HORIZON KINETICS

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Prefatory Remarks

A change of pace. This *Commentary* will largely be in conversational form, fewer numbers and statistics. Sort of because of the year-end wrap-up factor, to review what we've reviewed. Like the seminar sandwich formula: First, tell the audience what you'll be telling them; then tell them the actual thing; then tell them what you told them. But that's not entirely why.

Last year – the past several years, really – we've laid out in some detail what seems like a big bag full of developing systemic risks. Among them, but not the only ones:

- The expanding national budget deficit.
- The rising debt/GDP ratio that is funding those deficits.
- The looming ballooning (forgive the rhyme) interest expense burden as the low-coupon Federal debt gets refinanced at current rates.
- The excess currency creation that is part and parcel of that debt funding, and which will keep expanding so long as the debt keeps rising faster than the economy can, and which spells debasement and loss of purchasing power.
- The excessive equity market valuations, which—absent any other re-valuation triggers—are sustainable only by the Federal Reserve's artificially low interest rate policy. And,
- The increasingly extreme concentrations and market structure distortions driven by indexation's growing dominance.

It is a big bag full, and it only includes domestic structural risks. It shouldn't escape mention that in order to make that list less laborious to read, it didn't include the terms "record" or "historically unprecedented" that should have attached to each item.

The intent of those reviews was to describe these systemic risks as they developed. Systemic means that most of the market is impacted, including the cascading effect of one industry or sector upon another, a breadth of risk that can overwhelm diversification as a risk control tool. The idea was that if forewarned is forearmed, one could pre-position a portfolio – seek out and employ the rather few non-mainstream types of businesses and assets that can thrive in an inflationary environment if and when the comfortable and familiar investment applecart gets upended. It must be that such investment instruments are relatively few and non-mainstream—there's no other way, definitionally, to be where "the market" isn't.

Of course, things have yet to 'break'— nothing's crashed or burned. That's simply the way of markets. Once everyone else sees what you see, the price of what you want to own has already become exorbitant. Like waiting until the evening news reports that invading troops are massed at the border before trying to buy a seat on a train or plane. Or deciding to buy a Bitcoin ETF in January 2024, now that, well, everybody 'sees it'. In the latter instance, though, with the difference that there are ever stronger reasons to believe that Bitcoin is still at the initial phase of its ultimate total market value as a new asset class.

So, we'll try to tie all of that together in a broad-view, easy discussion format. Because while proofing an idea or hypothesis typically requires focus on the details, there's also a time to put the narrow facts aside, and consider them as a whole, the broad picture.

Also, there's been a significant development in our portfolios this past quarter, which is worthy of note. It might not yet be obvious, having only just begun to make itself felt, but it might become very apparent in the near future. That's something of which you should be aware.

Likewise, there are recent important developments in the 'outside world' that we touched on previously for their prospective impact upon U.S. business profitability and valuations. Those were anticipatory. But they have already wrought some initial changes and are on the cusp of making themselves obviously felt. They, too, might become very apparent in the foreseeable future. Investors should likewise be aware of those.

The Sweep of History or Era-Change Section

A reason for stepping back from the statistics and tables is that while they're necessary for validating certain points or ideas, you also want to avoid the missing-the-forest-for-the-trees problem. It's hard for most of us to imagine a true change of era, the kind that will be part of the sweep of economic history. Yet, if it's at all a distinct possibility, that can be the one big thing to pay attention to. But, after detailing one developing set of risks after another, how much can you hold in your head? That's a time for synopsizing and perspective.

My associate Murray Stahl, our chairman, recently shared the timeline of our careers at an investors' meeting. He didn't make the usual ties to various promotions or job changes but, rather, to the changing economic eras that our careers encompassed. He related it somewhat like this…

We lived the bulk of our professional lives, which date back to roughly the 1980 period, in a disinflationary environment. We didn't know it at the time, but it was the end of the inflationary era. History records that it ended because the Federal Reserve raised interest rates to an appropriately high level, slowing the economy enough that the pricing pressures relented. Murray never believed that argument at the time. We don't believe it now, even though it is accepted history. The different story is that the world of 1982 and 1983—especially the industrialized world as it then existed—benefitted from a series of economic miracles that had nothing to do with the Federal Reserve.

The first was that the Soviet Union was on the verge of economic collapse. It took the better part of a decade, but it was well and truly on its way. In order to stave off collapse, the country made use of the only source of external hard currency it had. What it had was every manner of hard commodity, from oil and coal to diamonds. All the Soviets could really do was begin to put their commodities on the global market. That was something without precedent because, from the establishment of the Soviet state at the end of the first world war until that juncture in 1982 to 1983, the Soviet Union operated outside of the context of the world economy. The Iron Curtain, geopolitically meaning the Soviet Union's deliberate separation from the Western nations of Europe, was physically real, too. It manifested in several thousand miles of physical barriers, some extremely militarized. In some cases, the protective zone around the border extended 10 to 15 miles into other countries.

The Soviets' entry into the world economy was a miracle for the world in that it caused unrelenting downward pressure on commodity prices. When the Soviet Union ultimately collapsed in the 1989 to 1991 period, when the people would no longer accept the state-controlled system, its circumstance had

worsened. The country was then known to be bankrupt, cash was needed even more desperately, and that resulted in even more commodity price selling pressure. This previously unavailable supply broke the back of commodity price inflation.

The next massive disinflationary force came from the People's Republic of China, then known as Communist China or Red China. They, too, were desperately in need of cash and foreign exchange. While they didn't have much in the way of commodities to offer, they did have a billion people. Instead of putting commodities on the global market, they put an extremely low-cost labor pool on the market. It was slow at first, as companies in industrialized economies adapted to make use of this resource (which involved reducing their domestic high-cost workforces and abandoning production facilities). Eventually China had its low-cost labor force emulators. These included Vietnam, Thailand, the Philippines, India, Pakistan, Indonesia, and Malaysia. Even the labor forces of countries in Latin America, like Mexico, joined the world economy. It might not be an exaggeration to say that 3 billion human beings joined the global labor pool.

The second economic miracle was the end of the power of labor to raise wages, at least real wages.

SOVIET OIL REVENUE ROSE IN '82

By THEODORE SHABAD

The Soviet Union, contrary to expectations of some Western analysts, managed to overcome a decline in world oil prices and to increase its crucial hard-currency revenue from oil exports in 1982.

Foreign trade statistics recently released in Moscow show that income from exports of crude oil and refined petroleum products to Western Europe, the principal non-Communist market for Soviet oil, rose by 13 percent last year, to some $16 billion, using the official conversion rate for the ruble.

This represented about 60 percent of the Soviet Union's foreign exchange earnings, which the Russians need to pay for imports of grain and high technology from the West.

"They evidently decided that they must earn a certain amount of foreign exchange for planned imports from the West, and are able to mobilize the additional supplies," said Marshall Goldman, associate director of Harvard University's Russian Research Center, in commenting on last year's oil-export drive.

Mr. Goldman, who is a specialist on the Soviet economy and on East-West trade, said Moscow's ability to make available additional oil for export when needed also cast further doubt on a prediction made by the Central Intelligence Agency in 1977 that oil production in the Soviet Union would begin to decline after 1982 and that the Soviet bloc would ultimately become a

TUESDAY, JUNE 21, 1983

The next major development for the industrialized economies was the opening of "denied areas." It's not a familiar term today, but it would be found in books on geopolitics written before the collapse of the Soviet Union. It referred to the Soviet Union and China, and simply meant that businesses couldn't expand there.

For instance, prior to 1990, it was inconceivable that someone would assert that McDonald's was going to open a store in Moscow, or even Bucharest or Warsaw. But it ultimately happened. And then in Shanghai and other Chinese cities. So, in addition to the disinflationary commodity and labor impacts, the third miracle for Western economies was that all the major consumer brand companies that could only expand globally within the context of what we then called the free world, could now be truly global. Much expansion ensued, growth that could not otherwise have occurred.

Then there were massive follow-on benefits, one of which was another dramatic economic change. The abating of inflationary pressures permitted governments to reduce interest rates. If we were having this conversation in 1980, wherever in the world wealth was allowed to be owned, it largely consisted of hard or tangible assets. The lower interest rates made financial engineering and financial assets possible. Financial assets eventually dethroned tangible assets as the preferred form of holding wealth. (Which is why you see find barely anything in the way of tangible assets in the investment world anymore, certainly not in indexes.)

