



## Misunderstandings Present Great Opportunities

A couple commentaries ago I wrote about emerging markets and their promise and I will expand on that here. I thought I would begin with an observation. Overt corruption, excessive deficits, money printing/inflation, unfunded liabilities, weakening rule of law and arbitrary and highly politicized economic decision making are all historically considered Emerging Markets (EM) traits. However, when you think about these factors, they equally describe the developed world these days as opposed to only the emerging markets. If this is true, and the western world and the U.S. are now more akin to how we previously viewed emerging markets, should different rules apply to how we value our public stocks and vice versa in emerging markets?

When assessing the risks in the U.S., I will address three main topics. 1) valuations in the U.S.; 2) central bank decisions and 3) geopolitical issues.

Going out of order, the only thing that U.S. investors seem to care about is potential/expected Federal Reserve actions. "Don't Fight the Fed" has never been stronger. The obvious analogy is Japan. They have led the way in all things related to leverage and Quantitative Easing ("QE").

Japan has done many things that economists would say will create poor results and yet those poor results historically didn't happen. The four actions that should have had negative results are:

- Central bank pegging rates at abnormally low rates
- Central banks printing money, i.e. QE
- Continued massive budget deficits. Japan has averaged a 6% budget deficit for the past 25 years. Averaged. By comparison, the U.S. has averaged a 4.2% deficit over the past 25 years.
- Debt/Gross Domestic Product ("GDP") > 100%. Japan is up to roughly 260% debt to GDP, up from 50% in 1989 when the Japanese everything bubble popped. By comparison, the U.S. is at 130%.

Economists would say that the above would lead to a weak currency and much higher than average inflation. We all know Japan has had very low/negative inflation and the Yen is only down 13% versus the U.S. dollar over the past twenty-five years. So what gives?

Economics is directionally good but a world's economy or currency value is influenced by many factors, most of which can't be put in a formula. I don't have a great answer, but here are a few potentials; the population is declining which leads to less aggregate demand every year, Japan is a heavily export driven economy which tends to make your currency stronger, all-else-equal and they have basically forced their local banks/insurance companies/pensions to buy Japanese bonds so the demand for bonds isn't impacted by world demand, or lack thereof.

With all that said, Japan's currency is down 45% versus the U.S. dollar over the past 10 years and their stated inflation is finally starting to pick up.

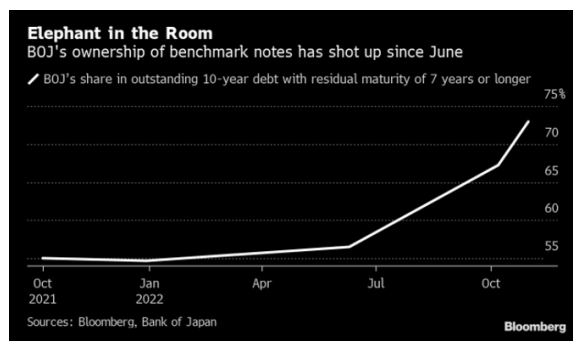
Currently because Japan suppresses its bond yields, the average interest rate on Japanese debt is 1.3%, which seems shockingly high given they for years have pegged ten-year rates at 0.25% (now up to 0.5%). Even with this massive intervention, the interest expense to the overall Japanese budget is roughly 12%. (Note, it would be 23% if the interest on the bonds the Bank of Japan owns didn't pay the interest back to the Federal Government.) All this said, Japan's overall budget deficit is at 7.6%. The big decision in Japan is to either support the economy in the short-run by allowing the currency value to fall by continuing to suppress rates and buying back massive amounts of government debt (QE), while running massive deficits versus supporting the currency by raising rates, initiating quantitative tightening (QT) and letting the economy fall. Japan has chosen the former.



The shocking/truly unsustainable part is that even with pegging the Japanese ten-year government bond at 0.25% and buying back over 50% of all Japanese bonds, the government's interest expense is still almost 23% of the federal budget. What happens if rates were to ever go up one percent or normalize even higher? It can't happen without crushing any semblance of a budget. A two percentage point rise in rates (to 3.3%) would mean their interest expense would be >50% of their budget expense. All else equal that means a budget deficit of over 25%. What is the currency worth at that point? As it is, the Yen has fallen 25% versus the U.S. dollar in 2022 and over 50% since 2011. Keep this in mind when you hear the Bank of Japan is raising the short-term rate a hair. It is all show to help support the Yen's fall. It won't continue, because it can't without making the above math all too obvious.

Based on the "reliable" Big Mac Index of worldwide pricing, a Big Mac in Japan currently costs \$2.85 versus \$5.00 in the U.S. The timing of when things happen based on economic formulas/theory is always tough, but it is safe to say Japan should see much higher inflation and/or the currency needs to fall a lot more.

It is worth noting that the Bank of Japan has recently been buying Yen to mitigate the decline. This was the first Yen intervention by the BOJ since the Asian Financial crisis in 1998. They can continue doing this with their reserves and by selling U.S. Treasury bonds, but it can't go on forever. It is also worth noting that there are many days in the recent past where the Japanese 10-year bond did NOT trade since the BOJ owns over 70% of all Japanese 10-year debt (see chart to the right). This is unprecedented and is thus the result is unknown but it is likely be be bad in the long-term.



It appears as though the U.S. and the European Union and the United Kingdom are choosing to follow Japan's current risky path that most emerging market economies followed for years. Like Japan, these seemingly bad decisions have not led to ill-effects leading to a bigger push for more, newly coined Modern Monetary Theory. This seemingly worked, until it didn't in 2022. Well, you don't hear that term much anymore since inflation has become such a big topic. With the U.S. reported inflation hitting 40+ year highs, the Fed has decided to do something about the problem it partially created by raising rates and going from QE to QT. When the economic impact is big enough they will reverse course and go back to lower rates and QE. Until then the U.S. is acting more rational than Japan, so the Yen is being hit.

The U.S. currently has a debt/GDP of roughly 137%, up from 33% twenty-two years ago when the tech/Nasdaq bubble popped here. The U.S. interest expense as a percentage of the U.S. budget is currently 8.0%, assuming that the Fed's holding of roughly 28% of all Treasuries has no interest expense since it is effectively paid back to the U.S. Government. (The interest expense to budget would be 11.6% if all interest were paid.) This equates to an average interest rate of government debt of 2.3%. If the average rate on U.S. debt were to rise to 4.0%, which isn't a huge stretch given the current 5-year note yields are roughly 4.0%, then the interest expense to budget would be over 14%. (Note, it would be 20% if the debt weren't owned by the Fed and the interest paid back to the Federal Government.) The U.S. budget deficit for fiscal year 2022 was 6.0%, but with today's rates, and the corresponding increase in interest expense, the deficit would blow out to over 15%. WOW

The above assumes government revenues hold up, which of course they never do in a recession. In my last commentary, I spoke of the coming budget problems from the lack of capital gains caused by a down market. No government gives this detail but as a case in point, California went from a \$100bb surplus in 2021 to an estimated \$25bb loss for 2022. The overall U.S. economy for the first 3 quarters of 2022 was up 10% versus the first 3 quarters of 2021 so a bad recession is not to blame. It is simply from lower tax receipts but that seems weird given jobs are growing everywhere. Further, wages aren't down so that isn't it. That leaves capital gains. The funny part of this estimate is that California says that "those estimates do not reflect a recession scenario." Years ago Federal Reserve Chairman Greenspan said "A surprisingly large percentage of



U.S. income tax receipts are tied to a rise in U.S. stock prices. When the U.S. stock market just stops rising...not falls, but just stops rising, that will put pressure on the receipt side of the U.S. fiscal picture, which no one is talking about." Yep.

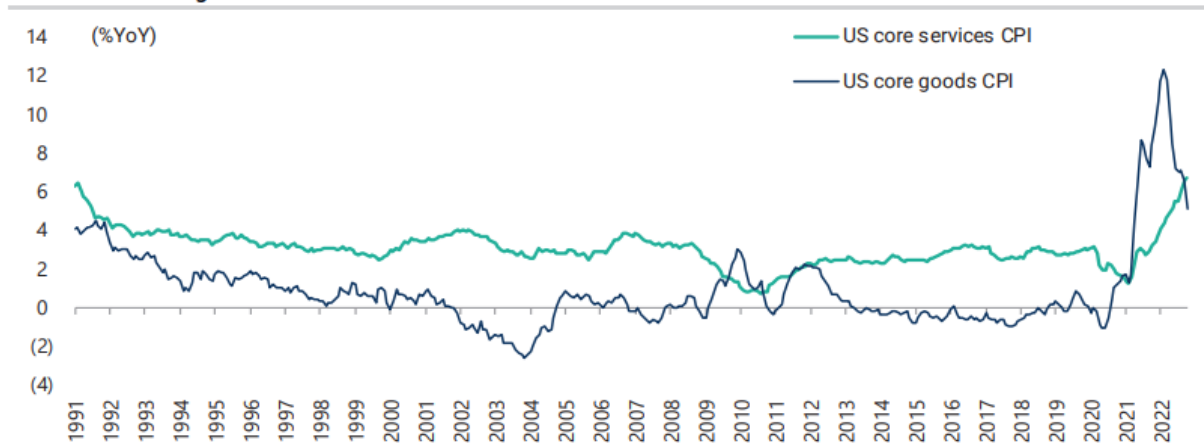
For all the ridiculous talk of the Federal Reserve (or any global central bank) being "independent," I will go with a flat-out "no." The U.S. Federal Reserve is a highly political institution who takes instructions from our political leaders, just like every other entity whose key employees are appointed by politicians. As the above scenario begins to unfold, the political class will force Fed Chair Powell to back down. They will decide that increased inflation is preferable to detonating the treasury.

I have written a lot recently about inflation so I will just add a few tidbits here. I found the following chart interesting. The blue line is the inflation starting in 1974. As you can see, our current inflation (orange line) is mirroring the '70s. It also implies the current downward trajectory of inflation may be somewhat transitory since the '70s had a resurgence of inflation after the initial rate increases.



Why you ask?

