009's critical 96.8 summit, achieved during the worldwide economic crash.]

	S+P 500	**URTH**	**Emerging Market Stocks MXEF**	**China Shanghai Composite Index**
Mid-Year 2016 Low	1992 (6/27/16) [S+P 500 high 8/25/16 at 2194]	65.57 (6/27/16)	788 (5/20/16)	2781 (5/26/16) 2808 (6/24/16)
2016 US Election Period Low	2084 (11/4/16)	69.67 (11/4/16)	837 (11/14/16) 840 (12/23/16)	[NA; no notable lows around 11/8/16; close that day 3148]
High During 1Q18	2873 (1/26/18)	**94.23 (1/26/18)**	**1279 (1/29/18)**	**3587 (1/29/18)**

[The S+P 500's January 2018 high was a very important interim top. Underscore its timing coincidence with peaks in other stock marketplaces.

Despite skyrocketing from its major valley in 1Q16, the MXEF (unlike the S+P 500) did not exceed its awesome Goldilocks Era record, 11/1/07's 1345. The MXEF did manage to surpass its spring 2015 high at 1069 (4/27/15; 9/4/14 top 1104). The Shanghai Composite's January 2018 summit remained many miles beneath its 5178 major high on 6/12/15.

The broad GSCI attained its initial high 466 on 1/25/18 alongside equities.

The broad real trade-weighted dollar established a peak in at 103.4 (December 2016)/103.2 (January 2017). The TWD dipped to 94.6 by January 2018; keep in mind the January 2018 peaks in various global stock benchmarks around then.]

(Initial) Low After 1Q18 High	2533 (2/9/18)	83.58 (2/9/18)	1136 (2/9/18)	3063 (2/9/18)

[Although the MXEF rallied and stayed above its early February 2018 interim low for a few months, it resumed its dismal retreat, making lower lows. The Shanghai Composite Index displayed a similar pattern. These declines contrast with the S+P 500 and URTH advances which progressed until late September 2018. The Shanghai Composite continued to retreat during the next several months.

All else equal, rising American interest rates, especially when alongside a stronger US dollar, probably tend to propel emerging marketplace stocks downhill. A substantial amount of emerging marketplace debt is dollar-denominated.

After its 7/6/16 major bottom in yield, the US 10 year government note achieved a second noteworthy yield low, at 2.01 percent on 9/8/17. The UST 10 year yield leaped up to 5/18/18's 3.13pc high. Examine the yield rise in the UST 10 year note from 5/30/18's 2.75 percent and 8/24/18's 2.80pc lows up to the early October 2018 crown around 3.25 pc.

The MXEF broke down decisively under 2/9/18's depth around mid-June 2018 (6/14/18 close 1126). The Shanghai Composite attacked its February 2018 trough several times in ensuing months, but only broke sharply beneath it after mid-June 2018 (6/14/18 close 3044).

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Various advanced nation and emerging marketplace stock indices achieved very important highs "together" early in first quarter 2018. However, probably beginning around the end of first quarter 2018, the generally bullish trend of the S+P 500 diverged substantially from the bearish trend of emerging marketplace stocks. Convergence probably returned after the S+P 500's autumn 2018 pinnacle.

The US tax "reform" legislation enacted in December 2017 was a critical factor in creating the price divergence that began around late first quarter 2018 between American stock price benchmarks and those elsewhere (including other advanced nations to some extent). The US corporate tax cut translated into higher reported earnings for American companies and thereby helped to give traction to and rally American stocks. Other leading countries around the globe did not enact a similar generous gift for their corporations. America's tax reform greatly encouraged share buybacks by US corporations.]

	S+P 500	**URTH**	**Emerging Market Stocks MXEF**	**China Shanghai Composite Index**
High Since 1Q18	**2941 (9/21/18)** **2940 (10/3/18)**	92.84 (9/26/18)	Within its bear drop, the MXEF had a minor rally from 9/12/18's 999 to 9/28/18's 1053. Compare timing that Sept high with those in S+P 500/URTH.	Very minor rally within prior large decline: 9/18/18 at 2644 9/26/18 at 2827.