And with decades of ever lower interest rates, governments' interest expense burden declined, which, gave them more money to spend. That spending, in turn, had its own additive impacts on economic growth. So, the corporations of the then industrialized countries were beneficiaries of a comprehensive range of truly beneficial, interrelated and follow-on changes that resulted in extraordinary global expansion, cost-of-goods-sold profit margin benefits, labor cost benefits, debt and equity funding cost benefits, and fiscal expansion benefits. Even if not miraculous individually (which they were), they certainly were in the aggregate.

Before we fast-forward 40 years to the present, we shouldn't just stroll by those described events, like faded photos, without pausing to appreciate how momentous they were. To make more real the power of those changes at the time and how they felt, here's one bit of color to add to the faded photo. The mere notion of a McDonald's in Moscow in the world of 1990 was more than novel; it was startling. You couldn't hear about but not discuss it with someone. The opening of a McDonald's in Moscow on January 31, 1990 was reported on the front page of The New York Times and The Washington Post, featured alongside articles on:

- George H. W. Bush's State of the Union address, which proposed deep cuts in U.S. military forces in Eastern Europe, coordinated with a reduction of Soviet forces, to accompany, as was quoted, "the beginning of a new era in world affairs."
- The dissolving of the Polish Communist party after 40 years of monopoly rule.
- The trial of top ministers of deposed Romanian Prime Minister Nicolae Ceaușescu. Mr. Ceaușescu and his wife were executed three weeks earlier, on Christmas Day, after attempting to flee from the violent overthrow of the government, which was proximally sparked by their ordering the shooting of anti-government demonstrators.

Amidst this global shift, that McDonald's in Pushinskaya Square near the center of Moscow—the first fast food restaurant in a country 2 ½ times the area of the U.S.—is reported to have served 35,000 customers on its first day. People stood in line for over six hours to experience this American food and Western style service.

To merely experience Western style service was itself an attraction. In order to expunge patrons' expected experience of Soviet state employed service workers, who were notoriously uniformly rude, dour-faced and unresponsive, McDonalds' 600 workers were selected from over 30,000 applicants. They were picked for their yet-unjaded youth, largely from universities, and being multi-lingual. Customers were reportedly shocked by

This is not the line.

smiling servers, so much so that the servers were asked to smile less[1].

THIS is the line

Recalling the notion behind the well-known Big Mac Index[2], a shortcut to calculating purchasing power parity among different nations' currencies, a Big Mac was reported to cost about 2 ½ hours of average wages for a Soviet worker, versus the 20 minutes required by an American worker. A standard meal—Big Mac, shake and fries—cost the equivalent of several days' wages.[3]

That reception is an impressionistic way to understand how profitable corporate expansion into the formerly denied areas was. Unlike the ordinary economics of trying to expand into a new market, the U.S. consumer products companies didn't have to spend more on R&D; the products already existed. They didn't have to massively expand their marketing budgets to fight for a market share toehold against local incumbents – there wasn't any local competition for what the U.S. and European companies were selling. They might not even have had to build much in the way of new production plants. And 1990 wasn't all that long ago.

Fast-forward 40 years from the start of this succession of economic miracles, and they are finally abating. Let's take the example of Russia, now 25% smaller than the Soviet Union. Because of trade sanctions related to the Ukraine invasion and other factors, Russian commodities are no longer flowing west. They're now flowing south and east, to China, India and Turkey.

China is now itself an industrialized nation. That wasn't true then. China makes all manner of industrial products; virtually nothing can't be made in China. That's really important to understand, and at a couple of levels. At the base international trade level, earlier this month, the BRICS nations—Brazil, Russia, India, and China, which was formed in 2009 and added include South Africa in 2010—expanded to include Iran, Egypt, Saudi Arabia, the United Arab Emirates and Ethiopia. In aggregate, those 11 nations control 43% of the world's population and roughly a third of global oil production. It is its own trading bloc, but one in a much more influential position than the OPEC cartel, which also controls one third of the global oil production, could ever be.

While OPEC did, at various times, deny oil supplies to their customers, their primary product was oil. They produced little else. The oil-consuming nations, in turn, made a lot of goods that the OPEC members needed, so they could counterbalance OPEC's economic leverage by denying those nations certain goods.

Now, though, the enhanced BRICS group is sufficiently large and diverse that it can trade with itself. Of the original five, only Russia had significant hydrocarbon reserves. The inclusion of Iran, Saudi Arabia and the UAE brings far more oil and gas. China and India have global-scale semi-finished and finished goods

[1] https://rarehistoricalphotos.com/first-mcdonalds-moscow-soviet-union-1990/
[2] Developed by Pam Woodall, economics editor of The Economist magazine, in 1986.
[3] https://www.history.com/this-day-in-history/first-mcdonalds-opens-in-soviet-union , and https://www.washingtonpost.com/history/2022/03/08/soviet-union-mcdonalds-moscow/

production capabilities. That's relevant for the U.S., because now that bloc of nations has the potential to de-dollarize, which was a stated aim of the original BRIC four in 2009. Just this past year, there have been Chinese yuan deals with Saudi Arabia. India, the world's third largest oil importer, and the UAE have already settled trade in rupees instead of dollars and agreed to set up a real-time payment link to enable cross-border payments. To date, these transactions have been negligible in the context of world trade. But, it's major in the context of commodities, because even though the yuan deal with Saudi Arabia and the rupee deal are rounding errors, it is a demonstration that commodities are no longer necessarily priced in dollars. The issue is, to what degree is that going to expand? And if it does expand, what would happen?

In order to understand that, one should understand what happens now, before that de-dollarization occurs. In 2022, the United States, wishing to control inflation, dramatically raised interest rates. Other industrialized nations had to respond if they didn't want their currencies to collapse relative to the dollar. So, let's look at what happened in India. The U.S. raises interest rates. India likewise had to raise rates to defend the currency, but the dollar increased relative to the rupee. So, if the oil price is the same, and the dollar increases relative to the rupee, we in America could possibly control domestic oil prices that way. But in India, the oil price just went up, because they have to pay in more rupees than before. Inflation has been exported to India.

Why wasn't that a problem in 1982? Because India was so impoverished, its oil consumption was so low that it almost didn't matter what the oil price was. Now, it really matters. For China, it matters more. If they find that intolerable or, at the least, a sufficient threat to their economic planning, national budgets and strategic goals, they now have the economic and political wherewithal to craft alternative sourcing mechanisms. Which they are clearly doing.

International trade appears to be transitioning to a multi-polar arrangement and, if so, that's a big deal. Moreover, 23 countries formally applied to join, so this economic bloc and its existing potential could expand further. That has implications for U.S. equities, global index construction and valuation, and inflation.

So, that nostalgic old film about all those economic miracles of the last 40 years, "It's a Wonderful Era," seems about to run in reverse. Obviously, the trade sanctions against Russia, our massive trade arrangements with China, and the expanded BRICS phenomenon are complex and can incorporate many competing perspectives. We here today, though, should be able to agree on one thing: No one's opening a McDonald's in Moscow anytime soon. There we are, right back to the concept of denied areas of 40 years ago.

A Soviet militiaman reading a menu at the new McDonald's restaurant that will open in Moscow this week.

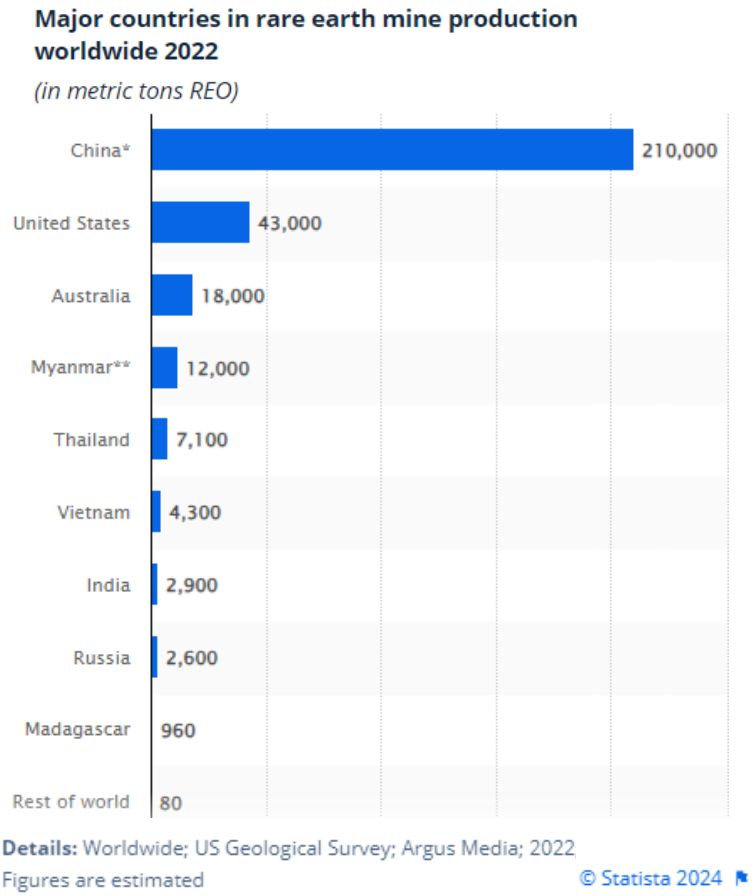
The Now, Going Forward Era Section

The Expanded BRICS Problem

The expanded BRICS trading bloc poses a new set of inflationary vectors. We know about the two most basic ones: a decade of disinvestment in critical natural resources, and drawdown of reserves from an oversupply position in 2014; and the monetary inflation pathway of excessive debt-funded deficits. It's why we own royalty companies on the important hard commodities like oil, iron ore, and the electrification metals, on the one hand, and the securities exchanges, on the other, along with other inflation beneficiary businesses.