**Exhibit 2: US core goods CPI and core services CPI %YoY**



Source: Bureau of Labor Statistics



Inflation is funny in that it isn't linear, nor smooth. Inflation (Consumer Price Index ("CPI")) is measured by the cost of things we buy. Once things go up in price, wages tend to follow, and per the chart above, they lag the initial spurt of CPI. After central bank rate increases harm the economy and dampen demand and thus prices of goods fall back somewhat, it is only then that service prices start rising. Wages are booming everywhere. As one example, the U.S. rail workers union threatened to go on strike, which would be disastrous for having goods delivered, given that they move 40% of all freight. The most recent offer that was REJECTED was a 24% increase over five years AND \$1,000/year in bonus money. Then the U.S. government forced the union to take the deal. Interesting move for a democracy. Another example is that recently Delta Airlines gave their pilots a 31% increase over 4 years + 4% of pay in '20 and '21 and 14% of '22 pay as a bonus. There are more examples like this everywhere. Do you really think this won't be passed through to prices?

We will see what happens but as I, and many others, have written, it is hard to imagine printing the amount of money the U.S. government has printed without serious inflationary consequences. By serious I mean more than the past eighteen months of elevated inflation. Also keep in mind that services make up roughly 70% of the U.S. economy so it is worth considering as it relates to today's "peak inflation" discussions. The last thing to note is that wage inflation is also much stickier. While prices of commodities like lumber, steel, shipping, etc. have come down with the demand destruction higher rates is bringing, you don't hear about wages going down very often right? Time will tell how this unfolds, but anecdotally it does seem like wages are still a huge pressure point for many/most businesses.

Here are two final great quotes about inflation.

- "We don't have inflation because the people are living too well, we have inflation because the government is living too well." Ronald Reagan
- "Nothing is easier, or more emotionally satisfying, than blaming high prices on those who charge them, rather than on those who cause them." Thomas Sowell

I have talked about the use of inflation to create negative real rates, which can bring down the debt/GDP. I still believe this is the path our governments are choosing and I believe soon enough the Federal Reserve will say 4% inflation is the target, as opposed to the historic target of 2%, which was equally ridiculous. (0% should be the target.) But... lowering debt via negative real rates assumes the budget deficit is modest, otherwise the debt increase via the deficit would offset the negative real rates. Keep in mind when our debt/GDP came way down from the mid 1940s to 1970, the average budget deficit during that time was roughly 0.5% of GDP. Umm, about that today... If both political parties in the U.S. have made one thing abundantly clear it is that they are more than willing to spend money on the population to buy votes. Thus, don't count on the total debt/GDP going down because of the negative real rates like it did before.

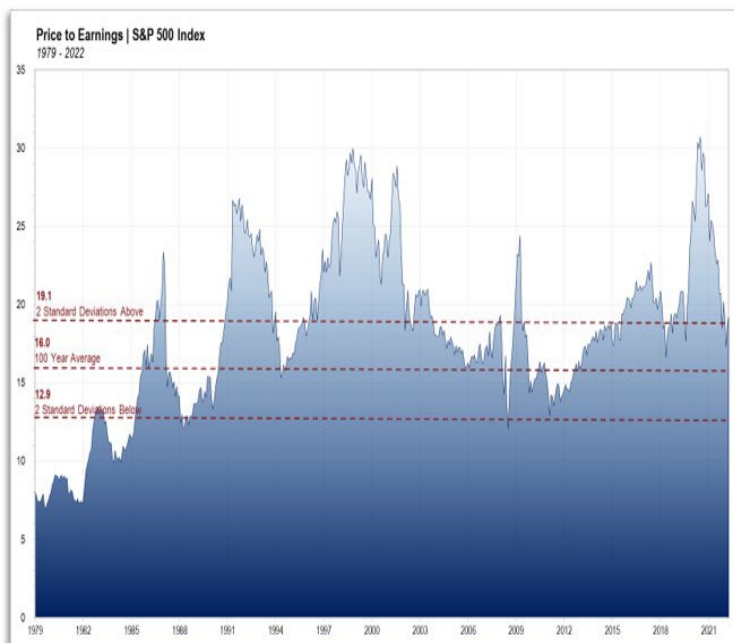
In 1929, the U.S. had virtually no federal debt. Thus, from that year to now, debt has grown by \$30.8 trillion. Here is the interesting part. From 1929 to now the cumulative U.S. deficit is \$20.9 trillion. This implies, on average, that our national deficit is actually 50% bigger than reported, on average, due to the non-reported deficits like Social Security, Medicare, etc. With this in mind, when you see that our budget deficit is 6% (2022), it is really 9% if we actually counted all our expenses in the deficit. If you are wondering if this math was more from the early years, in 2022 the budget deficit was \$1.4 trillion, but the Federal debt rose by \$2.5 trillion. Oops.

Further, the U.S. mandatory government spending (Social Security, Medicare, etc.) is 71% of the budget currently, up from 34% in 1965. Keep in mind all this is directly or indirectly tied to CPI, hence the recent announcement that Social Security payments will be adjusted up by 8.7% in 2023. When you add in interest expense it is likely that in not too many years, these payments will exceed revenue. That leaves all other Federal "discretionary" spending as purely deficits. This is our future.





As for the U.S. markets (Standard & Poor's 500 ("S&P500") as a proxy), they certainly aren't cheap, historically speaking. More importantly than looking at the current Price-to-Earnings (P/E) ratio compared to history, is the fact that companies in the S&P500 are still over-earning, in terms of net profit margin. You can decide if you think margins will stay elevated or if they will revert to the longer-term average, but virtually the entire margin gain since 2007 is due to lower interest expense (rates) and lower taxes. Secondly, the reported net profit margin today is "non-GAAP" or "pro-forma" whereas decades ago that "wasn't a thing" as the kids say. So, older data points in the chart use GAAP earnings as that is all there was, and newer data points use non-GAAP. This all contributes to why margins are higher today, but not all of it. Either way you want to adjust, margins are higher than average and the P/E multiple is higher than average. That doesn't mean the market can't keep going up, but it certainly implies a higher level of risk compared to periods when margins and multiples are much lower.



When people talk about emerging market risk the discussion frequently goes to the risks of being highly indebted (becomes more acute if you have U.S. dollar debt when your currency depreciates) and running twin deficits (trade and budget.) Hmm. Does that sound like any other country we know (and live in)? This discussion mirrors economic theory which states that the main factors that drive a currency's value are balance of trade as well as monetary and fiscal policies. The problem is that the U.S. is generally bad on all of these metrics these days.

Let's explore these factors:

- Debt – U.S. debt to GDP is over 135% and that isn't counting the contingent liabilities like Social Security or Medicare.
- Trade balance - Usually, strong currencies correlate with hefty, or at least improving, terms of trade, also known as the current account surplus or deficit. The U.S. has run big trade deficits for decades.
- Budget deficit – While better this year than last only because last year was unprecedented spending to counter the pandemic, this year's deficit is still near all-time highs and the projections (and logic) are not much better, not to mention the fact that the projections are seemingly always understated.

In the Financial Times on Aug 29<sup>th</sup>, Ruchir Sharma wrote an article entitled "A post-dollar world is coming." In it he gives some specifics to the above.

- When a country's current account deficit runs persistently above 5% of GDP it is a sign of trouble. (check)
- The U.S. currently owes the world \$18tr, or 73% of US GDP, far beyond the 50% threshold that many people have said currency "issues" arise after.
- The U.S. dollar has been the world's reserve currency for 100 years, which is longer than the 94-year average of the last 5 global empires that held the reserve currency.
- The dollar's share of foreign exchange is at 59% compared to the over 72% in 2000.



The big issue countering all of this is the fact that the U.S. dollar is the reserve currency of the world, but even that is slipping, as shown by the final bullet point above. There is, in much of the world, an unmistakable shift away from the U.S. dollar (USD). People weren't sure what would happen when Russia claimed they would stop selling their oil and natural gas in dollars. The Europeans all said no up front, but over time they relented and did it. Relative to the U.S. dollar this has been a HUGE turning point for the Russian Ruble. The dollar's share of foreign trade has been falling for over 20 years but perhaps this was the turning point? Given that it seems like the U.S. is trying hard to alienate Russia and China it shouldn't be a surprise that they have both turned away from the U.S. dollar, and are actively recruiting others to follow them. What is more interesting is that the very country that the oil for dollars deal was created, Saudi Arabia, is also at odds with the U.S. and has talked about selling in non-USD. More shockingly they have expressed interest in aligning themselves with Russia and China.

The Fed is still talking a big game of raising rates to squash inflation. However, given the debt, it seems clear they will have to reinstate QE, lower rates and deal with perpetually higher inflation. As I said, it seems likely that soon enough the 2% inflation target will officially move to 4% and from there who knows. None of that bodes well for the U.S. dollar.

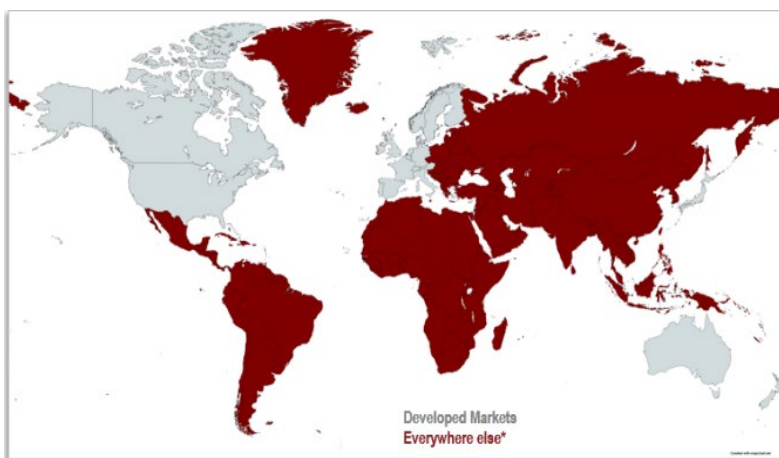
Another powerful influence against the USD is its valuation versus other currencies. There have been numerous times in the past when the U.S. dollar has been undervalued. Not so today. In fact, it is as overpriced as it has been since at least since the mid-1980s during the Reagan-dollar rocket ride (based on the price of the DXY Index.) The fact that this has happened with the kind of trade deficit described above is particularly astounding.