[The URTH did not break through its January 2018 barrier.

The MXEF and Shanghai Composite had a series of minor rallies during their crash from first quarter 2018 peaks. The table includes the ones coinciding with the September/October 2018 peaks in the S+P 500.]

Low Since Sept 2018	**2347 (12/26/18)**	**74.72 (12/26/18)**	**930 (10/30/18)** 945 (12/26/18) 946 (1/4/19)	2449 (10/19/18) **2441 (1/4/19)**
High Since End 2018/ Early 2019	2869 (4/1/19)	89.89 (4/1/19)	1075 (3/21/19)	3193 (4/2/19)

[The S+P 500's autumn 2018 height edged only 2.4 percent above its 1Q18 summit.
After its descent to 94.6 in January 2018, the broad real trade-weighted dollar renewed its upward trajectory. This rally in the TWD, as it occurred alongside the ascent in the UST 10 year note yield, probably encouraged the murderous collapse in emerging marketplace stocks from their late January 2018 pinnacle.

The TWD's September 2018 level at 101.2 occurred alongside the S+P 500's September/October 2018 peak, and it also equaled January 2016's important interim top at 101.2. The TWD's further ascent after September 2018 (a "too strong dollar") probably helped to depress prices in both emerging marketplace and advanced nation stock marketplaces.

The TWD's 103.2 top in December 2018 paralleled the apex of December 2016/January 2017's 103.4/103.2 high. Significantly, the TWD's December 2018 high intersects with the S+P 500 and URTH bottoms late that month, as well as with the related emerging marketplace stock troughs.

The TWD inched down only to 101.8 in January/February 2018, and March 2018's 102.1 stands close to these levels. However, central bankers, finance ministers, many US corporations and politicians, and ensembles of other financial players (especially the stock investment community) presumably do not want a "too strong" dollar. Many people believe that a somewhat feeble (or at least a weakening) US dollar often can promote stronger stock prices. Despite the small shift down in the TWD so far since December 2018, it occurred in tandem with the advent of the new policy of patience (relatively easy money talk) from the Federal Reserve. After all, central bankers want a continued global recovery and for the S+P 500 to not sustain dives of twenty percent or more from a peak. The TWD's paltry percentage decline thus helped to ignite the rally in advanced and emerging marketplace stocks.

The broad GSCI's 10/3/18 peak at 504 is still intact. Note the timing of its low on 12/26/18 at 366. Renewed GSCI declines relative to October 2018's plateau probably would warn of (or confirm) price deterioration in emerging marketplace stocks as well as advanced nation ones.]

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The FTSE Russell All-World index covers both developed and emerging stock marketplaces. The United States represents about 53.8 percent of this index (as of 2/28/19; FTSE website), with Japan at 8.0pc and the UK at 5.5pc the runners-up. Within the All-World's array of nations, emerging marketplaces total about 10.1 percent of the entire index.

Note the coincidence of the FTSE All-World Index key highs and lows since early 2016. Its 2016 major bottom occurred at 232.6 (1/20/16)/231.9 (2/12/16). The subsequent peak since then, 1/29/18's 364.0, has not been broken (as is true for the 1Q18 summits in the URTH and MXEF). It dipped to 325.6 on 2/9/18. The All-World Index rallied to 350.4 on 2/27/18. However, its final high thereafter occurred on 9/21/18 at 349.0, alongside the pinnacle in the S+P 500 (see also the URTH's top in late September 2018). The All-World reached its trough since then with 12/26/18's 287.6; compare the timing of the advanced nation and emerging marketplace stock marketplace signposts. Its high during first quarter 2019 was 339.2 on 3/22/19.