The BRICS challenge, though, isn't exactly about choking off U.S. access to resources. It's not as if the U.S. is without its own prodigious supply of raw materials, separate from external sources like Canada and other nations. If China will reduce its supplies of electrification metals, like neodymium, the U.S. can develop more. That's not the issue. The same goes for manufacturing, like electric vehicle batteries or solar panels.

It's just that it will cost more. We buy from China because it's cheaper, because of the grand geographic labor arbitrage that commenced in the 1980s. If China wants to mine neodymium in a certain area, and a town is in the way, the town will be removed; the mine will happen. If a Chinese solar panel or silicon chip manufacturer produces extremely toxic waste is expensive to recycle, instead chooses to dispose of it carelessly, there may be no consequences. In the U.S., private property rights and environmental regulation regularly impose such prohibitive costs that a very high proportion of important projects never commence. It's not that the U.S. can't get its own, say, rare earths, it's that it will cost more. Our workers and land cost more. Rents are higher. Legal and regulatory costs are higher.



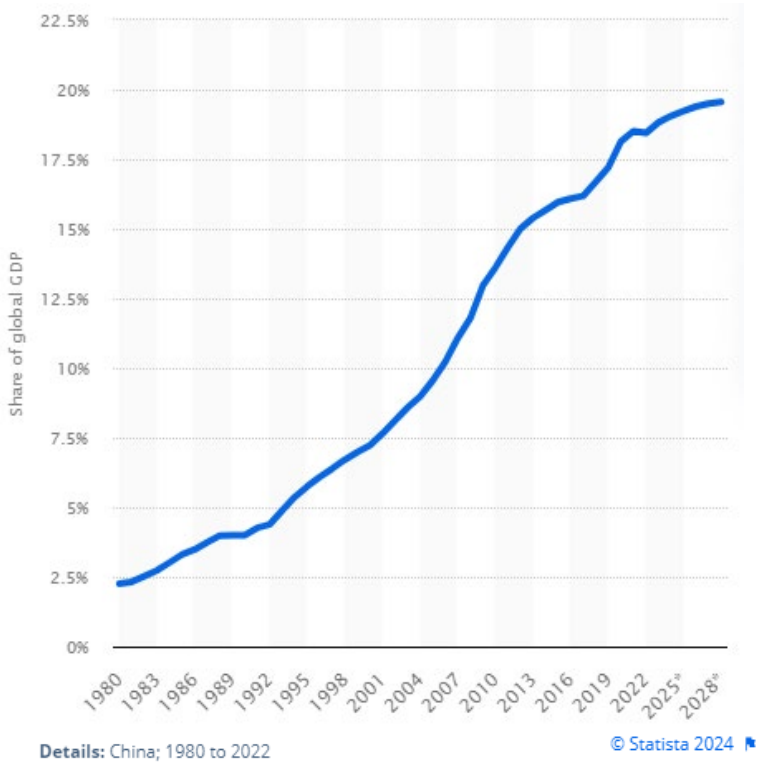
This, too, is part of the unwinding of what really was a passing era that would ultimately have an expiration date. Just some more (or returning) vectors of inflationary pressures for U.S. manufacturers and consumers.

Those are just supply issues. There's also the pure de-dollarization threat of the BRICS agenda. A prior example showed how the U.S. can export inflation to an oil importer like India, when the dollar rises against the rupee. That works in reverse if the dollar weakens because oil or other global commodities ever begin to be priced in other currencies. Those countries wouldn't need to buy dollars to buy oil. A weakened would dollar transmit higher costs to the U.S. immediately. Commodity prices would rise overnight.

The Direct Competitive Threat Problem: China and the U.S. Technology Sector

Here's yet another systemic issue that deserves serious thought by every equity investor, particularly index-based asset allocators. It's not 1982 anymore, and China is now an industrialized nation. In 1982, China's GDP was 6% that of the U.S. In 2022 in nominal, or exchange rate terms, it was 70%. But, in purchasing power parity terms, which is the more stable and economically realistic measure, China's GDP is now 20% *larger* than the U.S. economy.[4]

China's share of global gross domestic product (GDP) adjusted for purchasing-power-parity (PPP) from 1980 to 2022 with forecasts until 2028



There's virtually no industrial product China can't make. Its economic ascendance is more than that, though. It has made, and continues to make, enormous investments in technological evolution. In addition to educating vast numbers of engineers and making major investments in applied science, there has been an enormous investment in basic science.

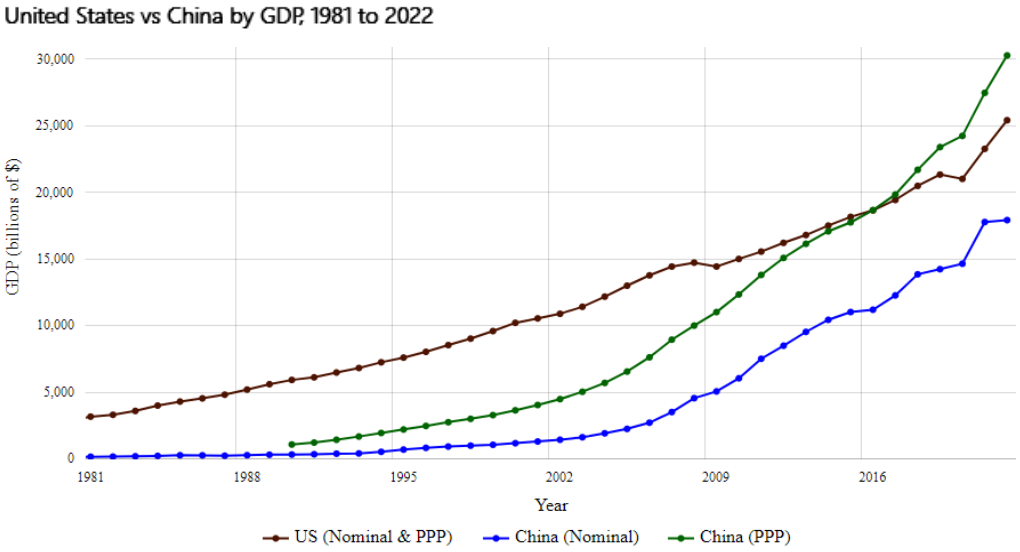
In 1982, the U.S. was still the leader in basic research, once conducted by the likes of Bell Labs, RCA, General Electric, Eastman Kodak, Polaroid and many other visionary companies. In 2021, the U.S. patent office granted 374,006 applications; a decade earlier, in 2011, the figure was 244,430.[5] China? In 2022, an incredible 4,323,000 patent applications were granted[6], nearly quadrupling in the past decade. Patents have a way of turning into commercial development.

[4] The exchange-rate basis, useful for international money flows and comparing current account balances, isn't a great measure of domestic value produced. It is subject to market-based swings and is distorted by differences in wage rates. What if the yuan is undervalued? Purchasing power parity adjusts for the local price circumstance, like the cost of a basket of goods. Per the Big Mac Index last year, the Chinese yuan was 37% undervalued at a China burger price of $3.50 vs. $5.58 in the U.S.[6]

[5] Ibid

[6] Source: Statista

The most publicly visible example of China's ascending technological capabilities is the electric carmaker BYD Auto. From 2012 to the end of 2022, BYD revenue grew at a 25% rate. By itself, that's not significant for today's discussion.



