The Heat is On

How is the US meeting power demand for air conditioning?

As the latest heat wave lands across the entire US, US thermal power sources (gas and coal) have been the main source for power generation to meet increased cooling demand. The following chart plots US power demand change since May 1. Wind (orange line bottom) and solar (purple) barely moved the needle. Combined, they declined. That decline represented ~2/3rds of increased coal generation (blue line 3rd from top). We anticipate Canadian results will be similar. Note BC's low water levels are likely to affect hydro output. We own private Canadian power generators Capital Power (CPX-TSX-\$41.89) and Emera Corp (EMA-TSX-\$55.04). Both have been great investments.

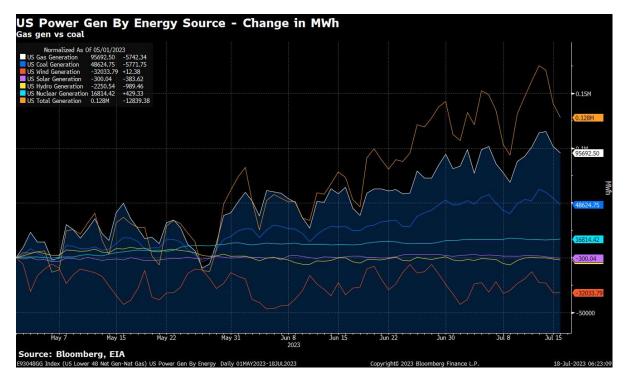
DISCLOSURE: I hold Capital Power and Emera personally, for family members and in client accounts over which I have trading authority. We have traded in the securities within the past 60 days.

US wind generation tends to trough in July and August and then picks up through the Fall. A problem for summer cooling. The North American central and southern plains are sunny and windy. Perfect solar and wind country. They're mostly sunny in the summer. The devil is in the details. As temperatures increase, solar panel efficiency drops. For every 1 degree C change above 25 C, solar panel efficiency typically drops by 0.35% to 0.5%.

https://blog.ecoflow.com/ca/effects-of-temperature-on-solar-panel-efficiency

Meanwhile cooling demand goes exponential as cooling systems attempt to maintain a 20 degree indoor temperature. A 40-C day in Texas makes exponential draw on power, while solar panels (in peak, new condition) efficiency declines. Very high heat temperatures are often paired with little wind (that's why it's hot).





Air conditioning has made the US South and Southwest comfortably habitable. The historical average July and August temperature for Palm Desert, CA, Scottsdale AZ and Las Vegas are around 41- C (note – average). The average temps in much of the deep south are over 33 Celsius. T'ain't the heat, it's the humidity. Without air conditioning, the past 20-year flood of southbound retirees from the Northern US and Canada would have been a trickle. Recent heat waves may complicate this trend. Will Tucsonites move to Saskatoon?

Our holdings of **Carrier Group** anticipated the demand for HVAC air conditioning. The stock price is up 52% over the past 12 months. The price hit a 52-week high this week. Trailing P/E around 18 is still not crazy expensive. The price may be getting ahead of the near-term profits. Somewhat pricey, but not nosebleed.

Carrier Global Corporation (CARR-US-\$54.82) – daily ranges 12 mos





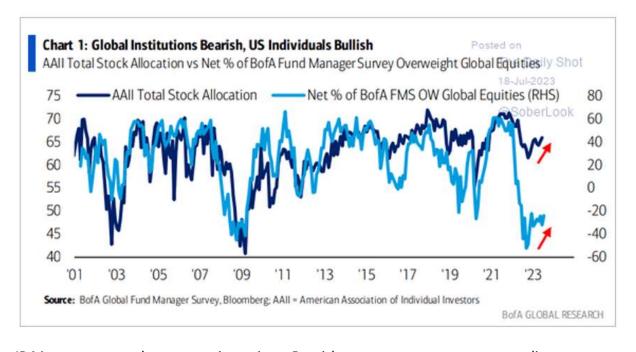


DISCLOSURE: I hold Carrier Group personally, for family account and for client accounts over which I have trading authority. We have traded in the security within the past 60 days.

Pros are still bearish.

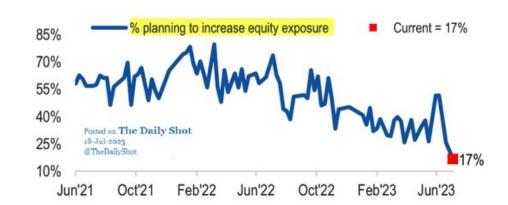
Bank of America, Goldman Sachs, JP Morgan and Citigroup updated their respective surveys of Big Money this week.