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As a footnote showing that convergence between advanced and emerging marketplace stocks is not always the case, recall marketplace history from 2011-2015. Even though the S+P 500 kept making higher highs after its spring 2011 summit (5/2/11 at 1371) up until spring 2015 (5/20/15 at 2135), the MXEF did not. The MXEF's 4/27/11 high at 1212 was not exceeded for several

more years, until 1/29/18's pinnacle at 1279 (which did not surpass 11/1/07's 1345 peak; S+P 500 peak 10/11/07 at 1576).

Some changes in price direction in these two beacons nevertheless have occurred around the same time during spans of notable price divergence. For example, although the MXEF's 4/27/15 top at 1069 rested underneath its September 2014 plateau, it occurred rather close in time to the S+P 500's important interim peak on 5/20/15 at 2135.

TAKING NOTES: 10 YEAR GOVERNMENT YIELDS SINCE MID-2016

The Grateful Dead sing in "Truckin'":
"Lately it occurs to me what a long, strange trip it's been…
Get out of the door and light out and look all around."

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The following table summarizes the "overall" travels in interest rate yields for the United States, German, and Japanese government 10 year notes since mid-2016. German debt is in Euro FX terms, Japanese debt in Yen terms. The table also includes the Chinese central government note as a key representative for emerging marketplace nation debt yields. China's yield is based upon the renminbi. For America, Germany, Japan, and China, the 2016 major yield low and the rate highs since that 2016 major trough are in bold. Statistics are through 4/1/19.

Over this time span, the table details significant yield shifts (turning points) for those countries. Given fierce yield repression from leading central banks (particularly in the advanced/developed nation category), arithmetic basis point moves between turning points for a given nation (Japan, especially) are not always substantial. Within this overall time period, yield shifts for the various countries frequently have occurred at or around the same time. Hence convergence has existed or developed.

To further represent emerging market debt trends, the table layout includes discussions of the voyages of the iShares (BlackRock) J.P. Morgan USD Emerging Markets Bond ETF, "EMB", an index composed of US dollar-denominated emerging market bonds issued by sovereigns. It covers over thirty countries. About 87.1 percent of the index debt belongs in the BBB/BB/B (S&P rating scale) category, with the weighted average maturity about 11.7 years (12/31/18; website). It is quoted in price terms. Thus the higher the EMB's price, the lower the implicit overall yield of the instruments in the portfolio; the lower the EMB's price, the higher the yield.

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Using the EMB as a benchmark, many key turns in emerging marketplace dollar-denominated sovereign debt "in general", as the following table indicates, occur near in time to those of advanced nations and China. However, this is only a guideline.

Suppose global economic worries regarding growth and creditworthiness are sufficiently severe to inspire "flights to quality" in the debt world. Fearful buying of government debt issued by so-called safe havens within the advanced nation sphere such as America, Germany, and Japan may take place, thus driving down yields for government debt in such countries.

However, yields for emerging marketplace dollar-denominated sovereign debt (or rates for lower quality sovereigns in the advanced economy constellation) sometimes may climb during such flight to quality periods. Falling global stock marketplaces (both advanced and emerging

marketplace equities) may accompany such yield trends. The US Treasury 10 year note made an important yield trough at 1.53 percent on 2/11/16; recall the major lows in the S+P 500 and other advanced and emerging marketplace nation stock marketplaces around then. However, the EMB index attained a very important bottom at 102.90 (an implicitly higher yield) on 1/20/16 (recall 4/27/15's 114.31 high).

Yield explosions in sovereign debt arenas are not confined to emerging marketplaces. They can erupt in advanced nation realms. Recall the Eurozone crisis and yield jumps in Greece, Italy, Spain, and elsewhere. Watch sovereign credit spreads, such as that for Italy and Spain against the German Bund.

Also monitor corporate yield trends (and spreads between high and low grade corporate instruments) in key economies. Corporate debt yields likewise can accelerate higher if fears regarding a notable economic slowdown (or recession) increase significantly, especially if equity prices also have declined substantially (or threaten to do so).