Source: IMF and International Monetary Fund, from https://statisticstimes.com/economy/united-states-vs-china-economy.php

Historically, Chinese companies manufactured goods for their own domestic market and, as a supplier, for export to U.S. and European companies. But, in 2020, BYD began selling its own vehicles in Norway. In 2022, it added Germany, France, and the Netherlands, among others, and the U.K. market in March 2023 . Which means that it has entered, stage left (or is it right?), onto the global stage. In the 4th quarter of last year, BYD sold more battery electric cars than Tesla. It can hardly be a coincidence that earlier this month Tesla reduced its prices in Norway, Germany, France, and the Netherlands.

This is the partial point: BYD, for its own account, entered the global market at scale, introducing a level of competition sufficient to force prices for Tesla a bit lower. And a bit lower prices force a company's profit margins more than a bit lower. That might not disrupt Tesla's business plans, but it might disrupt something else. Even after a price-cut related earnings decline caused Tesla's shares to drop 20% recently, it is still priced at 56x next year's widely expected earnings, and those earnings are expected to be 19% higher this year. A valuation that rarified rests upon a belief in a sustained high rate of growth. BYD's continued rapid expansion cannot but introduce doubt into the necessary sense of inevitability of that growth rate. Eventually, the facts will be what they will be. Tesla is the 8th highest weight in the S&P 500.

BYD: Chinese automaker takes EV sales crown

A Chinese automaker has passed Tesla as the world's best-selling EV maker, said **Nathan Bomey** and **Ben German** in *Axios*. Tesla last week reported a blockbuster quarter, delivering more than 484,000 of its electric vehicles, a 19.5 percent increase from a year earlier. But in the last three months of 2023 Tesla lost the bragging-rights title to BYD, which sold more than 526,000 battery-only vehicles. "Backed by investor Warren Buffett's Berkshire Hathaway," BYD boasts "arguably the world's most advanced battery" and outprices every competitor, with cars selling for as low as $11,500. The saving grace for Tesla is that it is "not expected to face BYD in the U.S. anytime soon," especially given the political firestorm a BYD entry would cause in the United States.

BYD's Han electric sedan

Still, BYD might just take over the rest of the world, said **David Fickling** in *Bloomberg*. "On almost every financial metric, the Chinese company is either advancing on or overtaking its American rival—with its gaze already set on the wider car industry." It's done so primarily by "owning its own battery supply chain" and sparing scarce materials like cobalt and nickel for cheaper iron and phosphate. "That translates into industry-beating financial performance." And it's using those profits to expand overseas, with a new assembly factory announced in Hungary and potentially others in Mexico.

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The full point is that if BYD has turned its attention from its domestic market to direct global competition, then other Chinese companies can do the same. The next most visible example of Chinese commercially applied technological prowess relates to the 2nd highest-weight company in the S&P 500, Apple.

In September 2023, Huawei Technologies introduced its Mate 60 Pro smartphone. It uses its own, internally developed 5G enabled chip that is apparently competitive with the Apple A17 chip. For practical purposes it has the functionality of the iPhone 15 Pro. This came as a great surprise – perhaps even shock – to the U.S. technology community, because four years ago the U.S. placed strict sanctions on China's access to state-of-the-art semiconductor manufacturing technology.

Rather than accepting the notion of being closed out of the possibility of advancing its economic progress, the nation apparently—and literally—decided that necessity would be the mother of invention. China developed its own state-of-the-art chip designs and foundry. This was not just reverse-engineering existing tech, but included new, proprietary technology.

In the space of a couple of months, the Mate 60 was outselling the Apple phone, despite limited availability. In the first week of this month. iPhone sales in China dropped by 30%, and Apple lowered the local prices of the iPhone 15 Pro and iPhone 15 Pro Max by 16%.[7]

These are merely the two most publicly visible examples a new phenomenon in world economic affairs. China has been employed as the manufacturing subcontractor for U.S. companies. That applies to the highest-end consumer technology that exists (which, subtext, means they know how to do it). In that relationship, Chinese companies have accepted very low margins, with the overwhelming bulk of the profit accruing to its U.S. customers, which earn just about the highest profit margins ever known on Wall Street. From a statistical perspective, it makes that level of profit an aberration. From a microeconomics perspective it makes it unsustainable; eventually, a too-high return creates or invites its own competition.

Embedded in the valuations of the leading U.S. technology companies is the expectation that China—and India, too, for that matter—are willing to accept a perpetually low rate of return, while their U.S. customers will perpetually enjoy returns that are many multiples higher. This might have been a valid assessment while those nations were technologically less capable, but they are clearly capable now. It appears that China has turned its attention from domestic commercial affairs and is now in global expansion mode. From these initial examples, it appears that this other vintage feel-good film, "My Delightful Terms of Trade, A Memoire," might also be rewinding.

One can't help but see the logical extension of these examples. What if a Chinese company decides to make a discounted version of the MacBook? Obviously, they can.

[7] https://www.reuters.com/technology/apple-iphone-sales-china-fall-30-first-week-2024-jefferies-2024-01-08/

Much more impactful for most investors, how about the Cloud? The major Cloud storage and services companies are, of course, the leading S&P 500 constituents: Amazon, Microsoft, Google and Apple. Salesforce and Oracle are also in the Cloud storage top 10. Despite the excitement about the cloud companies, at the end of the day it's just super-mega-massive data storage and retrieval on equipment that is manufactured in China. It doesn't appear to be proprietary. Not that that's a limitation any longer, in light of the Mate 60 smartphone. And if it's not proprietary, why can't some other company—it doesn't have to be Chinese—emerge to compete on the world stage to store data? Alibaba and Tencent are also in the top 10 providers globally, but so far have predominantly restricted themselves to China, and South and Southeast Asia.

China is moving from lower-margin businesses into higher-margin businesses. When people see that, they'll realize the film of the last 40 years is about to run in reverse. This would wreak havoc with stocks. Now, them's strong words, pardner. Just exactly how would that happen, do you reckon?

The Resultant Threat to Indexation, In Shorthand

A full Quarterly Commentary can be spent on this single issue, but for our easy listening tone today, just a minute or two, through a few descriptive, uncomplicated numbers.

Wall Street 2024 Estimates	S&P 500 Weight	P/E Ratio	Profit Margin	5-Year Est EPS Growth
Microsoft	7.26%	30.4	34.7%	15%
Apple	6.70%	26.4	26.6%	6%
Nvidia	3.47%	27.8	54.8%	102%
Alphabet (Google)	3.89%	21.9	5.0%	19%
Amazon.com	3.46%	42.5	5.9%	87% *
Tesla	1.50%	56.6	10.2%	2%
Broadcom Inc.	1.22%	20.6	47.2%	14%
Adv. Micro Devices	0.65%	42.6	23.2%	13%
Total	**28.15%**			

*Yes, that's a true figure, averaged among 47 analysts.

In the accompanying table are eight companies that are posed with the developing threats from China that we just discussed. These mere eight are 28% of the market cap of the S&P 500. If a handful of other IT companies were included, like Facebook, Salesforce, Qualcomm and Advanced Micro Devices, we'd be talking one-third of the index in this one highly interdependent business sector.

On this basis alone, any student of market history should immediately know—blind, so to speak—most of what they need to about valuation, correlation, return prospects and risk.

The features selected for the table are for your viewing interest without much need for explication. Observe the P/E ratios, from the consensus estimated 2024 earnings by Wall Street Analysts. The profit margins implicit in these estimates. The estimated earnings growth rates for the next five years.

The 87% five-year growth rate for Amazon is not a typo; it is the average of 47 analysts. Picking one cherry, the 23% net profit margin and presumed 13% earnings growth rate for Advanced Micro Devices are for a company that – as we covered in a prior Commentary – has not earned a cumulative profit since at least 1987, the earliest data readily available (albeit it had its episodic good years). Its 35-year cumulative loss appears to exceed $100 million.

What would happen if a hint of direct Chinese competition were to have a moderate but limited impact upon the profitability of these companies? It's a question that can be tested.

Using some round numbers – they can certainly be altered to suit – a 20% sustainable return on equity is indisputably a superior accomplishment for a large company. In the last two decades, from 2003, the S&P 500 ROE averaged 14%, amidst nearly ideal conditions: historically low, near-zero interest rates, a huge corporate tax rate reduction, share repurchases (the accounting for which boosts ROE by shrinking book value), and the margin benefits of outsourcing labor and manufacturing to low-cost nations. In the prior decade, from 1991 to 2003, the market ROE averaged 12.8%.