The first chart from BofA compares the American Association of Individual Investors (AAII) vs Global Equity Fund Managers (Joes vs Pros). The Pros remain at 20-year bearish extremes while Joes are under-weight equities but closer to their longer-term ranges.



JP Morgan surveyed near-term intentions. Bearish consensus near extreme readings.

Figure 2: Are you more likely to increase or decrease equity exposure over the coming days/weeks?

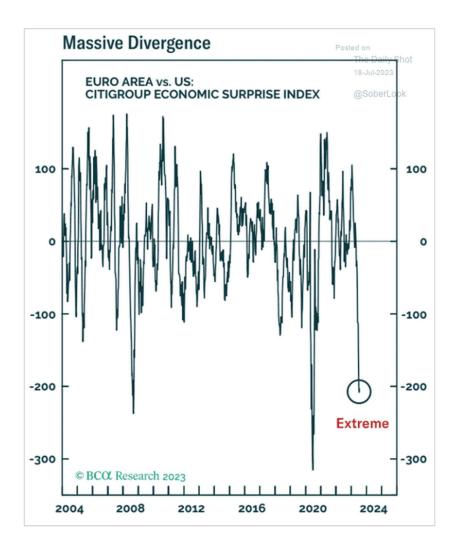


Source: J.P. Morgan.





Nobody is overly bullish on stocks. Aside from the obvious geopolitical tensions, why are global equity managers so nervous? Citigroup notes the extreme divergences between 'Economic Surprise' in the EURO area vs. the US (defined as unanticpated results). The surprises have been to the downside in Europe. We've been cautious on Europe for a number of years, well in advance of Russia's self-inflicted catastrophy. We disputed the fad for BRICs (Brazil, Russia, India, China), and stood aside from Brexit. It's a nice place to visit. We've questioned the investment argument.



'Monthly Economic Monitor: July/August' National Bank of Canada

National Bank's Economics team (not to be confused with National Bank Financials' group) remains cautious on the economy. The sum up their conclusion as follows:

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What about the direction of stock prices?

We're not indexers. We don't make top-down market calls and don't alter our investment stance based on asset allocation trends. When clients ask us 'where are markets headed' we reply we don't know and neither does anyone else with any accuracy. We don't think we need to know this to make money. When we see value, we will buy. When we don't, we won't. We see good values in the stocks we want to own today. We like the dividends we're receiving and expect them to rise. As it seems inflation is declining (for now) this should incent other investors to follow us into these same companies later, but we don't know when. We're seeing 6% + dividend yield from a well funded, profitable companies with growth histories that seem to likely to continue. A 6% dividend growing at an unspectacular 7% per year (not guaranteed!) could provide a 7% cash income yield on cost in less than 3 years. 7% return doubles the money in 10 years. Faster if dividends are compounded. Sustainable, growing income is what retirees need, not market prices.

If yields grow history says prices will follow, but they might not! With these kinds of yields we don't worry about prices lifting. Given the above bearish tone, we suspect it will be sooner than many think. None of this guaranteed. Weird things can happen. Terrorists might fly airplanes into a building. Banks might make stupid lending decisions leading to a great property collapse and bankruptcy. A global pandemic might break out. A major European country might invade another. Experience says we'll survive...but we might be wrong.

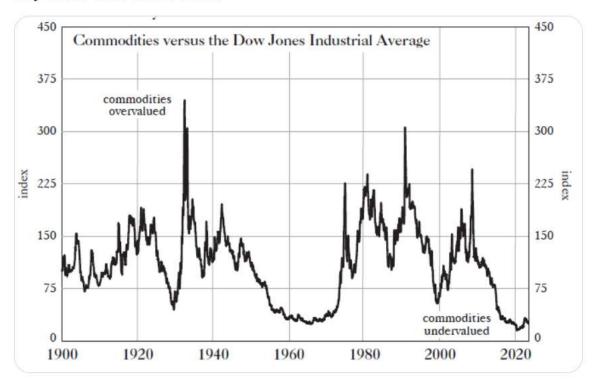
What about Canadian stock prices?

Our dividend portfolio owns US companies. Our percentage tilt is towards Canadian stocks. Why? We think Canada is well positioned to supply future commodity demand (if our governments will allow it). Why is this a thing? Despite recent price inflation, commodities remain undervalued. Restricted Ukraine grain exports add to the trend.





Commodities more undervalued today (compared to the \$DJIA)... than any other time since 1900.