Lastly, transitioning to the point of this piece, which is Emerging Markets, we should circle back to the title as it relates to the misunderstandings of risk as it relates to developed markets versus emerging markets. Historically, developed country securities enjoyed a valuation premium in part because they enjoyed the benefits of strong political and legal infrastructure. Emerging markets did not deserve such attractive valuation multiples because there were more risks; sham elections, governments being overthrown, nationalization of companies, price controls, etc.. Is it possible that the very politicians that are supposed to represent us are allowing this great advantage to erode before our eyes but the pace is slow enough that we haven't fully recognized it yet?

The solid political and legal structures of Developed Countries are now proving to be more malleable than we thought. It may be tempting to rationalize some of these events or explain them away as one off things, but they exist. The leaders of the free world have become Machiavellian, and as such the valuation premium may no longer be warranted.

Let's move on to Emerging Markets and start with the big picture. As much as the world's economy was driven by the "developed" countries in the distant past, it is clearly being driven now by emerging markets. Collectively, emerging markets have

- 87% of the global population
- 76% of the total land area
- 44% of Global GDP, up from less than 20% in 2000.
  - EMs have accounted for 76% of global GDP growth over the past 20 years.
- 76% of global foreign exchange reserves





While I think we have all seen the 50 years ago to now pictures of China, how about this one for Jakarta, Indonesia?



This transformation is everywhere in emerging markets. It is also interesting to note that EM countries comprise 27 of the 50 largest economies and 9 of the top 20. That doesn't sound so "emerging" does it?

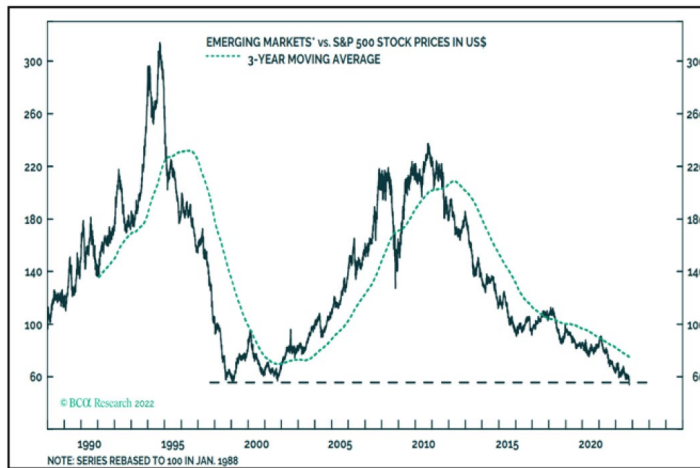
1-10	11-20	21-30	31-40	41-50
United States	Russia	Poland	South Africa	Chile
China	Brazil	Sweden	Bangladesh	Columbia
Japan	Australia	Belgium	Egypt	Finland
Germany	Spain	Thailand	Denmark	Romania
United Kingdom	Mexico	Ireland	Singapore	Czech Republic
India	Indonesia	Argentina	Philippines	New Zealand
France	Netherlands	Norway	Malaysia	Portugal
Italy	Saudi Arabia	Israel	Hong Kong	Peru
Canada	Turkey	Austria	Vietnam	Greece
S. Korea	Switzerland	Nigeria	Pakistan	Iraq

Since valuation is the thing that matters most in a stock for Kopernik, let's turn our attention there. Thus, the opportunity is that EM stocks trade at a sizable discount to DMs. Below are a couple of charts showing the disparity of EM and all foreign stocks versus the U.S.





Figure 28 Emerging Markets versus S&P 500 Index, 1988–2022



Source: The Bank Credit Analyst

Chart 6: 15 year bull market of US over RoW likely reverses in '23  
US vs RoW equities price relative



Source: BofA Global Investment Strategy, Global Financial Data, Bloomberg

Theoretically, this could just mean that the U.S. is that overvalued, as opposed to EMs being that cheap, so let's dig further there.

Index	Index Market Cap	Price to Book	Price to Earnings
Bloomberg Emerging Markets Large, Mid, Small Cap Price Return Index (EMLS Index)	\$8,300 billion	1.3x	9.7x
MSCI Emerging Markets Index (MXEF Index)	\$5,600 billion	1.3x	9.6x
MSCI Frontier Markets Index (MXFM Index)	\$69 billion	1.5x	8.1x
Bloomberg Developed Markets Large, Mid, Small Cap Price Return Index (DMLS Index)	\$55,000 billion	2.4x	17.2x
NASDAQ Composite Index (CCMP Index)	\$17,860 billion	4.3x	46.4x

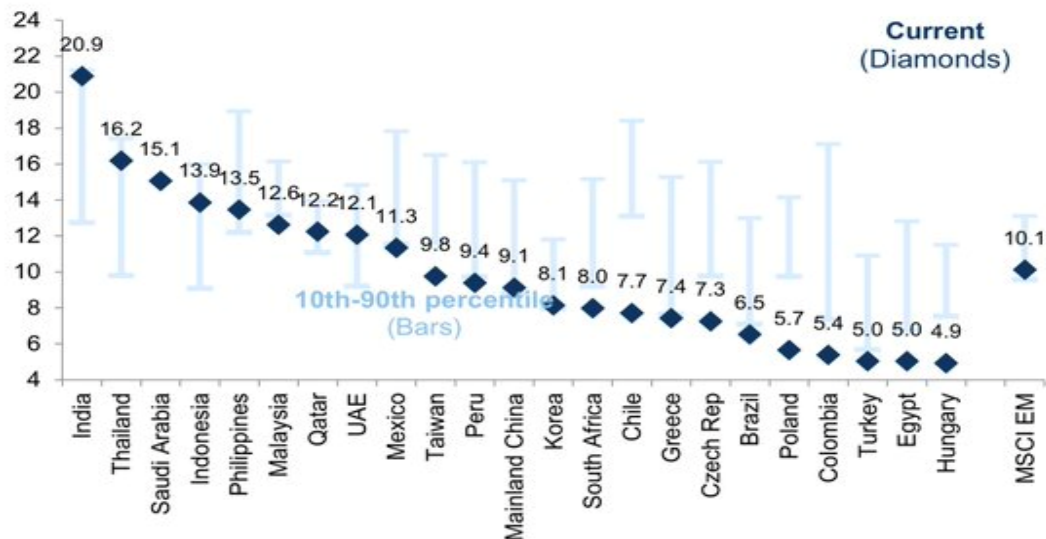
Source: Bloomberg  
As of 10/27/2022

There are many reasons that simply looking at a P/E ratio isn't the perfect valuation metric, but given its ubiquity, here is another chart showing the relative P/E ratios in various EM countries and where the current ratio is relative to its historic range. As you can see most are at their lows or at all-time lows. That doesn't mean they are buys but it does mean they are worth spending time analyzing.





## PE Ratios (since 2003)

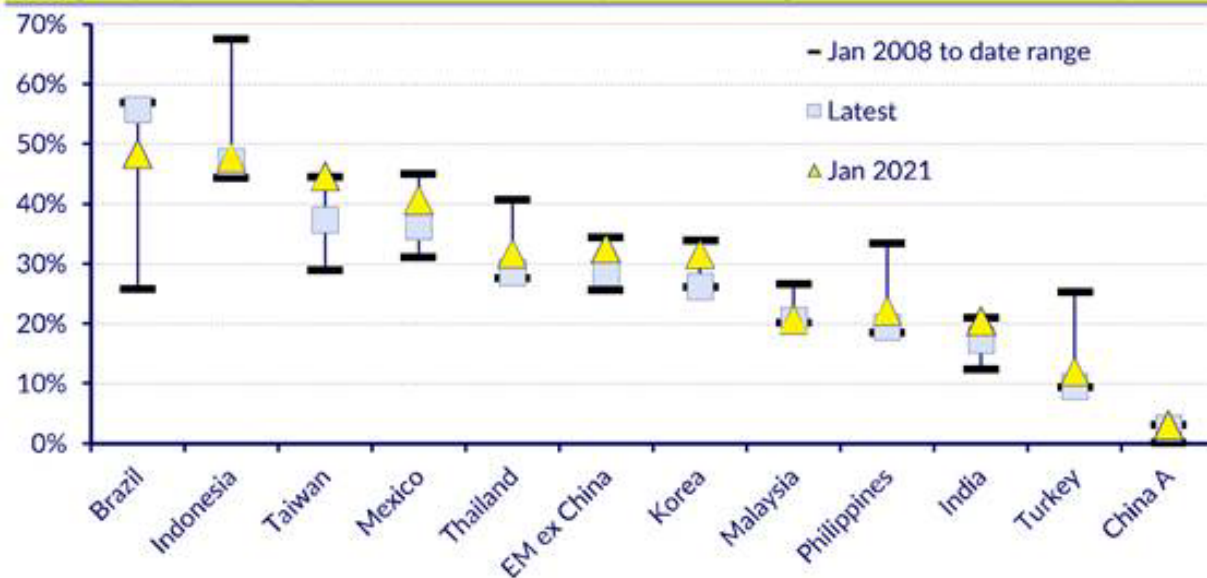


Source: Factset, Goldman Sachs Global Investment Research

Given that it also seems clear that foreign (EM) valuations frequently move with the interest from DM investors here is a chart showing that most EMs are at lows in terms of foreign equity ownership as well.

Figure 8

## Foreign equity ownership: current versus January 2021 and range since 2008 (% market cap)



Source: CLSA, national stock exchanges, Bloomberg, MSCI



Given the discussion earlier about the U.S. dollar, it is worth discussing the currencies of different Emerging Market countries. The first caveat is that currencies are hard to understand, especially compared to the USD given the reserve status of the dollar, but here is a quick table comparing the underlying status of these countries' finances/trade balance.

As you can see, virtually every metric looks better for EM countries than the U.S. While the U.S. Dollar (DXY Index) is up 45% since 2008, it is down 8.5% from its all-time high in September of 2022 so maybe the EM currency strength will continue?