Let's also say these companies were then priced at 20x the earnings that a 20% ROE would generate. That, too, is well above the long-term average valuation of the stock market. If that were to be the case, here is what the resultant share prices would be, alongside their current prices. Again, these are very favorable profitability and valuation measures. And, again, this is more for your perusal than my speaking pleasure.

Theoretical vs. Current Share Prices		
Current Price	Theoretical Price	Change
$394	$119	-70%
189	16	-92%
571	44	-92%
145	87	-40%
153	71	-54%
211	61	-71%
1,144	207	-82%
163	135	-17%

One or two more tables, and we're done with this tour of what indexation has become in the past half-dozen years. Unfortunately, it is necessary in order to understand where you stand.

The Curious Case of Global Index Weightings – From the Outside, Looking In

Published earnings projections don't see it or account for it. Yet we just easily saw, when looking from *outside* the U.S., the disruptive threat to the established large-cap companies that dominate the U.S. stock market— by observing the recent competitive actions and immediate impacts of Chinese technology companies.

	Share of World GDP 2023, PPP-based	iShares MSCI ACWI ETF Weights (1/18/24)
China	19.1%	2.6%
U.S.	15.2%	63.4%
Japan	3.7%	5.5%
U.K.	2.2%	3.4%

Source: International Monetary Fund [8]

The disruptive threat to U.S. equity *indexes* is also best seen from outside the U.S. In shorthand, again, just a few charts will paint the picture. They run in sequence.

China has now reached a 19% share of global GDP, versus the U.S. 15% share. This is on a purchasing power basis, which is the way the IMF and even the CIA assess economies.

The U.S. stock markets, by value of their listed equities, have a 46% share of the world's total stock market value. China's stock markets value is 33% of the value of the U.S. stock markets, and 15% of global stock markets.

Value of Listed Equities Sept. 2023 ($ in trillions)	
China (Shanghai, Shenzen, Hong Kong)	15.08
NYSE & NASDAQ	45.82
World	99.33

Source: Statista, from World Federation of Exchanges (focus.world-exchanges.org)

Investors in the standard global index, the MSCI All Country World Index (ACWI) , are presumably there for its breadth, to diversify

[8] https://www.imf.org/external/datamapper/PPPSH@WEO/OEMDC/ADVEC/WEOWORLD

country-specific risk. The U.S. is a 63% weighting.[9] The China weight is 3.9% of the U.S. weight, and 2.6% of the index.

The Information Technology sector is 23% of ACWI, and U.S. companies are 81% of that. Chinese IT companies are 0.4% of the ACWI IT sector. Chinese IT companies total 0.09% of ACWI overall, which is less than 1/10th of 1%.

This glaring divergence could be sustainable in a general condition of stasis. But the relevant conditions are anything but.

iShares MSCI ACWI ETF, IT Sector weights, as of 1/18/24

% of	Fund	IT Sector
IT Sector	23.5%	100.0%
U.S. IT cos.	19.0%	80.7%
China	0.09%	0.4%

Source: International Monetary Fund

- China is growing relative to the U.S. economy, the technology sector in particular.
- China's intention to escape its captive-manufacturer status is unceasing. One policy example is the National Integrated Circuit Industry Promotion . The goal is to have 90% of the country's internal semiconductor needs designed and produced domestically by 2030.

  Semiconductor *design* (another discussion for another day) is the highest-margin technology business, singularly responsible for the extraordinary 50%-level profit margins of the likes of Nvidia and Broadcom. That is because, having long ago outsourced their manufacturing, today's American chip companies simply develop the designs and *collect royalties* (sound familiar?) from the manufacturer (think Taiwan Semiconductor). China's withdrawal of its demand would have very obvious consequences for the U.S. semiconductor industry.
- There are very large Chinese companies that are not even publicly traded, like Huawei Technologies, which introduced the iPhone replacement, the Mate 60. What sort of market cap should the Chinese version of Apple have? Listings of Chinese companies are increasing.

An index investor can no longer be indifferent to the possible emergence of China in the world technology arena. The obvious absurdity of the China equity market capitalization being less than 4% of the U.S. equity index weight will eventually be eliminated. That would entail reconstituting the MSCI ACWI—and probably other global indexes—to properly represent the role that publicly traded Chinese companies play in the global economy.

That is more consequential than it might seem. Since the sum of the parts must equal the whole, the greater the weight of Chinese companies in an index, the smaller the weight of other nations must be. Bear in mind that 1) such reconstitutions are done holistically, not marginally, and 2) a reduction in the U.S. mega-caps weightings would not simply be a ministerial change. The index funds that hold those shares would have to sell them, and those are substantial quantities of shares. A China-oriented index reconstitution would be a very disruptive process that will probably entail large valuation losses for many U.S. companies that are now the primary positions in the MSCI ACWI – and, of course, in the S&P 500.

[9] U.S. companies are 19 of the top 20 holdings, and 27 of the top 30.

Implications for Portfolios and Some Recent Portfolio Developments

Picture a darkened theater, the stage lit, an approaching collision. Rolling in low, from stage left, two new characters: Expanded BRICS and China, wielding their commodity, currency and technology cudgels. Center stage, standing high and confident, unnoticing eyes pointed heavenward, the lead indexes: MSCI ACWI and S&P 500, on their shiny but rickety podium, made of structurally distorted and vulnerable valuation, concentration and allocation blocks. The lead character, Portfolio, stands to one side, eyes slowly following, not yet comprehending, mouth not yet agape. Suspenseful music, with hints of urgency, prompting a sparse Greek chorus: What will happen? Will Portfolio move aside in time, or no? Collateral damage be he, or does he walk offstage into a new dawn?

The advancement of BRICS and China adds two more dimensions to the change-of-era phenomenon we've detailed in recent years. They just keep adding up. The central risks might be characterized as1) a good-old-fashioned-but-really-really big tech sector valuation collapse and, 2) more importantly, an extended inflationary era. The portfolio implications of those risks are also two-fold: 1) the need to incorporate effective tech-distant diversification, and 2) to include inflation beneficiaries, without foregoing expected return while awaiting that outcome.

It is often said (I heard it on the radio just last week), that many S&P 500 companies have pricing power in an inflationary environment. Yes, but no. Yes, when the price of copper rises, the producer can charge more. Unfortunately, the employees, equipment, and fuel will cost more, too. In a different manner befitting its different business, a consumer products company might have pricing power on the top line of the income statement, but no protection, one or two line items down, from rising raw materials and labor costs. Most businesses have large balance sheets and labor forces upon which inflation can act.

That's the reason for, among other select business models, the hard asset companies in our portfolios. These royalty companies earn their revenues as directly as is possible from the underlying asset itself, whether it's an ore, mineral fertilizer or even an off-shore wind project, without intervening operations or expense. They help finance these projects, but the physical capital investment and expense are borne by third-party operating companies. The royalty company receives its share of the revenues off the top, so to speak. Accordingly, they generally have extraordinarily high profit margins even in the absence of inflation in the underlying assets they finance. They have no property and equipment or meaningful employee base upon which inflation act against them. Over time, they are natural compounders.

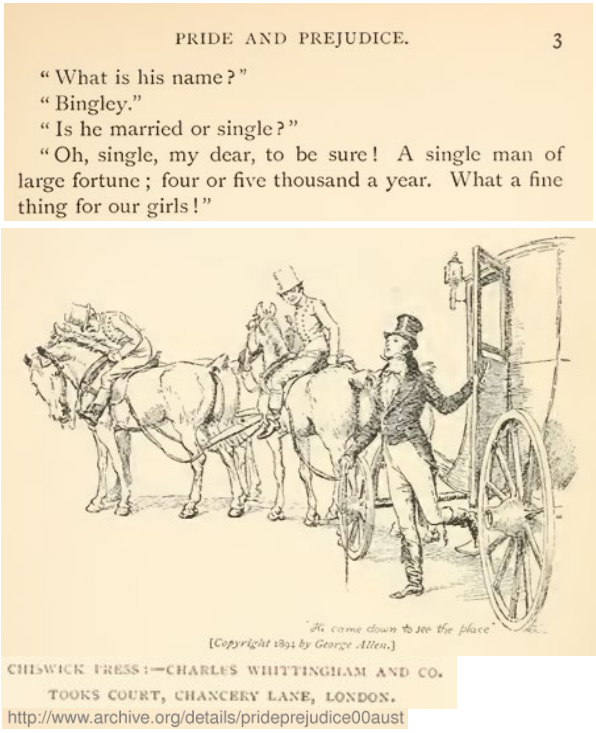
As powerful as compounding is, it nevertheless takes quite a bit of time to manifest itself sufficiently to stand out above the short-term growth trajectories and valuation fluctuations of standard businesses. So, to realize the benefits of compounding requires informed patience; it can't be disturbed or 'optimized' by trading in and out of it.