Source Frank Curzio Research: https://twitter.com/FrankCurzio

'The Week in Charts' - Charlie Bilello July 16, 2023

We've bookmarked Mr. Bilello's blog page. His eclectic collection of charts are a gem.

https://bilello.blog/2023/the-week-in-charts-7-16-23

With the climate in mind, his notes on Tesla are required reading for those following EVs. We've repeatedly advised that the trend towards EV's won't be <u>investible</u> until the broad public shows an appetite for shopping at a wide range of manufacturers, noting a consumer focus on Tesla.

Mr. Bilello's July 16 posting updates this trend.





BERRY GROUF

Top-selling electric vehicles in the U.S. for the first half of 2023

VEHICLE	SALES		FROM 2022
Tesla Model Y		200,520 vehicles	52.9%
Tesla Model 3°	112	,791	11.3
Chevrolet Bolt	33,659		360.9
Rivian R1T°	16,452		194.3
Volkswagen ID.4	16,448		272.5
Ford Mustang Mach-E	14,040		-20.6
Hyundai loniq 5	13,641		-0.4
Tesla Model X	13,475		3.7
Tesla Model S	10,106		-29.3
Ford F-Series Electric	8,757		281.4

*Estimated

Source: Motor Intelligence

The chart plots US sales for the ten most popular EVs (being most of them). Top 10 combined US domestic EV unit sales 1st half 2023: 439,889 units. Combined sales Tesla (models Y, 3, X and S): 336,892. Tesla market share: 76.6%. The largest % Change in Sales has been at other manufactures.

Chevy Bolt saw the largest % gain with unit sales climbing 361%. This gain implies previous sales around 9,326 units for an increase in unit sales of 24,332 units. EV fans cheered. For perspective GM sold 2.2 million cars and trucks in the USA in 2022. GM's global unit sales in 2022 were 5.94 million. EV's remain a rounding error for many manufacturers.

There may be problems emerging in the EV sales space.

'EV sales growth's about to slow. If building is getting easier, why is selling them harder?' Medora Lee – USA Today (via Yahoo Finance)

https://finance.yahoo.com/news/ev-sales-growths-slow-building-091628757.htm

Staying with batteries...

Graphite One Awarded \$37.5 Million Department of Defense Grant Under the Defense Production Act

A client asked about **Graphite One (GPH-TSX Venture \$1.60 \$CDN)** this week. NBF does not cover the stock, so we had no formal opinion for her. Here is the company's website and news feed. https://www.graphiteoneinc.com/





The recent announcement:

https://www.graphiteoneinc.com/graphite-one-awarded-37-5-million-department-of-defense-grant-under-the-defense-production-act/

The \$37.5 million funding for Graphite One comes out of the Pentagon's National Defense Budget. News sources say the White House was instrumental in getting the funding committed. Note the mine is yet to be permitted. If the US President wants it done, is it done? The stock is up this week. Graphite One's stock price has seen regular surges and collapses over the past few years. Joe Biden was elected in Oct/2020 – (middle of the chart). The stock price closed around 40 cents the month prior to his election. The following high spikes are around \$2.60.



We made the following cautions to our client:

- Current EV tech is focused on batteries. Current battery tech needs graphite.
 Projections for graphite demand are immense and challenging. Necessity is the
 motherhood of invention. Alternatives are likely. The demand slope could change or
 disappear if alternatives are found.
- 2. This is a highly speculative company the does not fit our risk parameters. With no operating cash flow things can go wrong. Complete loss is possible.
- 3. A US President thinking something is a good idea does not guarantee profits. We advised she look up 'Solyndra' favored by a previous US President whom Mr. Biden worked for. https://en.wikipedia.org/wiki/Solyndra

Back to Mr. Bilello's July 16 blog. We've pointed out the purchasing power effect of rising interest rates on mortgage debt service payments. Mr. Bilello's July 16 charts convey this relationship clearly. The charts are required reading for property owners in British Columbia.

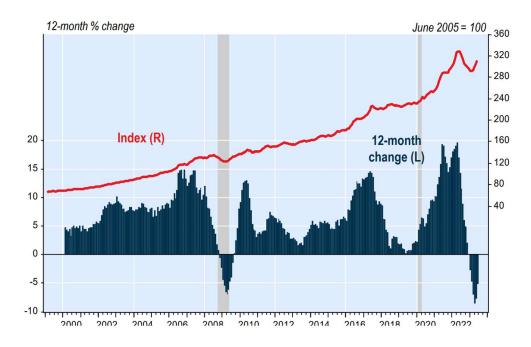




Teranet-National Bank House Price Index - Canada: Spectacular jump in house prices in June

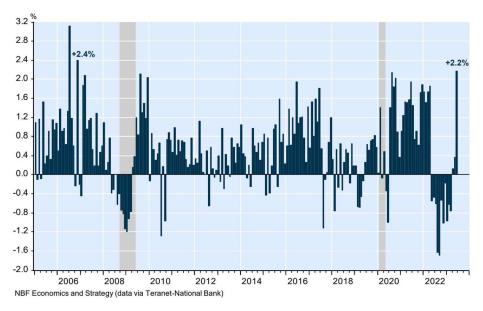
Remember the talk of Canadian house prices crashing? That crash was supposed to 'crush' Canadian bank earnings? Investors fled the Canadian banks. We disagreed. Canadian house prices were up...again...in June. The Teranet index has tripled since 2005.