	Debt/GDP	Budget Deficit 2019 (pre-covid)	Balance of Trade / GDP
<b>Brazil</b>	80.3%	-5.9%	1.0%
<b>Poland</b>	53.8%	-0.7%	4.2%
<b>Czech</b>	41.9%	0.3%	3.1%
<b>Hungary</b>	76.8%	-2.1%	0.8%
<b>S. Korea</b>	46.9%	0.4%	3.7%
<b>Mexico</b>	57.6%	-2.3%	-1.5%
<b>Indonesia</b>	42.8%	-2.2%	2.7%
<b>China</b>	71.5%	-6.1%	2.6%
<b>Nigeria</b>	35.0%	-3.5%	2.1%
<b>U.S.</b>	137.2%	-4.6%	-3.1%

Historically, one of the big EM risks was that they held too much US\$ debt. This is partly because their capital markets frequently can't support the volume required, and in part that the companies want to lock in the rate for longer and they seem to forget the risk/volatility of the currency moves. Today EMs, collectively, hold just over \$4 trillion in US Debt, which is up from 2000 but is under 10% of GDP, so that seems more than manageable. It is also interesting to note that in 2022 with the US Dollar up 8.5% for the year, some EMs such as Brazil, Mexico, Chile, Peru, Egypt and Nigeria have seen their currencies appreciate versus the dollar. They have also all had positive, or barely down, stock market performance in 2022 in U.S. dollars as well.

While we are generally bullish on EM equities, given the current valuations, I think it is a good idea to consider the bigger picture as well. Historically, EMs focused on growing by aligning themselves with the Western world for that growth (ie, the U.S. and Europe). Slowly but surely this is changing and they now rely more on the other EMs more for their growth. This is best shown by discussing the BRICS countries.

The "BRICS" investment term was coined in 2001 by Goldman Sachs, representing the promise of Brazil, Russia, India, China and South Africa. Less well-known is that those same countries started a cooperation agreement and actual trade organization on June 16, 2009. More importantly, the BRICS trade organization name will need to be changed shortly given the huge interest by other EM countries in joining the organization. Some of these interested countries include Argentina, Iran, Turkey, Saudi Arabia, Indonesia, Kazakhstan and Egypt. Assuming they all join, >50% of the world population will be in this trade organization and >40% of global GDP. Notice that Turkey, a NATO member, is in there. The times are a changin' as the saying goes.

	% of world GDP - 2021	% of world GDP - 1991
<b>G7</b>	35.3%	67.1%
<b>BRICS</b>	25.4%	8.6%

*Source: IMF (G7 = US, Canada, Germany, France, UK, Italy & Japan)*

To highlight this, in a 2019 interview from prison, newly elected, for the 2<sup>nd</sup> time, Brazilian President Lula said "BRICS was not created to be an instrument of defense, but to be an instrument of attack... Further, we will have our own currency to become independent from the U.S. dollar in our trade relations." To add to this he recently reflected to a time talking to ex-U.S. President Obama. "[President] Obama called me, telling me, 'Are you creating a new currency, a new euro?' I said, 'No, I'm just trying to get rid of the U.S. dollar... I'm just trying not to be dependent.'"

I don't mean to imply that EMs are all moving away from the West, but more they are focusing more on other emerging markets to improve their own growth. There is also a growing difference of opinion from the EMs, compared to the West and the U.S. about the U.S. driven sanctions against Russia and China. Given the sensitive political environment I want to be clear that I'm not saying that EMs are pro-Russia's war with Ukraine. What I am saying is that many of those countries see the Russia/NATO/US proxy war in Ukraine as far more nuanced than we hear about in the West and many EM countries think the



U.S. is being too forceful with their sanctions. Further, they view the semiconductor sanctions against China as more evidence of the U.S. overstepping its role. These actions by the U.S. are only strengthening the bonds between the EMs.

To highlight this, an Oct '22 study by Cambridge University showed that of the 1.2bb people that live in western liberal democracies, 25% have a positive view of China and 13% of Russia. For the 6.8bb people in the rest of the world 70% are positive toward China and 66% towards Russia.

Since China is a HUGE driver of EM growth, I would like to point out that China is doing what the Western world did over a year ago: stopping the Covid related lock-downs. (They also just announced ending inbound travel restrictions.) The big difference is that in China the lockdowns were geographically spotty, but when they happened they were severe. The lockdowns in the U.S. meant we could still generally eat at restaurants (outside) and have things delivered to us and go to "essential" businesses. In China their lockdowns meant all that was off-limits. You had to stay in your apartment. So to say opening up will have a positive impact in China is an understatement. Just like the U.S. boomed upon opening, it stands to reason the same will be true of China. As further proof of this, pre-Covid, Chinese households had 8-9 trillion RMB in cash in their bank accounts. Now they have 15.5 trillion. This is due to a combination of stimulus (Chinese M2 up 30% in last 2 years) and working from home/earning money but being locked down and unable to spend it (same as in the U.S.). This will all come flooding out, just as it did here.

Further, while most Chinese real estate seems high, relative to their incomes, Chinese mortgage rates are down 150 basis points since pre-covid and are near all-time lows which is, obviously, quite different from the U.S.

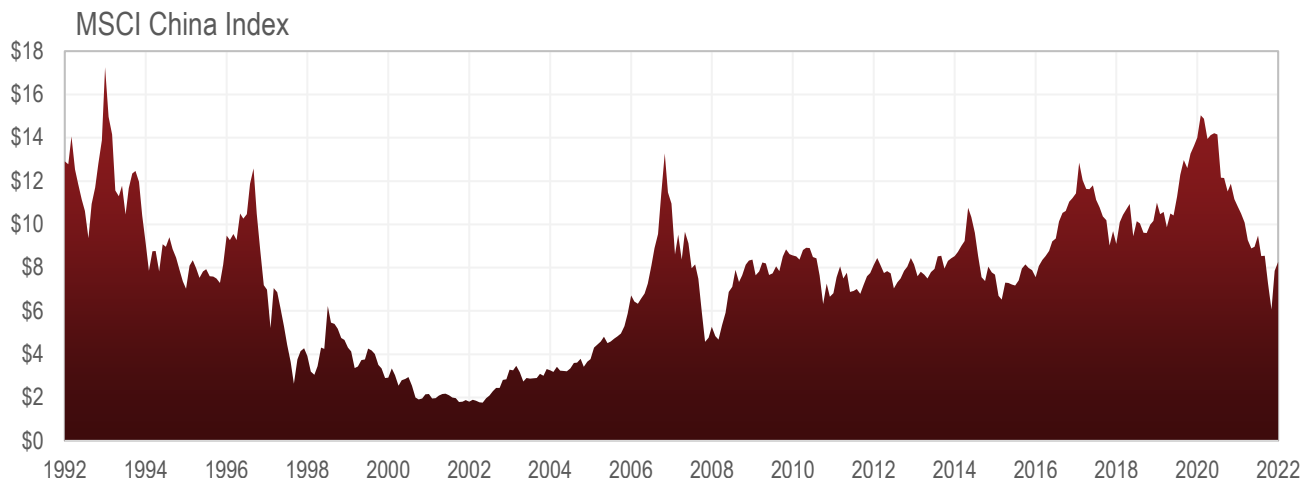
By opening up, after such intense lock downs, it is also logical that they will have waves of covid infections, and while tragically that means some will die of covid, it also means there will be more employees calling in sick from work, so the supply chain disruptions we, in the US, hoped were ending, may linger longer since China remains the factory for the world's goods.

Let's look at a few specific EM countries to highlight the opportunities.

## China (MSCI China Index)

As a broader look at China, the index is below where MSCI started tracking it in 1993. During these 29 years, the Chinese economy has grown over 3,500%. As you can see on the chart to the right, the MSCI China index is down 36% since then in US\$. It was down 24% in 2022 in U.S. dollars.

China	1993	Current
P/E	9.5x	11.0x
EV/Sales	2.1x	1.5x
P/Tangible Book	1.1x	1.3x





## Hong Kong (Hang Seng Index)

While officially considered a developed market, the Hong Kong stock market tilts heavily toward mainland China stocks, especially by market cap, so I will include them in this list of emerging markets. Some of the biggest components of the index are Alibaba, Sinopec, China Mobile, etc... More to the point, the index is currently roughly where it was in 1997. So, 25 years and 0% return, not including dividends, while Hong Kong's GDP has grown over 100% during that time and China's GDP has grown over 1,700% during that time.

Hang Seng Index	1997	Current	Hang Seng China Enterprise Index Current
P/E	20x	6.7x	5.8x
EV/Sales	10x	1.45x	1.3x
P/Tangible Book	3.0x	0.87x	0.76x

Hang Seng Index



The Hang Seng index was down 14% in 2022 and over 40% since early 2018 in U.S. dollars. The Hang Seng China Enterprises Index, which, as it sounds, is all Chinese companies, is down roughly 50% since 2018 in U.S. dollars. For reference, during this time, the Hong Kong dollar is flat with the US dollar, given the hard peg, and the Chinese Renminbi is up 16% versus the U.S. dollar.

## South Korea (Kospi Index)

Officially, South Korea is listed as an “emerging market” but this would appear to be an oversight. It is as developed as most developed countries. Today S. Korea has a GDP per capita of \$34,757, which compares to Japan at \$39,285, France at \$43,518, Italy at \$35,551 and Spain at \$30,115. Needless to say, all the others are “developed markets.” More to the point, here is the chart of the Kospi index of Korea, in US dollars. As you can see, the index only recently bounced off the level the index was at in March 1989. Since that time, 33 years ago, Korean GDP is up 630%, while the Korean won has lost 23% of its value compared to the U.S.\$. The market was down 29% in 2022 and 38% from its recent high in 2021 in U.S. dollars. The specific valuation data is hard to find before 2004 so that is the starting point below.

South Korea	2004	Current
P/E	17.0x	11.6x
EV/Sales	0.88x	0.93x
P/Tangible Book	1.44x	1.05x





Kospi Index

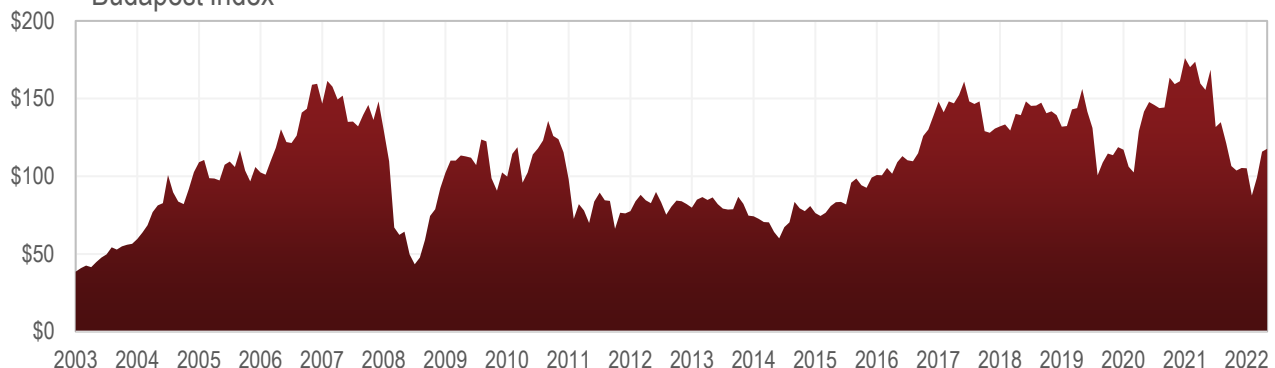


## Hungary (Budapest Index)

The market was down 24% in 2022 in U.S. dollars (the Hungarian Forint is down 13% this year). Since 2005, when the index was roughly the same as now, Hungary's GDP is up 64% while the Hungarian Forint is down 52% versus the US dollar.

