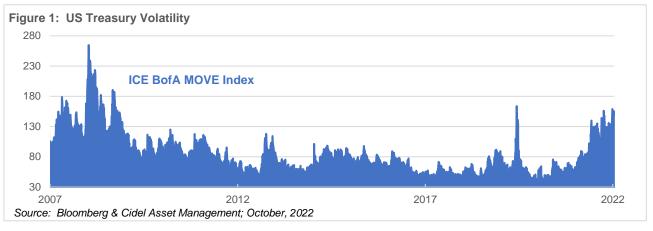




## Will the economy tap out?

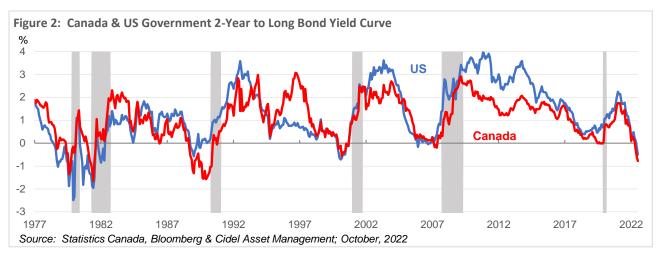
My long-term colleague Joanne tells me that the most common sign that an MMA fighter is going to tap out (submit) during a match is when they find themselves in a hold that compromises their breathing...for instance the rear-naked, guillotine and triangle choke holds (all news to me). Occasionally the fighter waits too long before tapping out and loses consciousness, at which point the match is obviously over. Myself, I prefer two-wheeled competition, where the competitors often find themselves competing against the wind or a mountain as much as each other. But for sake of this analogy, MMA is more appropriate: the Economy is like the grappler under a choke hold; the central bank, the grappler placing the hold; and inflation, the air. (I imagine the government could be like the referee, able to call the match, but like in MMA, is unlikely to do so.) In our match, between the economy and the central banks, we similarly don't know if the economy is going to tap out before losing consciousness... Unfortunately, we think this there is a strong probability that the match will be over by knockout!

The Fed and the Bank of Canada have been forced to raise policy rates this year in such an abrupt manner that yield volatility is back to the levels experienced during the early days of the pandemic (see Figure 1). Recall, that was when lockdowns were invoked, the sky was falling, and in response, monetary policy was eased dramatically. The last time we saw higher volatility levels than those of today, was during the credit crisis, when we landed in the great recession. In both of these volatile episodes, policy rates were dropped dramatically, and quantitative easing was deployed.



Yield curves are now more inverted than during the credit crisis, when curves only flirted with inversion. The US and Canadian 2 to 30-year yield curves are around -80 and -40 basis points, respectively (see Figure 2). The last episodes where the curves were this inverted was prior to the 2001 and 1990-91 recessions. There is, however, precedence for yield curves to be even more inverted than what we see today – prior to the 1980's recessions, the US yield curve was over two times today's inversion. Unfortunately, in all cases over the last fifty years, when the US yield curve (2's to longs) went negative, a recession followed. In addition, we are now dealing with a Federal Reserve and Bank of Canada, that have stated they will continue raising rates to bring inflation back to target, in spite of the risks of recession. Consequently, we think it is becoming increasingly difficult to envision a scenario where the yield curve inversion unwinds before the economy falls into recession. In terms of our analogy, the economy is likely to get knocked out.

Why do we think it unlikely the economy will tap out before being knocked out? Although interest rates have risen abruptly, it is still questionable as to how tight current monetary policy is. In the US, real yields only began to move into positive territory in April, and then it was only for long bonds. It took until August for the entire real Treasury curve to move into positive territory, but real yields were still mostly well below 1%. In



September, we had a further repricing of Treasuries, with real yields along the curve finally rising to just below 2%. But do 2% real yields imply tight policy? Over the last decade, central banks and other academia have published many articles examining neutral real rates of interest (see Exhibit A), generally positing that such rates have fallen steadily over the last fifty years. Many studies have concluded that the neutral rate for the US is now below 1%, having fallen by 2 to 5% (depending upon the model used) since the eighties. Neutral rates are not something that can be empirically measured, but there is general agreement that they change over time. So, the neutral rate of the 2010's is likely not the same as that of the 2020's. Although monetary policy is clearly tighter than a year-ago, when overnight rates were hovering just above zero and real rates were negative, we think policy is not as tight as generally assumed. It is very possible that real yields at 2% are only marginally higher than neutral and have only been so for a short period of time.