Another special investment attribute of hard asset investing: there is very little supply of such companies and almost no index presence. That, too, is an aberration of the past several decades of the financialization of investing, enabled by low, then artificially low interest rates. That is a very attractive strategic opportunity: buy something with little available supply today that might be in great demand and revalued upward on some tomorrow. Informed patience is required for this, more of which shortly.

In macroeconomic re-wind mode, capital should revert from financial to tangible assets, which is where wealth traditionally was kept. Especially assets that generated income. In 18th and 19th century England, someone's wealth was not quoted in the value of their stocks, bonds and the equity value of their homes, as it is today, but on the income their capital earned. In the opening pages of Jane Austin's *Pride and Prejudice*, a wealthy young man's fortune is described as "four or five thousand a year." That was the income produced by his capital. Although impossible to realistically translate the purchasing power of £5,000 pounds in 1813, most particularly because of what kind of labor and personal service could then be purchased, it is variously put at several hundred thousand dollars.

Most of this gentleman's estate income was likely from farmland leased out at probably low but very stable yields, and long-dated, even perpetual government bonds, also very stable income streams. And maybe some stock, which the prudent understood to be risky—and is why they offered higher yields—such as the many government-granted import-export monopolies in overseas colonies. Among the most successful and disastrous of these were the East India Company and the notorious South Sea Company, in which Isaac Newton reportedly lost much of his fortune.

Closer to home, look at the stock quotations in the daily paper from before the age of financialization. Aside from a much greater presence of raw materials producers, you'll see that a good quarter to a third of them were preferred stocks. People liked their income. The preferred yields on the accompanying page from a 1929 N.Y. Times averaged about 6%.



PRIDE AND PREJUDICE. 3

"What is his name?"

"Bingley."

"Is he married or single?"

"Oh, single, my dear, to be sure! A single man of large fortune; four or five thousand a year. What a fine thing for our girls!"

"H. come down to see the place"

[Copyright 1894 by George Allen.]

CHISWICK PRESS:—CHARLES WHITTINGHAM AND CO.
TOOKS COURT, CHANCERY LANE, LONDON.

http://www.archive.org/details/prideprejudice00aust

TRANSACTIONS ON THE NEW YORK STOCK EXCHANGE

THURSDAY, FEBRUARY 21, 1929.

Day's Sales.	Wednesday.	Tuesday.	A Year Ago.	Two Years Ago.
3,394,990	2,907,000	3,205,150	1,766,730	2,101,330

Year to Date.	Same Period 1928.	1927.	1926.	1925.
172,193,490	96,328,272	72,723,265	71,261,257	72,056,230

1929. High.	1929. Low.	Stock and Dividend Rate.	First.	High.	Low.	Last.	Net Ch'ge.	Closing Bid.	Closing Ask.	Sales.
170	134½	Electric Auto-Lite (4)..	157½	160	155½	159½	+ 2½	159¼	159½	15,600
113	109	Elec. Auto-Lite pf. (7)*	112	112	110½	110½	— 1½	110½	113	30
15¾	12¼	Electric Boat	12⅞	13¼	12⅞	13⅛	+ ⅛	13⅛	13¼	1,700
64⅞	43⅞	El. Pwr. & Lt. (1).....	59⅜	60½	59	60½	+ ¾	60	60¼	7,100
92⅞	82⅞	El. Storage Bat. (5)....	85	85¾	85	85¾	+ 1	85	86	600
22½	10⅝	Em. Brantingham, A...	17⅝	17⅞	17⅝	17⅞	+ ⅜	16	17⅝	100
37	27	Emp. Cap. Corp. (2)...	34	37	34	37	+ 5	37	38	910
60¼	48½	Engrs. Pub. Serv. (11).	54	54	54	54	..	53¾	54	800
100	90	Engrs. Pub. Serv.pf.(5)	92	92	92	92	— 1	92	93	200
36	31½	Equitable Off. Bldg. (2)	34½	36	34½	36	+ 1⅞	36	36½	25,000
75⅝	66⅞	Erie	69½	71⅜	69½	70¼	+ 1	70⅛	70½	11,300
64⅝	59⅞	Erie 1st pf.	61	61⅞	61	61⅝	+ ⅜	61¼	61½	1,200
60¼	57	Erie 2d pf.....	58	58	58	58	+ 1	58	59	100
52¾	44½	Eureka V. Cleaner (4).	46⅞	47	46¾	46¾	+ ¼	47¼	48	600
110⅞	107¼	Fairbanks-M. pf. (7)..*	108	108	108	108	..	107½	108	20
22⅝	18	Fed. Motor Truck (80c)	19	19¾	18⅜	19⅜	+ 1¼	19¼	19⅜	600
106	95	Fid.-Phenix F. Ins. (2)	97¾	98	97½	97½	+ 1½	97	98½	500
97¾	85	Filene's Sons	95	96¾	94½	96¾	+ 1½	94	96½	1,600
107	105¼	Filene's Sons pf. (6½).	105¼	105¼	105¼	105¼	— ¼	105	106½	300
71⅞	64	First Natl. Stores (1½)	70	71⅞	70	71¼	+ ⅜	71¼	71½	15,600
20⅛	15⅜	Fisk Rubber	16½	17	16½	16⅞	+ ⅛	16¾	16⅞	4,300
72½	63¼	Fisk Rubber 1st pf....	64¼	64¼	64¼	64¼	+ ¼	64	66	100
82½	66½	Fisk R. 1st pf. convert.	70	73	70	73	+ 2	73	75	200
84⅞	72	Fleischmann Co. (13½)	73½	73¾	73	73¾	+ ¾	73½	73¼	4,200
69	62	Follansbee Bros. (12½)	63⅞	63¼	62	62¼	— 1¼	62¾	63¼	1,500
53	45	Foundation Co.	48	48	48	48	+ 3	47	50	100
101	85¼	Fox Film, Cl. A (4)...	88	88¾	87¾	88	..	88	88½	3,000
54⅞	45⅞	Freeport Texas (4)....	47	47	46⅛	46¼	— ⅛	46¼	46⅛	2,000
106	101	Ful. (G.A.) Co.pr.pf.(6)	105⅝	106	105⅝	106	+ ½	105⅝	..	200
33⅞	24	Gabriel Snub., Cl. A..	29¼	29⅝	29¼	29⅝	+ ½	29½	29¾	500
25	15	Gardner Motor	17⅞	17⅞	16½	17	— ⅛	16⅞	17⅛	2,600
102	86	Gen. Am. Tank Car(14)	91½	91⅞	91	91	— ⅝	91	91½	1,000
81¼	66⅝	Gen. Asphalt	69½	70	69	70	— ¼	69¼	70	1,500
60¾	37½	Gen. Cable	54½	55	54½	55	..	54	55	1,300
119⅞	81	Gen. Cable, A (4).....	109½	109¾	108¼	108¼	— 1⅜	108	109	2,200
73	63	Gen. Cigar (4)	72½	73	72	73	+ 1	72½	73	19,000
262¾	222	Gen. Electric (16)	233¾	240	232	240	+ 8	239½	240	24,000
11¾	11	Gen. Elec. special (60c)	11⅝	11½	11⅜	11½	..	11½	11⅝	3,000
89	70	Gen. G. & E., Cl.A(1½)	88⅞	89	88¼	89	+ ½	80	88⅞	400
116½	105½	Gen. G. & E. pf. A (7)*	109	109½	109	109	+ ½	108½	110	150
135	121	Gen. G. & E. pf. A (8)*	122	125	121¼	125	+ 4	125	127	130
115	107¼	Gen. G. & E. pf. B (7)*	109	110½	105	110	— ¾	108½	110¼	220
89⅛	83	Gen. Mills (3)	85½	86½	85⅛	86¼	+ ⅜	85⅝	87	500
86	78	Gen. Motors (3)	80⅜	81⅝	80	81½	+ 1	81¼	81⅝	64,000
109¼	109¼	Gen. Motors pf. (6)...	109¼	109¼	109¼	109¼	..	109	..	100
126½	124¾	Gen. Motors pf. (7)....	125	125	125	125	..	125	125¼	100

A Place for Some Capital-Intensive Businesses with True Contingent Pricing Power

There are the securities exchanges in our strategies, of course, which we've adequately covered. Also, '2nd tier' varieties of asset-light businesses, like car dealerships (AutoNation and Penske Auto Group) and shipping brokers (Clarkson PLC and Braemar PLC). Less well reviewed have been a few companies that are asset intensive, but have particular inflation-beneficiary attributes.