Hungary	2005	Current
P/E	13.9x	4.7x
EV/Sales	2.1x	0.8x
P/Tangible Book	3.3x	0.98x

Budapest Index

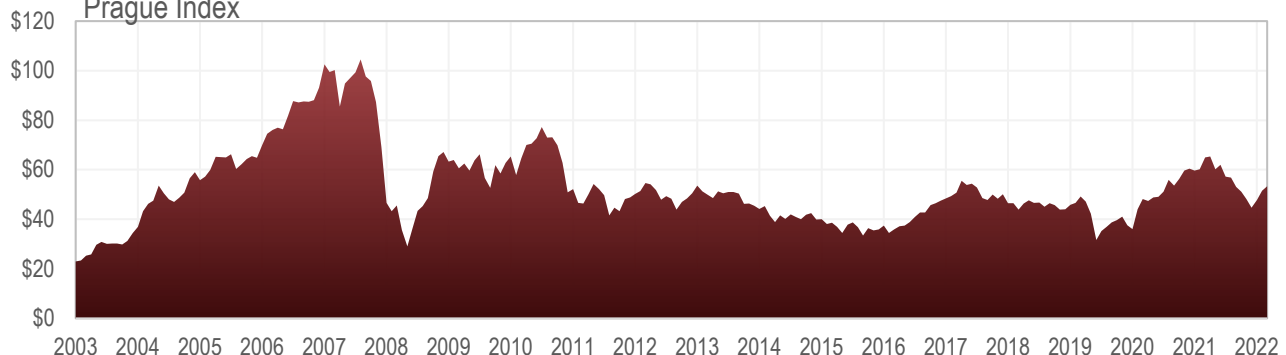


## Czech (Prague Index)

The market was down 18% in 2022 in dollars (the Czech Koruna is down 3.5% this year). Since 2005, when the index was roughly the same as now, the Czech Republic's GDP is up 54% while the Czech Koruna is down 3% versus the US dollar.

Czech Republic	2005	Current
P/E	17.6x	7.7x
EV/Sales	2.8x	1.2x
P/Tangible Book	2.7x	1.4x

Prague Index

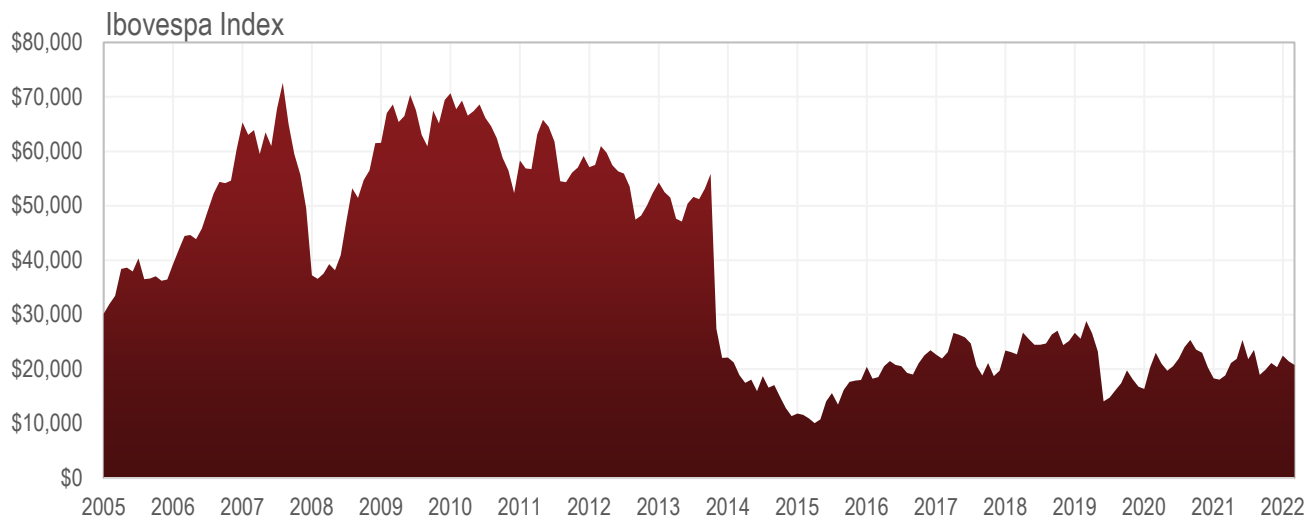




## Brazil (Ibovespa Index)

The market was up 10% in 2022 in U.S. dollars (The Brazilian Real is up 5%.) Since 2007, when the index was roughly the same as now, Brazil's GDP is up 36% while the Real is down 64% versus the US dollar.

Brazil	2007	Current
P/E	11.8x	6.3x
EV/Sales	1.8x	1.3x
P/Tangible Book	2.7x	2.7x



Mexico	2007	Current
P/E	18.0x	14.1x
EV/Sales	2.2x	1.8x
P/Tangible Book	5.5x	3.9x

## Mexico (S&P/BMV Index)

The market is down 2% in U.S. dollars in 2022 (the Mexican Peso is up 6%.) Since 2007, when the index was the same as now, Mexico's GDP is up 26% while the Mexican Peso is down 44% versus the U.S. dollar.



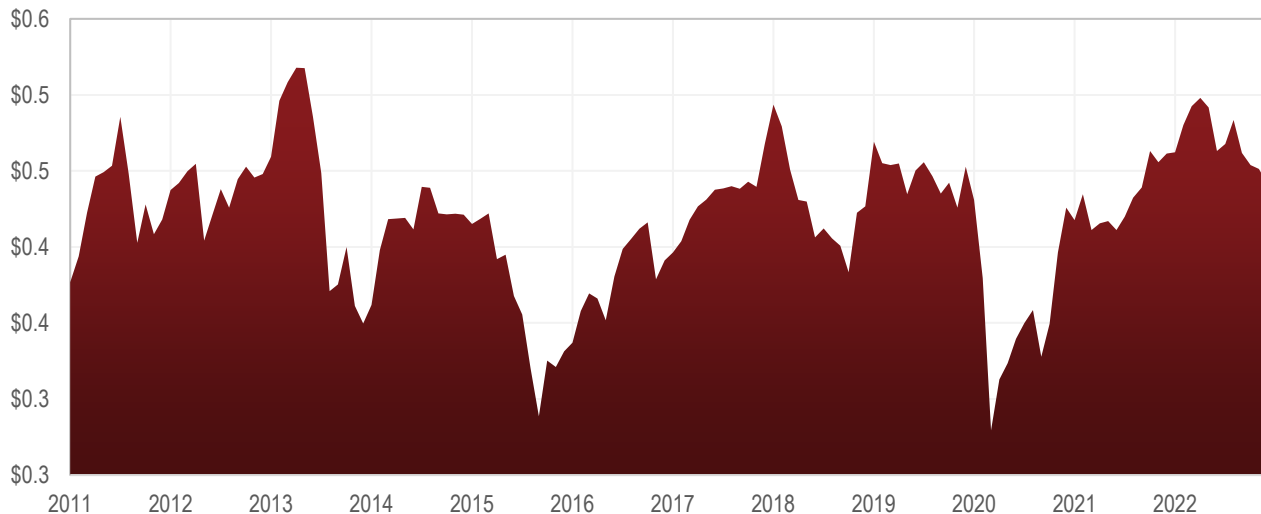


## Indonesia (Jakarta Index)

The market was down 5% in 2022 in U.S. dollars (The Indonesian Rupiah was down 9%.) Since 2011, when the index was the same as now, Indonesia's GDP is up 44% while the Rupiah is down 46% versus the U.S. dollar.

Indonesia	2011	Current
P/E	19.1x	13.4x
EV/Sales	2.6x	2.3x
P/Tangible Book	3.4x	2.4x

Jakarta Index

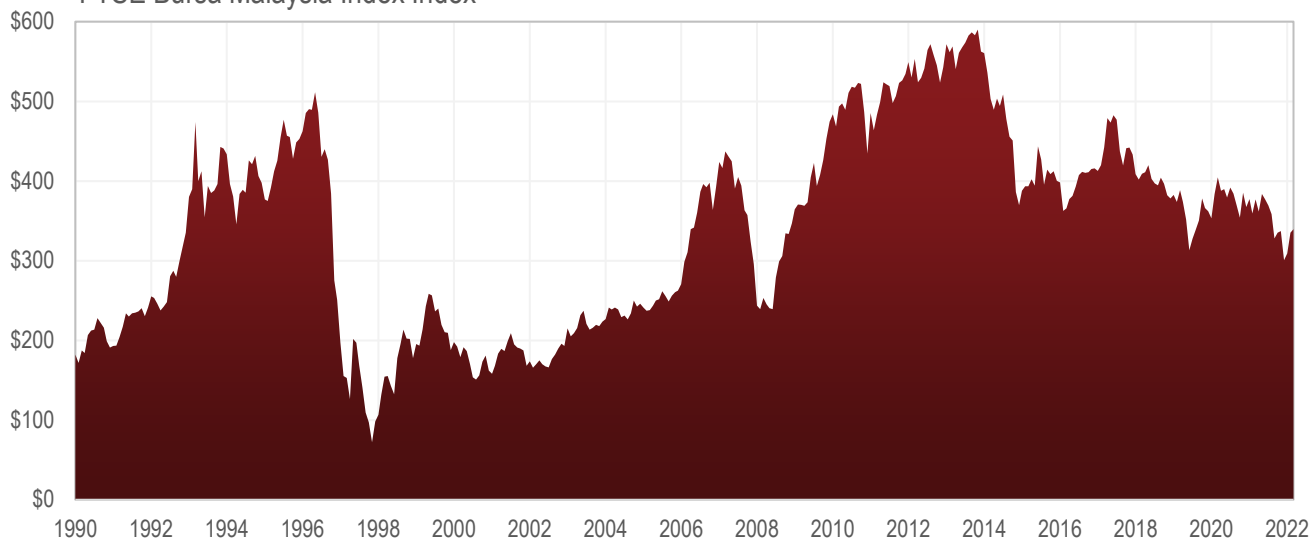


## Malaysia (FTSE Bursa Malaysia Index)

The market was down 11% in 2022 in U.S dollars (The Malaysian Ringgit was down 6%.) Since 1993, when the index was the same as now, Malaysia's GDP is up 450% while the Ringgit is down 44% versus the U.S. dollar.