In order for interest rates to be truly restrictive, we think that the Fed and the BoC will have to continue to raise rates, so that real rates are sufficiently above neutral and remain so for long enough for the effect to translate across the economy. Why do we think there is a strong possibility of knock-out, i.e., recession? Central banks have put themselves in a bind: they are raising rates quickly and in large increments, having lost the opportunity to be pre-emptive and go more slowly ahead of the rise of current inflation; while running the risk that rate increases will not be stopped until they become too restrictive. We think central banks will not be able to stop raising rates until inflation drops close to the 2% target, or within the 1-3% band used by both, the Fed and BoC. We expect inflation to stay persistent for longer than hoped, and while the magnitude and pace of rate increases may be reduced, the Fed and the Bank will not be able to stop early. They cannot take the risk of prolonging inflation and losing hold of inflation expectations.

We believe that today's inflation was triggered by the pandemic and the dislocations that it created, but it has evolved into something different. Initially, lockdowns and restrictions disrupted commodity supplies and supply chains, and altered household consumption patterns that together, resulted in supply/demand imbalances for goods and commodities. The war in Ukraine further exacerbated the imbalances for food and energy. However, as households have resumed consumption of many services, such as travel and dining, and correspondingly reduced goods purchases, supply/demand imbalances have shifted to the service sector and, more specifically, labour. Inflation which had been stoked by higher goods and commodity prices, especially energy, has translated to wages and housing (the by-product of higher mortgage rates). Whereas goods and commodity price inflation had the prospect of being transitory, without policy intervention, we don't

## Exhibit A: r\* - Natural Rate of Interest / Neutral Real Rate of Interest

r\* is defined as the real rate of interest consistent with output equaling potential and stable inflation. Economic theory implies that the natural rate of interest varies overs time and depends on the trend growth rate of output.

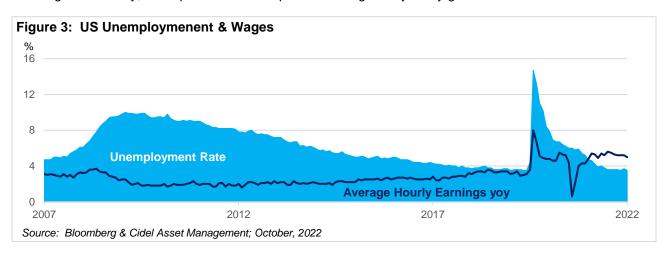
The New York Fed uses several models to estimate r\*, notably the Laubach-Williams and Holston-Laubach-Williams models, which had both estimated r\* around 0.5% in November 2020. However, "owing to extraordinary volatility in GDP related to the COVID-19 pandemic", they suspended the posting of regular updates to the estimates.

believe that to be true for wage inflation. The reality is that supply constraints, particularly labour shortages, require softening of demand in order to reduce the corresponding inflationary pressures.

Although the pandemic has clearly had a downward impact on unemployment – participation rates have fallen, with women exiting the labour force at greater rates and with early retirements prevalent – pressure was already being felt before the pandemic. In 2019 unemployment rates were at historical lows and labour shortages were evident in services, particularly healthcare and tech. There was not the level of excess job openings that exists today, but openings were, for the first time on record, in excess. However, the tight labour markets were overshadowed by declining growth, despite the noticeable increase in wages (see Figure 3). Many believed that the incongruence between jobs and available skills was depressing growth, which seemed to stir central bank concern for disinflation, rather than for the potential broader inflationary impact of low unemployment and higher wage growth. The Fed had been raising rates very gradually over the course of 2015-18, in an attempt towards policy rate normalisation, but the suggestion of economic weakness, prompted a reversal with the lowering of rates in 2019. Although wages were growing at close to 3% YoY there seemed to be relatively little concern over wage inflation. Rather, central banks were in fact probing unemployment levels, to see how low they could go before inducing higher inflation (see Exhibit B).

The period that began in the early 80's until now, is known as the "Great Moderation". (I would argue that the period following the credit crisis is more aptly described as the "Great Stimulus" – a period of disinflation accompanied by aggressive central bank stimulus.) It is possible that the recent bout of inflation will prove to be just a blip within the long secular decline, instead of the start of a new era – we are skeptical. We think it more likely that the secular forces that supported low inflation over the last fifty years are no longer in place (although, we don't believe the pandemic is specifically responsible). In the late 70's, early 80's inflation spiked on the back of war in the Middle East, as high energy prices percolated through the global economy. Wages and prices spiralled as cost-of-living adjustments became endemic. It ultimately took the appointment of Paul Volcker as Fed chairman (who replaced William Miller who replaced Arthur Burns) to finally have the conviction to continue raising rates to quash inflation, despite of the risk of recession. Inflation peaked at 15%, Fed Funds at 19% and long-term Treasuries at 15%. In the fifty years that followed, until the beginning of the pandemic, inflation averaged 4%; in the tail ten years it was only 1.8%. While central banks have been quick to congratulate themselves for adopting inflation targeting and limiting subsequent inflationary episodes, we think there is another narrative. Globalisation, technology, demographics, and less military conflicts have been key deflationary forces that have characterised the Great Moderation.