	USA	**GERMANY**	**JAPAN**	**CHINA**
2016 MAJOR LOW	**1.32** **(7/6/16)**	**-.21** (negative) **(7/6/16)**	**-.30** (negative) **(7/27/16)**	**2.66** **(8/15/16)**

[The EMB made an important high 9/7/16 at 118.14.]

Interim High	2.64 (12/15/16)	.51 (3/14/17)	.15 (2/13/17)	3.50 (2/6/17)

[The German Bund's low yield following 3/14/17's elevation was .15pc on 4/18/17. Germany's high during this mid-year 2017 time span occurred thereafter, on 7/14/17 at .60 percent. Though the July 2017 minor top occurred after March 2017's, it only slightly exceeded it. The July 2017 crest was part of a general pattern of slowly rising European interest rates.

The EMB's low was 107.74 (11/14/16).]

Mid-2017 or Later Interim Low	2.01 (9/8/17)	.28 (9/8/17)	-.01 (negative) (9/4/17)	3.24 (3/24/17) 3.50 (6/20/17)

[Germany's yield low on 12/11/17 matched 9/8/17's .28 pc.

China's 10 year yield lows in March and June 2017 preceded those in America, Germany, and Japan. Note that China's government yield peak since summer 2016, 11/22/17's 4.04pc, preceded those of advanced nations. China's yield ran up to 3.70pc on 5/10/17 before subsiding to its 3.50pc mid-June 2017 elevation, which happened to equal 2/6/17's high.

The EMB's "related" high is 9/8/17's 117.46.]

	USA	**GERMANY**	**JAPAN**	**CHINA**
1st half 2018 (or earlier) High	3.13 (5/18/18)	**.81 (2/8/18)**	.10 (2/2/18)	**4.04 (11/22/17)** 3.98 (1/18/18)

[The UST 10 year's interim top on 2/21/18 at 2.96pc was close in time to Germany's February high. Japan's February 2018 yield high occurred alongside Germany's 2/8/18 one.

The second high in China's yields slightly preceded in time the German and Japanese ones. Compare the EMB's timing and direction: 1/5/18 price high at 116.86; recall the highs in global equities in late January 2018.

German and Chinese yield falls preceded America's. The jump-start to the US economy via tax "reform" probably encouraged American economic strength (and credit demand) and thus its later yield high.]

Mid-2018 Minor Low	2.75 (5/30/18)	.19 (5/29/18)	.02 (7/2/18)	3.43 (7/20/18)

[The initial UST minor low during mid-2018 was 4/2/18's 2.71 percent. The German Bund established a second low at .28pc on 7/6/18. Note also the UST's 8/24/18's 2.80pc low in relation to the timing of Germany's 8/17/18 additional minor trough at .29pc. Japan's JGB made other lows at .02 percent on 11/22/17 and 3/26/18.

The EMB fell to 105.17 on 6/19/18 (following its 1/5/18 high at 116.86). Note the bear move in emerging marketplace stocks after their end January 2018 pinnacle.

The EMB then walked slightly uphill, making an interim price high on 7/27/18 at 109.77, close in time to China's July 2018 yield low.]

October 2018 High	**3.26 (10/9/18)**	.58 (10/10/18)	**.17 (10/4/18)**	3.71 (9/21/18)

[Note the proximity of these 10 year government debt yield highs to peaks in the S+P 500 and other advanced nation stock benchmarks. The UST's 3.25pc on 10/5/18 rests even closer in time to the S+P 500's 9/21/18 (2941)/10/3/18 (2940) pinnacle.

In contrast to the rising yield pattern of the United States and other government note benchmarks, around this time the EMB rallied from 9/4/18's 104.98 (compare 6/19/18's 105.17) to 9/27/18's 108.11. Thus the emerging marketplace sovereign debt (EMB)'s minor price top (9/27/18's implicitly lower yield for the debt securities package of the EMB) occurred alongside the September/October 2018 price highs in the S+P 500 and related equities.]