Malaysia	1993	Current
P/E	27x	16.2x
EV/Sales	n/a	3.0x
P/Tangible Book	n/a	1.6x

FTSE Bursa Malaysia Index Index



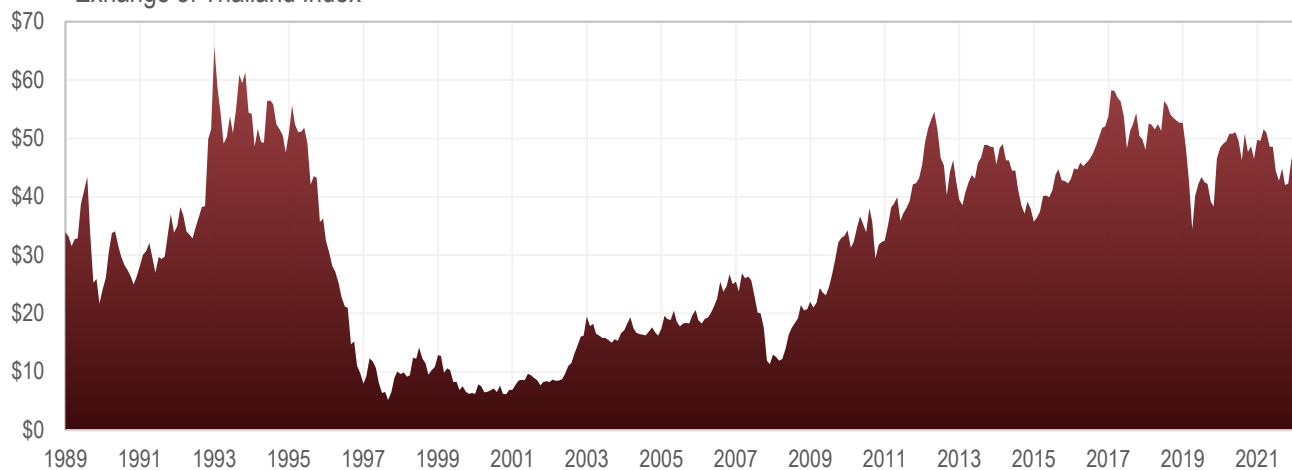


## Thailand (Exchange of Thailand Index)

The market was down 3% in 2022 in U.S. dollars (The Thai Bhat was down 4%.) Since 1993, when the index was the same as now, Thailand's GDP is up 290% while the Thai Bhat is down 29% versus the U.S. dollar.

Thailand	1993	Current
P/E	n/a	15.1x
EV/Sales	n/a	1.6x
P/Tangible Book	n/a	2.1x

Exchange of Thailand Index

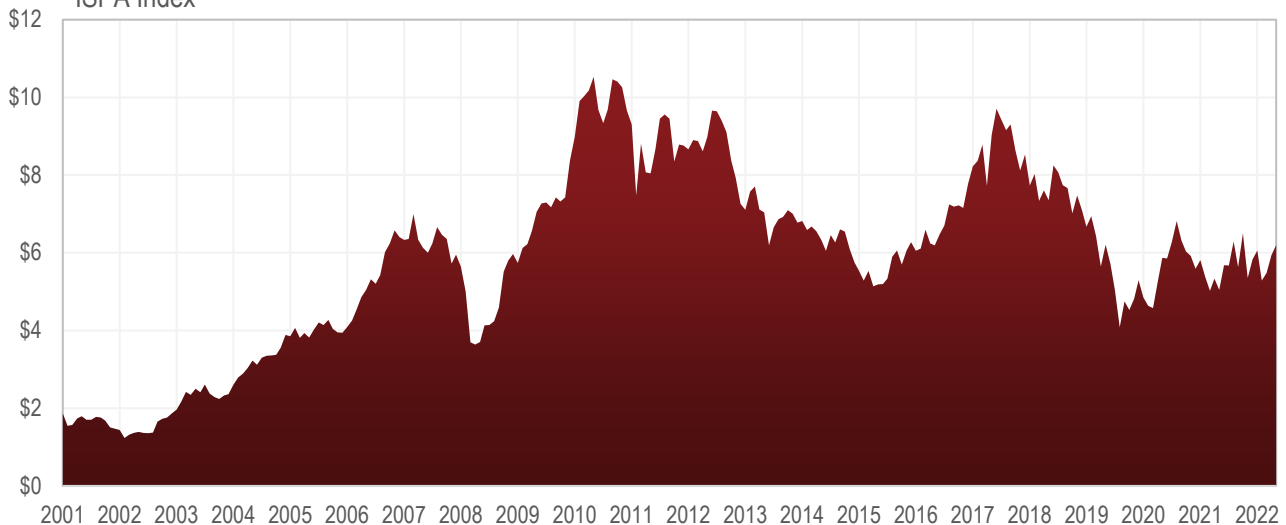


## Chile (IPSA Index)

The market was up 22% in 2022 in U.S. dollars (The Chilean Peso was flat.) Since 2007, when the index was the same as now, Chile's GDP is up 84% while the Peso is down 7.5% versus the U.S. dollar.

Chile	2007	Current
P/E	22.0x	5.5x
EV/Sales	2.2x	1.4x
P/Tangible Book	2.7x	1.2x

IPSA Index



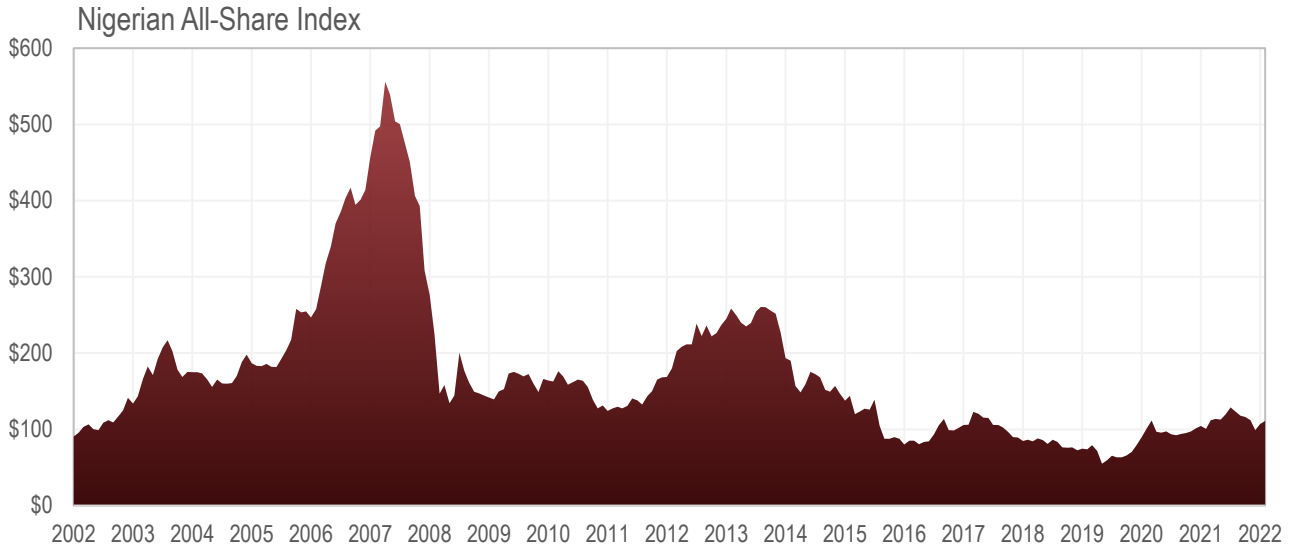




## Nigeria (Nigerian All Share Index)

The market was up 8% in U.S. dollars in 2022 (The Nigerian Naira was down 8%.) Since 2003, when the index was the same as now, Nigeria's GDP is up 320% while the Nigerian Naira is down 70% vs the U.S. dollar.

Nigeria	2003	Current
P/E	30.0x	10.0x
EV/Sales	1.2x	1.7x
P/Tangible Book	2.4x	2.7x



The point of all this is to show that these countries have grown a ton (that's a technical term) and the markets are all roughly where they were 15-30 years ago. That is incredible. Part of this is due to the strength of the U.S. Dollar, which has made those countries look cheaper, but as demonstrated on an earlier chart, the dollar is cyclical, like everything else and is currently near its all-time high. Another part is that these markets were too expensive to start, which is likely, but the declines are still significant. Any combination of weaker dollar and/or strength in these EM stock markets will lead to good returns.



Bringing this all back to compare these EM markets to the U.S., the S&P500 ended 2022 down roughly 20%. The weakness of the market this year has brought it down to where it was eighteen months ago (2021). But, to compare to the EMs if we go back to 2007, the US GDP is up 59% since then while the market is up 175%. The key is that valuations in the U.S. are all way up. Certainly over 2007 and above every time period other than 2000, depending on the metric used, and last year.



One final note on how EMs act differently now than the past. I just spent 2 weeks in the Czech Republic and Poland meeting companies throughout Eastern Europe. What struck me as interesting, and very different from the West, was the governments actions to counter the massive energy inflation Europe is living with. In Eastern Europe, each country is a little different but they have chosen to temporarily tax, almost always, businesses, to raise additional money to help subsidize the energy costs for the general population. I'm not taking a side of if this is the right approach, more just pointing out that they are choosing broad business austerity as opposed to just increasing their countries' debt to find the energy subsidies. Some western European countries, like Germany, have announced energy windfall taxes, but those are very targeted and very small. By contrast, in 2022 Germany has announced 264bb Euros in energy subsidies, funded primarily by additional debt. (This equates to a 10% increase in Germany's total debt. It also compares to Germany's total budget revenue of 840bb Euros. Further, their energy company windfall tax is estimated to bring in 2bb Euros, so it barely moves the needle.) Germany is less leveraged than most of Western Europe, but the point is the difference of how the governments are handling this.