One such is Archer Daniels Midland, one of the largest agricultural commodities processors. They turn grains and legumes into flour, protein meals, oils, starches, syrups, cellulose pulp, what have you. Almost everything on a dinner plate came through, in some fashion, ADM's hands. Yes, they have machinery, terminals, ships, railroad cars. And as an intermediary, theirs is a low-margin business. But it is a constant-spread business that earns a pretty stable margin on a very large sales base. When pricing rises for a period of time, that percentage spread is on a higher dollar amount, hence more dollars of income—so income can rise nicely when agricultural commodities do. And there is the opportunity to expand their margins somewhat.

"Somewhat" can be a big deal in a low-margin business. If Microsoft, with its 35% net margin, were to increase its gross margin by a half percent, it would not be a big deal. Between 2020 and 2022, the Archer Daniels Midland gross margin—sales less cost of goods sold—improved by 0.57%. It's simple operating margin, just deducting the standard selling, general and administrative expenses, rose by over 50%, even though SG&A rose also. Net income rose even more. That was just a matter of improving the net profit margin by 1.53 percentage points, to 4.27%.

If we're entering a multi-polar world—of changing global trade flows and terms of trade—it suggests there will be opportunities in certain types of other asset-intensive businesses that have pricing power together with incumbent installed bases of assets that can't be replicated. That can be a very remunerative investment. That is, such a business won't have to contend with the universal factor that so often spoils otherwise good investment ideas: the increased supply by competitors that is induced by rising prices. That was the perpetual problem with a gold: higher prices work for a while, until it induces more supply.

One such example, which might lately be found in some strategies, is Eagle Materials. It is one of the largest U.S. producers of cement and aggregates, as well as gypsum wallboard. Traditionally, cement makers were highly localized businesses, because cement's high weight/value ratio makes it uneconomic to truck farther than about a 150-mile radius. A new highway or construction project in the area would be profitable, but when that activity ended, the quarry might have to close until the next time. Over many years, Eagle Materials has taken that cyclicality out of the business by acquiring other such companies, even though any single location remains subject to the historically episodic demand in its immediate environs. It now has dozens of facilities throughout the mid-west and into the sunbelt.

The highly local monopolistic characteristics of each location still remain, though, which lends that character to the entire company. And for obvious reasons, it's unlikely that many more cement plants will be built in this country. Eagle Materials has 25 to 50 years or more of reserves at every location. This is a kind of business that *can* benefit from a long-term rising price environment.

The same could be said for offshore drilling companies: those that remain have figured out how to remain profitable indefinitely at extremely depressed activity levels, although industry conditions have been improving. Offshore platforms are extremely expensive and, again for obvious reasons, no one is going to

be replacing them. At some point, with their version of localized monopoly characteristics, they will have both increase demand and pricing power, and outperform, too.

A Significant Portfolio Development, in Three Parts

Part One, Narrowly

An important tipping point was reached in many portfolios last year. It took a half-dozen years and is the result of one of the two greatest positive forces in investing: compounding. We're not referring to the very visible Texas Pacific Land Corp. position. That is the product, for older-vintage accounts, of 10 to 15 years of compounding. The greater the weight a successful strategic position like that becomes, the more volatile a portfolio will be, since an individual stock will vary more than a portfolio of stocks.

In 2022, TPL was visibly responsible for such accounts appreciating substantially during a year when the stock market was down substantially. In 2023, TPL was responsible for those accounts declining modestly while the market was up substantially.

What wasn't very visible is that, after a half-dozen years of compounding, a second strategic position in older-vintage accounts also achieved an important critical mass. Its appreciation in the final quarter of 2023 substantially offset the TPL decline during the period. [10] This is the Grayscale Bitcoin Trust (GBTC). In rough terms, averaged across the group of such accounts, its 80% appreciation offset about three-quarters of the 33% decline in TPL.

The positive impact of the cryptocurrency position in that cohort was understated in that it doesn't include Grayscale Litecoin Trust and Grayscale Bitcoin Cash Trust. First purchased early last year, they doubled and tripled during the 4th quarter. Also, many clients opted to gain cryptocurrency exposure through our crypto limited partnerships rather than through the Grayscale trusts, so the impact of those returns is also excluded from the figures above. It's quite possible that the cryptocurrency holdings fully counteracted the TPL decline.

That by itself is not of particular importance. Those are short-term fluctuations. If we paid overmuch attention to such volatility, we might have sold out of TPL a half-dozen times in the last decade or two, and it would be a long-forgotten point of discussion.

– The first important observation is that, in round terms, the GBTC average weight at the beginning of the quarter would have been about 5% (working backwards from the December 31st price), yet that was sufficient to counter a 37% position's large decline.

– A second observation is that whereas TPL was originally purchased at a 6%-plus core weight, the original GBTC purchases were at a de minimis or near de-minimis level of 0.25% to 0.5%. Yet, we considered it no less important a strategic position than TPL.

The logic can be summarized by the separate positive and negative cases for Bitcoin:

[10] Restricting ourselves to that oldest contingent of accounts that could and would buy it. There are any number of constraints and timing and implementation issues among any large group of accounts. Many, for instance, were constrained from owning bitcoin in any quasi-direct fashion, but were permitted to own it indirectly, as through MicroStrategy, though that was not our preferred instrument and not purchased in fully discretionary accounts.

- The risk, six or seven years ago, that the Bitcoin experiment would fail had to be considered high indeed. Rationally, a 50% chance of failure might have been too low. Would a 90% or 99% chance of failure have been a defensible estimate? Sure.
- The success case return, though, would be far greater than even the 99% loss probability—that is, greater than a 100x return. Valuation exercises at the time suggested that, should Bitcoin become accepted as a parallel currency—parallel to all the global currencies, since that was both its purpose and its reach, being digital and borderless—its return possibilities were on the order of 1,000-fold.
- That wasn't just an abstract expectation, like buying a lottery ticket. It was rooted in the basic premise of Bitcoin: as the first ever, and only direct protection against currency debasement. Even in a historically benign inflation environment of 3%, even for a global reserve currency like the U.S. dollar, money loses over 85% of its value in the course of a 70-year lifetime. Poetically speaking, the value of such an instrument is incalculable. It is actually calculable, though, depending on the use case.
- How did we reconcile the extraordinary risk vs. extraordinary return choice?
    - *Arithmetically,* we handled it through an appropriate sizing. The return possibility in 2017 was that of a new, unknown asset class progressing from a rounding error market capitalization of $40 billion in the context of the global financial markets, to whatever aggregate demand the global population might eventually have for such an instrument. For example, just the global money supply of just the U.S. Europe, Japan and China, was near $60 trillion at that time. Today, the figure is near $90 trillion.

      That magnitude of return potential permitted a sufficiently small initial portfolio investment that a complete loss would literally be a rounding error. Conversely, a 0.5% position that appreciates 100x would, all else held equal, add 50% to a portfolio's value. A 1,000-fold return would sextuple the value of a portfolio.
    - *Strategically*, we viewed the 0.5% position cost as a one-time insurance premium that paid for the ultimate currency debasement hedge. When people say that bitcoin went up, they think of it on a standalone basis, like a stock. We think of it in relation to other currencies, like an exchange rate. To us, Bitcoin didn't go up, other currencies depreciated.

      In mid-2017 you could purchase a $1 million home with 393 bitcoins. Today, you'd only need 25. To us, that's a stronger currency against which other assets are deflating.

– The third and most important observation is the critical mass or tipping point that GBTC reached this past quarter. If the near-doubling of a 5-ish % GBTC position was sufficient to offset a decline in a 30+ % TPL position, then from this point forward, further meaningful appreciation of Bitcoin will have an obvious impact on such a portfolio. It will be the second such increasingly impactful strategic position. Again, it took many years of informed patience, because that's what compounding requires.

A related point is that TPL and Bitcoin are not the only significant strategic holdings of size. The others might not be so individually, but they are as sectors. Those would be the other royalty companies as a group, and the securities exchanges as a group. Either or both, in their turn, can have their observable

impacts on a portfolio, particularly as they continue to compound. Bitcoin, however, does have the greatest potential by far—with a qualified exception. That exception is Bitcoin Cash.

Part II, Bitcoin ETFs and the Bitcoin 'Refresh' Opportunity

Bitcoin Cash is a fork of Bitcoin. Its most important feature is its identical monetary protocol to Bitcoin, meaning the same fixed supply, a 21-million-coin limit in the year 2140. Therefore, in its pure money function, it should ultimately share the same value.