Low Since October 2018	2.34 (3/28/19)	-.09 (negative) (3/28/19)	-.10 (negative) (3/28/19)	3.06 (3/29/18)

[Notably, US dollar-denominated emerging marketplace government yields "in general" (EMB) raced higher following the 9/27/18 price top. See the EMB's price lows on 11/27/18 (102.15) and

12/26/18 (102.62). These EMB price lows (yield highs) occurred in connection with the bottom in the S+P 500 on 12/26/18 and other key stock marketplaces around that time (as well as an initial yield low for the UST 10 year note, 1/4/19's 2.54 percent). The yield slump in the UST 10 year note since autumn 2018's highs around 3.25 percent thus significantly contrasts with the EMB price lows (higher yield trend for EMB members). Recall 1Q16, when the EMB price bottom at 102.90 on 1/20/16 likewise was adjacent to the major bottoms in the S+P 500 and other equity weathervanes (and the UST 10 year's important interim low on 2/11/16 at 1.53pc).

After the UST's initial yield trough on 1/4/19 at 2.54 percent, it edged up to 2.80pc on 1/18/19 (2.77pc on 3/4/19). However, it thereafter stumbled to 3/28/19's 2.34pc low.

Significantly, German and Japanese note yields are now negative. Germany went negative on 3/22/19. Such low yields in two major OECD nations and the fall in Chinese rates, even if encouraged by yield repression programs, do not indicate robust economic growth. All three nations rely substantially on their exports of goods as part of their growth engines, and international trade (and currency) battles persist.

The EMB climbed relatively steadily after its end-year 2018 bottom (as did the S+P 500, URTH, and emerging marketplace stocks), reaching 110.37 on 3/20/19. The EMB's low yield to date in its near-term trend stage since 11/27/18 (102.15)/12/26/18 (102.62) is beneath the low yield represented by 9/27/18's 108.11. The EMB's falling yield (rising price) trend thus apparently has linked up with the yield slumps (which commenced in early autumn 2018) in the government notes of America, Germany, Japan, and China. Looking forward, will this pattern persist?

If a sufficiently sharp drop in global stock marketplaces reappears (watch for slumps heading toward a 20 percent fall in the S+P 500 from its peak, yields for America and other safe haven countries may slump further. If such substantial equity price weakness emerges, lower-quality debt yields may climb, whether in the dollar-denominated emerging marketplace sovereign domain, weaker advanced nation sovereign arenas, or the corporate debt universe (especially for lower-grade instruments).

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The recent falls in the US Treasury 10 year note yield does not preclude an eventual climb to rates above October 2018's 3.26 percent ceiling. The likelihood of towering US federal budget deficits in future years (see Congressional Budget Office estimates) probably will be a key factor influencing any such ascent in yields.

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China's ongoing yield decline since November 2017 probably confirms the nation's reduction in its GDP growth rate. The NY Times headlined "China's Premier Admits to Economic Slowdown" (3/16/19, ppB1, 4). Many nations still envy China's recent GDP expansion rates. However, given China's huge role in the global economy, falls in China's output growth rate are a bearish sign for worldwide real GDP output in general. And of course weakening GDP growth in America, Europe, and Japan probably would inspire slowdowns in China and many other emerging marketplaces.

Observers closely monitor the cross rate between China's renminbi and the US dollar. That indeed is an important relationship, particularly on the US/China diplomatic front. However, the broad real effective exchange rate index ("EER") for China published by the Bank for International Settlements is a better indicator of China's overall currency strength or weakness (3/20/19 release; monthly average, 2010=100).

Although the China EER peaked at 131.1 in November 2015 and fell to 118.5 in May 2017, it has remained quite strong. It rebounded to 127.6 in February 2018. Though it fell to 121.7 in August 2018 and remained around there for several months, it rebounded to 126.3 in February 2019. This rather strong China EER likely has helped to weaken Chinese growth for quite some time, and thus this EER foreign exchange situation probably partly explains the recent willingness of China's political (economic) leadership to embark upon growth-building measures such as cuts in corporate taxes, efforts to boost credit extension (lending), and steps to lower interest rates.]

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