U.S.	2007	current
P/E	17.1x	19.5x
EV/Sales	2.5x	2.7x
P/Tangible Book	6.0x	13.1x

## Commodity/NIMBY ("not in my back yard")

Moving on from Emerging Markets, we should also discuss some commodities, which look quite undervalued to us. While the investment world remains fixated on every word that comes from Federal Reserve Chairman Powell's mouth or any other Fed Governor as it relates to monetary policy, they are seemingly ignoring the endless stream of hypocrisy that is coming from Western governments and their populations from around the world as it relates to environmentalism. By this I am referring to their incessant discussion of the impacts of climate change, but at the same time they make it increasingly difficult to develop the projects required to make an environmental difference. To be clear, Kopernik is absolutely committed to communicating with companies we are shareholders in about being good stewards of the environment, as well as their community and shareholders, but as with everything this isn't black and white. The problem isn't becoming "greener". It is if you cut other sources of energy before the more environmentally friendly approaches are at scale.

Here are some examples:

- I recently saw a survey of U.S. Tesla owners show that over 50% of them ultimately chose to purchase a Tesla because of the environmental benefits of an electric vehicle (EV). However, the U.S. power generation is roughly 2/3rds from burning fossil fuels (natural gas and coal mainly). Tesla owners feel good about the difference they are making by driving an EV, all the while the power that charges their EV is coming from burning a fossil fuel.
- The Dutch have announced they are closing their massive Groningen natural gas fields in 2024, officially because of the small earthquakes they claim are caused by pulling the gas out of the ground and the environmental damage burning gas creates but reading between the lines it seems this is more because it is a fossil fuel. They are all in trying to move toward green energy. The problem being the country is small with a dense population that it is virtually impossible to build onshore wind and solar farms because of the citizen outcry of not putting those things near their homes (NIMBY). This leaves Holland with the option of importing natural gas or coal.
- In the U.S. we have banned, so far, the development of the Pebble copper mine in Alaska due to claims of environmental risks to the native Salmon population. This could be in the top 5 biggest copper mines in the world. While Kopernik believes the environmental concerns are overblown and this mine should be built, I am more pointing out the irony of wanting more EVs, let alone more wind and solar, all of which require a huge increase in copper, but then finding reasons to not mine the copper required in the U.S. (NIMBY.) While we won't admit it, the implication is we want the emerging markets to mine the copper we need.
- In early 2022 Serbia cancelled Rio Tinto's exploration license of a lithium mine in the country due to environmental concerns. While Serbia lags most of Europe in the pace to move to green energy, they still have a 5,000 Euro subsidy for buying electric vehicles. Yes, those same Evs require massive amounts of lithium to power the battery.



- Not a specific example, but every major mining company will say it now takes upwards of 15 years, if it can be mined at all, to develop a new copper mine because of the permitting process from the time the copper deposit is found.
- There is heightened discussion today of slowing down the development of lithium and other mines in South America due to environmental concerns.

To quote Thomas Sowell, “There are no solutions. There are only trade-offs.” This goes for the environmental movement as well. What many consider a massive environmental risk, creates new risks. Digging a hole in the ground in scale or extracting anything from the earth comes with environmental costs.

While interesting to witness, my point isn't the hypocrisy, but more the denial of the obvious that we need and will keep using fossil fuels longer than politicians want to admit to. There are structural reasons that the demand for a commodity won't go down (oil and natural gas in emerging markets) or demand will rise because of governmental subsidies (Solar, wind, Evs) and yet governments around the world are making it much harder to pull those commodities out of the ground. This would lead to the conclusion that we are going to be in for a massive supply shock and increasing prices.

## Oil/Energy

I have shown in the past how the emerging world continues to consume more oil and that increase is overwhelming the slight decline from the developed world. Said another way, the emerging world has 6.6bb people and is increasing oil/gas consumption and the developed world has 1.4bb people and they are slightly decreasing their consumption. The overall demand for oil/gas isn't going down anytime soon, even with more windmills, solar farms and Evs. Greta isn't going to be happy.

On the topic of OPEC, here's some quick math. Global supply and demand are roughly in balance today. The supply is impacted as follows:

- The US was pumping 1.5 million bbl/d from its special petroleum reserves that has now ended.
- 1 million bbl/d of Russian oil is roughly down since pre-Ukraine invasion and the recent price caps.
- OPEC has cut 2mm barrels/day
  - Supply reduced by 3mm barrels/day.

On the demand side:

- China will increase its consumption by roughly 2 million bbl/d when they normalize now that their obsession with Covid 0 and its hard lock-downs seems to be over.
- World oil demand generally grows at roughly 1 million bbl/d, net.
  - There is the 3mm barrels/day coming back, then continuing to increase every year.

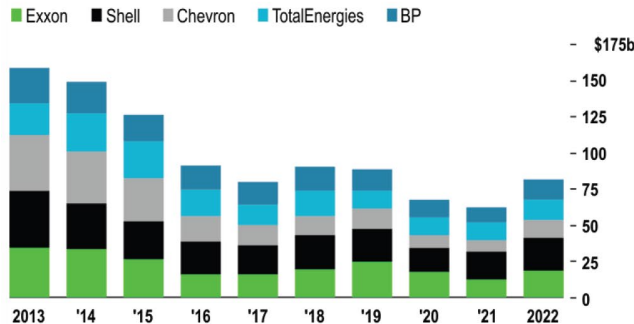
This seems like a really bullish scenario for oil over time, which could be a real crisis for the consumers of oil.

That is all shorter-term. How about longer term? See below. The chart on the bottom left shows that capital expenditures from the world's major energy producers is down roughly 50% over the past 10 years. The chart below and to the right shows that reserve life is coming way down as production is far outpacing finding new reserves. Longer-term you couldn't script a more bullish set-up for oil than that.



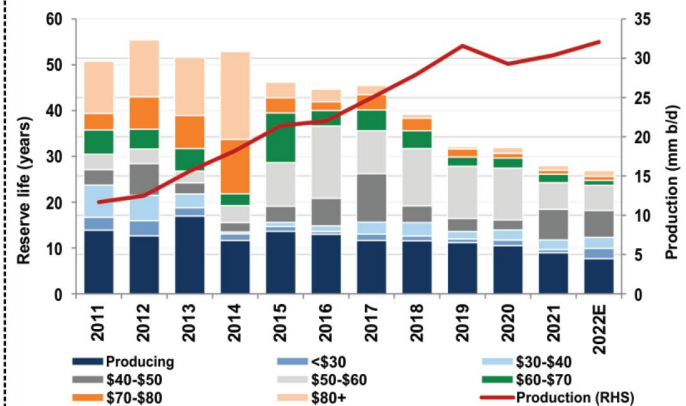
## Capital Cutback

Big Oil's spending is half that of 2013, when crude last topped \$100



Source: Bloomberg data  
Note: Full-year 2022 figures are companies' guidance

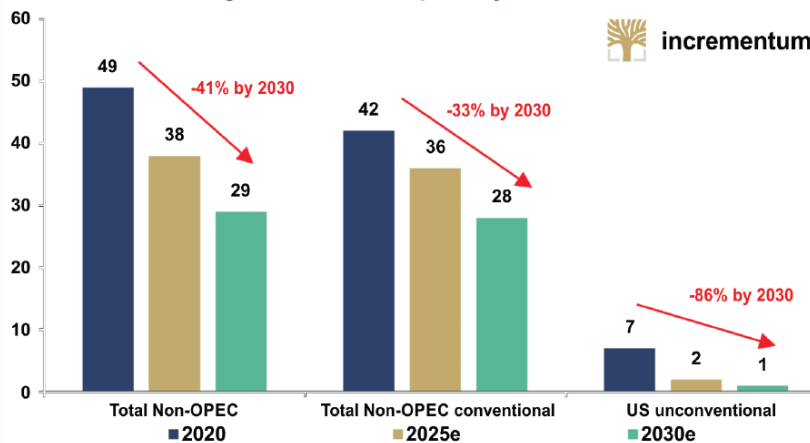
## Top Projects reserve life, by year of report and breakeven



Source: Bloomberg (left) and Goldman Sachs (right)

Further, per the chart below, keep in mind that the entire gain in global oil output over the last decade would not have happened if not for US shale oil and Canadian oil sands. Both are under attack by the ESG proponents and their own governments so it is hard to imagine this repeating. Shale oil also has a huge decline rate so if the wells are not replaced, quickly, then even US Shale oil supply will start falling. Oil, like virtually every commodity pulled out of the ground, continues to be harder to find in the same quantities we found it in the past. This also means that conventional oil will start declining soon as well. If demand continues to grow in emerging markets, the price seems set to explode higher.

## Projected Declines in Non-OPEC Production Assuming No Additional Drilling, in mn. barrels per day, 2020-2030e



If you are interested in a broader look at the oil market an excellent book is *How the World Really Works*, by Vaclav Smil. Further, if you like data as opposed to opinion, this is the book for you. I found one of the most interesting parts to be when the author claims the four pillars of societal advancement are cement, steel, plastics, and ammonia. All four are VERY energy intensive to make. These four items consume 17% of the world's total primary energy supply and create 25% of CO2 emissions. When people talk about cutting back on energy, have you heard them talk about cutting back on these items?

As an example, windmills use tons of cement and steel. Each windmill uses 200 tons of steel and concrete per MW of installed capacity. The blades are plastic and carbon fiber (15 tons per windmill) which is made from oil. Then you have to truck it all to the remote location using a diesel burning truck.