Teranet-National Bank National Composite House Price Index[™]



Canada: Strongest monthly rebound since November 2006

Monthly change (%) in the Teranet-BNC HPI, seasonally adjusted







Instead of a crash, we think house prices will be flat a long period. So far even that conservative view has been wrong! Maybe we're underestimating immigration.

Canada: Annual Inflation back within the BofC's target range – NBF Economics July 18, 2023

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What about Chinese Demand?

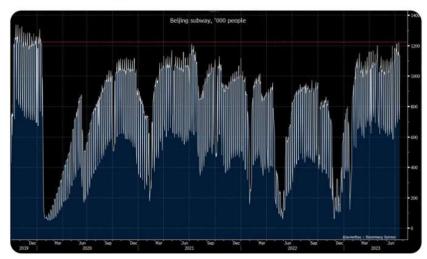
There's been a lot of worrying about the Chinese economy lately. We share concerns over China's longer-term demographics. Their population is aging rapidly. Like Japan, China has historically not welcomed immigrants. Some may draw comfort from Japan's example. Japan has a closed-door immigration policy, a stagnate population and for the past 20 years, a stagnate economy yet remained the world's 2nd largest economy with a great standard of living for much of that period. China is much larger and on average much poorer. Unlike Japan, China is effectively a dictatorship. Such structures always end badly...eventually. Then there's COVID. As the Chinese government doesn't provide data, we don't know the COVID pandemic impact on the population and the economy. We don't know if COVID aggravated the demographic trend or solved it. That's over the long term.

What about the next quarters? We think China is exiting (finally) their COVID problems.



CHART OF THE DAY: The number of people using the Beijing subway has hit the highest since 2019, surpassing the previous post-covid peak set in the summer of 2021.

Always good to remember that China exited covid restrictions a year later than the West | #OOTT #ONGT #China

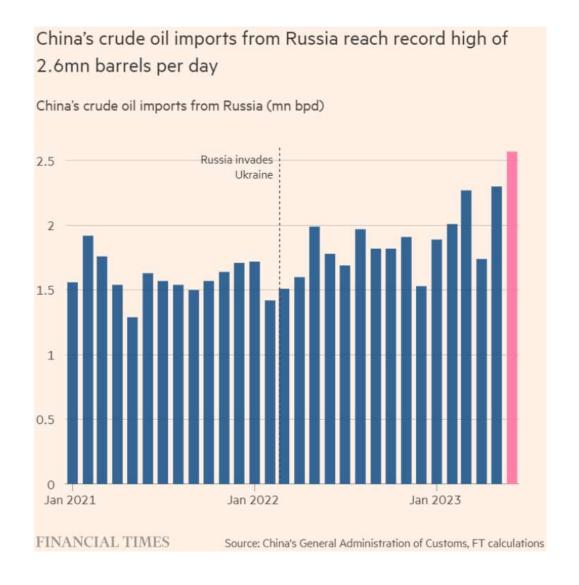


Source: Javier Blas - Bloomberg Chart of the day July 18, 2023 via NBF Before the Bell





Signs of demand strength. China is importing record amounts of Russian crude.



'US Recession Risk Monitor' National Bank of Canada July 17, 2023

Positive signs as we're seeing less red, more yellow and a bit of green. National Bank's Recession Monitor draws from timely yet trailing, data. Pundits worrying about a market crash in advance of a pending Recession are fighting the last war. That was so last year. Markets have been pricing in a rebound in the economy since late 2022.

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We've shortened up our bond maturity durations, are tilted towards Canadian dollars and remain at our upper end allocations to high quality dividend paying stocks.





ILBERRY GROUF

Have a Great Weekend

Steve & Anna Hilberry



Steve Hilberry Wealth Management Advisor, CIM

Anna Hilberry Wealth Management Advisor, CIM

FOR THE RECORD July 21, 2023

DOW INDUSTRIALS: 35,308 S&P 500: 4,550 S&P/TSX COMP: 20544 WTI: \$76.70 LOONIE IN \$USD: \$0.7571 \$US

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