Yet, one Bitcoin Cash trades at 0.6%, less than 1% of a bitcoin. If Bitcoin Cash were to appreciate to merely 6% of Bitcoin—which is still just a tiny fraction—you'd get all the appreciation potential of Bitcoin, whatever that might be, but x10.

That extraordinary gearing, as they say in England, makes possible a repeat of our original Bitcoin experiment. A properly proportioned amount of Bitcoin Cash can be a complementary return-and-hedge asset in a wide range of investment strategies. Perhaps it's most natural and effective place is in a cash and fixed-income portfolio, which has no inherent protection from debasement. True, Bitcoin Cash would occupy a weird location on the risk/reward matrix chart that a bond manager would use, but paired they might be like the Reese's Peanut Butter Cup commercial – you know, the crash between the two trucks, which serendipitously spill and mix their cartons of chocolate and peanut butter onto the road.

As small as Bitcoin Cash's market value is, at $4.4 billion, in the world of trillion-dollar companies, it is clearly not unknown. An indicator of demand is that as soon as anticipation of the SEC's approval of Bitcoin ETFs heated up in mid-November, the Grayscale Bitcoin Cash ETF (BCHG) rose from its customary NAV price to, as of January 22nd, a 70% premium to NAV. That's far exceeds the greatest premium that GBTC ever reached, so we no longer purchase BCHG.

There is, however, an alternative within Horizon Kinetics' Limited Partnerships, of which clients may avail themselves. It was begun in 2017, holds Bitcoin Cash directly and, of course, without the premium.

Part III: The Continuing Convergence of Crypto and the Incumbent Financial System

The regulatory approval of Bitcoin ETFs was very big news. More than that, it was a necessary precondition for more important developments that aren't in the regular news. Bitcoin ETFs equal institutional acceptance of Bitcoin itself. Major investment firms are now taking it off their restricted lists. Futures have been trading on the CME since December 2017; contract volumes have risen more than 2.5x and the average monthly price by 4.2x. The existence of the ETF cash market will deepen the trading possibilities.

Even at this early stage of becoming an accepted asset class, Bitcoin volume alone is approaching 10% of the NASDAQ's total. Trading volumes will increase yet more, because this will be beneficial to all sorts of Wall Street businesses, which means ever more parties of significance and influence that have a vested interest in furthering Bitcoin's market development. CME Group, as an example, currently has the largest open interest for Bitcoin futures contracts in the world. The NYSE, Nasdaq, and Cboe have applied for rule changes that would allow them to list options on their new Bitcoin ETFs.

At the most publicly visible level, the existence of ETFs will invite both 'large' and 'small' money into those funds, which will buy more bitcoin. Between January 11th, and January 18th, BlackRock's iShares Bitcoin Trust (IBIT) collected $1.0 billion of AUM. So, how're they doing?

The iShares ETF's annual fee is 0.12% until the fund reaches $5 billion, then 0.25% on assets above that. It's difficult to see how fees that low could ever have a meaningful impact on a business as large as BlackRock. So why does it bother?

There is an old-school, big-money answer: Lending. Great fortunes have been made in lending. There is a lending market for Bitcoin, and it is not small. Even at recent loan rates in the 5% to 7% range, lending is far more profitable than custody. Demand to borrow Bitcoin has been expanding, but of course the total supply is not. ETF providers are not allowed to directly lend out assets or take lending fees, but where there's a will there's a way (more below).

As well, there is a new form of cryptocurrency lending developing. That is lending it for very short periods of time, and it also solves the problem that interferes with an otherwise great business: credit risk. Unique aspects of the Bitcoin technology solve that problem. This form of lending is called a flash loan because, believe it or not, the loan exists for only up to several minutes. It is an uncollateralized loan, yet also risk-free to the lender. The market for such a short loan is cryptocurrency arbitrage.

In conventional arbitrage, algorithmic traders make use of small price differences in a stock that trades on multiple exchanges. That's done in high volume with nano-second latency, where even a penny differential is profitable. It's accomplished on the four major North American stock exchanges in the U.S. In contrast, there are hundreds of cryptocurrency trading venues around the world and about 8,000 traded cryptocurrencies. The price differentials are usually expressed in currency pairs, like the exchange rate between Ethereum and Bitcoin, and any two coins can form a pair. The number of possible arbitrage trades is massive. This could become a very large market.

The way the loan can be safe to the lender is because of an attribute of the cryptocurrency blockchain validation process. The loan is valid only during the cryptocurrency block creation period, which is 6.4 minutes on the Ethereum blockchain. A bitcoin can be associated with an Ethereum coin to accommodate a smart contract that defines the terms of a loan, and which is attached to the Ethereum blockchain.

If the loan is not repaid within the period, the transaction pertaining to the loan is cancelled, so that it is not posted to the blockchain, as if the bitcoin was never lent out. The default risk has been transferred from the lender to the counterparty.

The standard gross rate for a loan with about a six-minute duration is 0.09%, or 9 basis points. There is some fee associated with the transaction, and this does not include pool-based fee-sharing, as happens now, but for example simplicity, assume a full 0.09%. That might not seem like much. But for someone who has a reserve of cryptocurrency to lend out, this is what an expected return could look like. If the holder were to make just one 6.4-minute loan per day, the annual compounded return, reinvesting the interest income into additional arbitrage lending, would be, because cryptocurrency trades 365 days a year, 1.0009^{365}, which is 38.9%. In practice, someone would make more than one loan per day, but neither would they be likely to loan out more than some portion of their reserves.

This is a developing market, with many unknowns. Nevertheless, how intriguing must this new class of loans be for brokerage firms, banks and other custodians? If flash loans, at scale, can generate merely a reasonable fraction of the theoretical frictionless yield just described, and if ETF issuers could capture that, then BlackRock's 0.12% fee makes all the more sense. The manager of a Bitcoin ETF would keep the coins on the balance sheet, but lend them out. Now, an ETF manager can't lend or benefit directly. The net loan interest, after paying a fee to the securities lending agent that effectuates the loan, can only accrue to the

ETF shareholders. However, BlackRock owns a securities lending agent, so in that manner flash loan interest can redound to the company.

The theoretical earnings to the ETF are so great that in such a scenario one can plausibly imagine it exceeding the fee sufficiently to pay the shareholders a dividend. If that's plausible, then how high a dividend? That has implications that ramify beyond whether BlackRock charges 0.12% or instead pays out 1.2%.

The most intriguing musing: should a significant and normalized flash loan market ever be established, then what impacts might there be from a risk-free rate of return that is competitive with or exceeds those from the bond or equity asset classes?

These questions fall into speculations, and obviously this a complex topic that will be evolving rapidly. They are introduced because of the changes they might eventually bring to the investment landscape. The narrow takeaway for the purposes of our portfolios is that the acceptance vs. failure balance of the Bitcoin experiment has shifted meaningfully. One might be so bold as to suggest that cryptocurrency seems to be coming into its own.

Summation

All of this can probably be reduced to a couple of paragraphs. It's about scarcity investing in a world in which the geopolitical supply and demand forces and the competitive relationships of the past 40 years are being challenged, ending and even reversing. Relationships that were highly beneficial to U.S. corporate growth and profitability, to government funding and monetary policies, and which transmitted, of course, to investors and consumers.

If the impacts will be an inflationary landscape in which there is more-but-cheaper money and supply-constrained, more-costly commodities, then one wants to own scarce assets. Throughout history—through wars, national upheavals, both slow and fast inflations—the highest real returns have been from items of recognized scarcity. Traditionally, they were tangible assets, whether land, gold, diamonds, or art and other collectibles. It was never money, and common stocks as an asset class have a pretty sketchy record.

- There are maybe a dozen or so companies in the world like TPL, which require minimal or near-zero reinvestment of earnings in order to sustain a high and extended rate of financial return. They are tied directly to the hard assets that figure centrally in the developing global supply/demand equation.
- There are only a dozen or so major regulated securities exchanges in the world, which generate consistently high financial returns with minimal reinvestment needs, and benefit directly from both the money and commodity related conditions that now threaten.
- There are only a handful of ways to own Digital Scarcity, meaning the few limited-issuance cryptocurrencies. Other than those, there is no stable, non-debaseable money in world (with the exception of those no longer produced, like a Lincoln head penny). Money's central problem is unrestrained supply.

Some of the world's largest money managers will try to make use of this limited-supply crypto, and the securities exchanges are likely to be the venues in which the increasing number of instruments and trading activity around crypto will converge.

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