We are concerned that the deflationary forces that we believe were central to the Great Moderation are no longer in place. In particular, demographics and globalisation trends do not appear to be favourable. The bulge of boomer workers that were available during the Great Moderation has been replaced by the bulge of retirees, and many developed countries appear less welcoming to migrants. The world appears to be "deglobalizing" as trade with countries such China and Russia has become less desirable, if not impossible. The difficulty with supply chains during the pandemic has also encouraged countries to look inwards for sourcing. Additionally, we expect that the adoption of ESG goals by many governments and businesses will



be somewhat inflationary. We should point out that technology still has the potential to be deflationary – by definition its impact is constantly changing and there is nothing to say that it will not continue to be deflationary. We do not suggest that inflation will continue out today's levels, but we question the supportive dynamics that were previously in place.

The markets are currently expecting that the Fed and the Bank of Canada will reach their policy rate objectives by early next year: 5% and 4.5%, respectively. It is also expected that rates will remain at this level for a while – both central banks have done an effective job of forward guidance. But throughout this tightening cycle, the markets and central banks have been playing catch up, having to constantly upgrade expectations and guidance. For the reasons we mentioned above we expect this to still be the case as we move into 2023. We expect tightening will continue until a least mid-year, at which point inflation should fall to acceptable levels, but unlikely before the economy falls unescapably towards recession (unconsciousness).

A note on corporate bonds. Corporate yield spreads have widened close to levels seen at the beginning of the pandemic. But these levels are well shy of the levels experienced during earlier recessions, particularly the Great Recession (Credit Crisis). Although many forecasters now expect a recession in 2023, there is also the feeling that most borrowers are adequately prepared and demise will be avoided – after all, everyone is expecting a recession. We think that yield spreads are still vulnerable to widening – historically, liquidity dries up quickly when investors sense a recession is imminent, irrespective of borrower solvency. We do expect, though, further differentiation between investment grade and non-investment grade yield spreads. Canada does relatively well in this scenario, as the Canadian market is dominated by investment grade, particularly financials. We should also point out that over the years, Canadian financial issuers have issued a broader range of securities across the capital structure – In this context, lower-rated hybrid securities will continue to underperform (wider yield spreads) as the economy weakens.

There will be a buying opportunity for both duration and credit, but not yet. Although yield curves are predicting recession, i.e., having inverted well below zero, it is likely that as expectations of policy rates move higher, entire yield curves will shift upwards, while maintaining, or even, growing the inversions. The added price sensitivity of longer maturity bonds implies, to us, that it is still too early to extend duration. In addition, the potential for further spread widening, as corporate bond liquidity dries up, will present a better entry point for lower quality credit.

## Exhibit B: Bank of Canada Monetary Policy Framework Renewal

In December 2021 the Bank of Canada published a report on its quinquennial monetary policy renewal. In simple terms it decided to renew its agreement on Canada's inflation targeting framework for another five years, ending December 2026. Under the agreement the Bank will continue to conduct monetary policy aimed at keeping inflation, as measured by CPI, at 2%, within a 1 to 3% range. The Bank also reported that under the agreement that Bank could continue to use the flexibility in its framework to manage the challenges of lower neutral interest rates and the uncertainty about maximum sustainable employment.

What struct us in the report was a "drift" in the Bank's perception of its mandate. Whereas the Federal Reserve has an explicit mandate to promote effectively the goal of maximum employment, no such mandate has been agreed to with the Bank of Canada. Yet, in the Bank's report, the following statement was included in reference to the Bank's flexibility:

"... the Bank will continue to use the flexibility of the 1 to 3 percent control range [of inflation] to actively seek the maximum sustainable level of employment..."

Perhaps more troubling was the Bank's introduction of the concept of "probing" as follows:

"To seek maximum employment, the Bank may sometimes tighten its monetary policy stance more gradually than it would have in the past when inflation is near the 2 percent target and employment is near the Bank's current estimate of the maximum sustainable level. Such a policy is often referred to as probing, and it can allow employment to rise above the Bank's current estimate of its maximum sustainable level as long as inflation remains near the midpoint of the inflation-control range and the Bank does not see clear evidence of rapidly building inflationary pressures."

We think the Bank may have gotten too complacent with low unemployment and rising wages. We suspect they will want to re-examine their flirtation with probing potential output, particularly as it relates to unemployment.