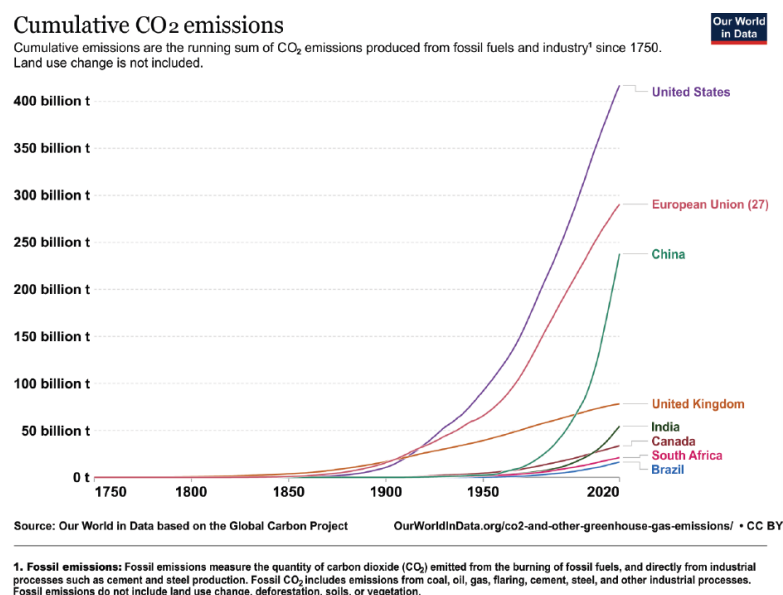




As for EVs, Mr. Smil claims that a Tesla battery weights roughly 450 KG or roughly 1,000 pounds. To get all the lithium, cobalt, nickel, copper, graphite, steel, plastic, etc. to make the battery, 225 tons of raw earth need to be dug to get to the minerals required. All that digging is done with, you guessed it, big machines that burn diesel. While this amount of earth dug per battery seems high to me, directionally you see the point.

Allow me one emerging market climate/ESG aside here. As the U.S./Europe continue down their path of trying to reduce CO2 emissions, they are becoming more vocal about the emerging markets following their lead. The problem is that the emerging markets just want to grow and raise the standard of living for their population and when pressured by the U.S./Europe about their emissions, they are saying that the West had 200+ years to burn fossil fuels to advance, why should the EMs be different? Fossil fuels remain the cheapest, most energy efficient source of power, period. (I'm leaving aside the argument for nuclear.) If renewables were truly cheaper, as pundits claim, why wouldn't 100% of incremental power plants be via renewables around the world? Yet they are not, even with the massive subsidies thrown at them.

Here is a chart of the cumulative CO2 emissions since 1750. If you are an emerging market, it is easy to see why they may not follow the West's morality lesson after our history of burning fossil fuels.



Source: Our World in Data & The Global Carbon Project

To hammer this home, here are a few recent quotes.

- “Developed nations enjoyed the resource, they contaminated the world, they should be the ones who change their lifestyle. I am not pro fossil fuel; I am pro fossil fuel for Africa.” Gabriël Mbaga, Minister of Mines and Hydrocarbons of Equatorial Guinea.
- “We must not be forced to do what will destroy our future and our children. We need energy to sustain our future generation.” Dr. Omar Farouk Ibrahim, the secretary General of the African Petroleum Producers Organization.
- Nigerian President, Muhammadu Buhari, (OPEC+ member) “Many of my peers are frustrated with Western hypocrisy and its inability to take responsibility. Governments have repeatedly failed to meet their commitments to the \$100bb fund for climate adaptation and mitigation in the developing world – for the mess their own industries caused. According to the UN, Africa is the continent worst affected by climate change, despite contributing the least to it...



Amid this simmering acrimony, I offer a few words of advice to Western negotiators at this year's COP27... Don't tell Africans they can't use their own resources. If Africa were to use all its known reserves of natural gas – the cleanest transitional fossil fuel – its share of global emissions would rise from a mere 3% to 3.5%. We are not the problem. Don't tell Africa that the world cannot afford the climate cost of its hydrocarbons, and then fire up coal stations whenever Europe feels an energy pinch. Don't tell the poorest in the world that their marginal energy use will break the carbon budget, only to sign off on new domestic permits for oil and gas exploration. It gives the impression your citizens have more of a right to energy than Africans."

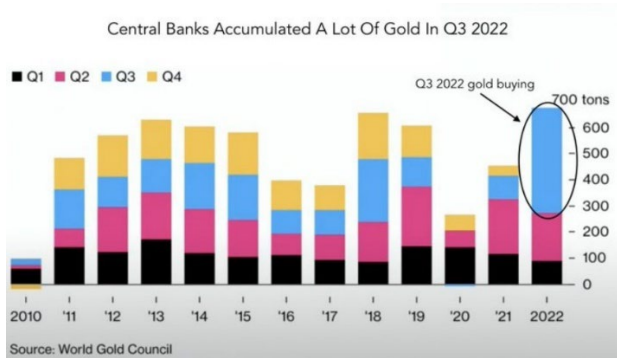
- At the recent US Africa summit where President Biden promised Africa \$55bb over 3 years if Africa committed to implanting "green" energy infrastructure, Rwandan President Paul Kagame said "We have made it clear there isn't anyone going to come from anywhere to bully us into something to do with our lives."

## Gold

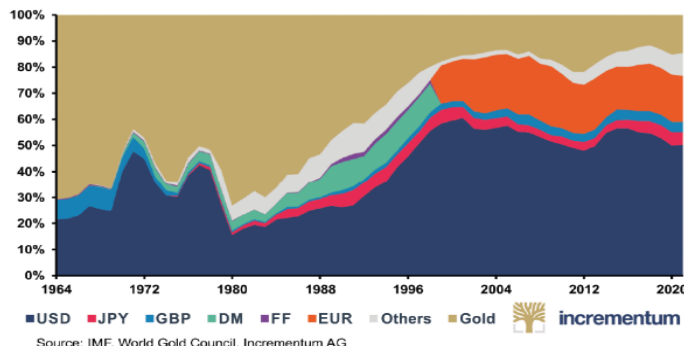
We continue to have conviction in mining companies, especially gold miners. Given the constant debate of whether gold is money or if it is "an unproductive" asset as Warren Buffett has said, It was interesting in a recent interview when the Governor of the Dutch Central Bank said their gold revaluation account ensures the solvency of the central bank. I.e., if world governments revalue gold higher that would solve any short-term solvency issues in the central bank. It is for this option that the Governor said they would "definitely not sell their gold."

Warren Buffet once said gold was an "unproductive" asset, which, as defined in his 2011 letter to shareholders, means "assets that will never produce anything, but that are purchased in the buyer's hope that someone else, who also knows that these assets will be forever unproductive, will pay more for them in the future." His point isn't wrong in that if the only comparison of gold is to a world-class, growing, productive business, who can always pass inflation through, as opposed to most companies. That said, most can't always pass inflation along and when the government has spent over 100 years telling you they want to devalue the currency (ie, 2% inflation). During this time holding an asset that historically was money and has limited supply growth and is still seen by virtually all governments around the world as the only real way to protect your reserves from devaluing, seems like a positive.

If gold is not seen as money, then why are central banks not only not selling, but in fact buying at basically all-time record levels? Current central bank purchases are higher through three quarters of 2022 than in any full year since 1967, when the U.S. Dollar was still backed by gold. I will also point out that the huge increase this year started in the 2<sup>nd</sup> quarter, after the U.S. "froze" Russia's reserves held by the U.S. If you were a foreign country that had reserves held by the U.S., would you leave them there knowing that the U.S. can freeze/confiscate your assets? Further, according to the U.S. Treasury Department since February of this year China has sold over \$120bb in U.S. debt and China claims to be buying gold, but we don't know the amount. Interesting timing given the Russian war with Ukraine started in February 2022 and the Russian assets were frozen.



Composition of Global FX Reserves incl. Gold, 1964-2021





For those in Mr. Buffett's camp that say gold is a worthless metal, I will counter with: how much is a fiat currency worth that prints its money and buys back its debt?

See the chart to the right about global FX reserves held by central banks. In 1964 gold represented roughly 70% of FX reserves. We are now near the bottom at roughly 20%. What happens to the price of gold if central bank buying of gold continues at this pace?

## US Tech Stocks

I have spoken in the past of the craziness of ignoring stock options as "pro-forma" earnings. It is a real cost, and you either need to value that option, or in the least add back the new dilutive shares to that year's P&L. Now that Big Tech is down meaningfully in the US, there are many people saying how cheap Facebook is at 11x P/E or Google at 17x P/E. Given their historic growth, optically this appears to be correct. However, as Ben Hunt at Epsilon Theory recently wrote, the share buybacks at tech companies are basically just offsetting the employee share issuance. So for all the hype about Facebook's \$96bb in cumulative buybacks the last few years, keep in mind the shares that the \$96bb bought are equivalent to the new shares issued to employees, thus there was no net reduction in shares outstanding. How about Google? They have purchased \$156bb of their own shares since 2019. How wonderful for the shareholders right? Oh wait, 90% of that offset the new shares given to employees. This is everywhere in U.S. tech. Shareholders willingness to look the other way at all the pro-forma earnings add-backs have given the growthier companies in the U.S. the ability to suck wealth from the shareholder and give it to the employees, but not call it an expense. If you are a trader, who basically only looks at whether a company beats its expected earnings, so be it, but if you are a long-term investor, these things will matter at some point.

Let's finish with this great cover.

It is funny how sentiment works. Many people pointed out the ridiculousness of crypto lending and the potential for fraud at FTX, it was fascinating to see the media's praise of FTX and its founder, Sam Bankman Fried ("SBF"), who turned out to be just another grifting fraud. The point is when the sentiment goes that high, that fast, something seems to happen. To highlight this specific sentiment absurdity, consider that SBF's entirely fraudulent company received a higher ESG score specifically on "Leadership & Governance" than did Exxon Mobil. Again, while we are big believers in ESG, some of the agencies that score ESG seem to have missed the big picture.



The point of this whole commentary is to show that emerging market equities are about as cheap as they have ever been, which means opportunity in the long-run. While Kopernik has many fears about many things, in general our fear is lower when valuations are way down, and vice versa. For those who believe that the U.S. markets and the U.S. Dollar will continue their ascent relative to Emerging Markets, I will end with a couple quotes:

- "Doubt is not a pleasant condition, but certainty is absurd." Voltaire
- "One need not be a prophet to be aware of impending dangers. An accidental combination of experience and interest will often reveal events to one man under aspects which few yet see." Friedrich Hayek

Thanks again for your support.

Mark McKinney  
Co-Portfolio Manager – Kopernik International Fund / Analyst  
Kopernik Global Investors, LLC  
January 2023



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