

Asset Allocation Strategy

CIO Office | May 2023

Time-out

Highlights

- Despite lingering uncertainty, markets remained relatively quiet in April, with most assets closing the period slightly positive. In hindsight, after a little more than a year of rate hikes and roller coaster rides for investors, the fact of the matter is that U.S. stocks and bonds are essentially at the same levels as they were this time last year. Now, a turning point seems to be looming as the Fed is visibly preparing to call a time-out on rate hikes.
- Looking at the last ten rate cycles, historical facts suggest that a period of economic stagnation could continue with the Fed on the sideline, with little immediate consequence for stocks and to the benefit of bonds. But once the time-out expires, the transition to rate cuts could, unfortunately, mark the beginning of a more pronounced deterioration in economic activity and, hopefully, a more sustained slowdown in inflation.
- More specifically, three key scenarios appear conceivable in the Fed's ongoing fight against inflation from here onwards: (1) a resounding victory, which equity markets seem to expect; (2) a hard-earned victory, discounted in part by bond markets, and; (3) an overtime period, unlikely, but not impossible.
- In any event, as investors, we never aspire to predict the turn of events with precision; no one can. Much simpler, our approach focuses on assessing whether macroeconomic conditions are conducive to risk assets' outperformance, and with what degree of confidence. At the moment, virtually all the indicators that we monitor are sending a cautious signal. The only exception is market momentum, which seems convinced there is no reason to be wary in the way that harkens back to the Summers of 2000 and 2007.
- Against this background, we are keeping our defensive asset allocation in place.

Table 1 Global Asset Allocation Views

	-	←	=	→	+	Δ
Asset Classes						
Cash						
Fixed Income						
Equities						
Alternatives						
Fixed Income						
Government						
Investment Grade						
High Yield						
Duration						
Equities						
Canada						
United States						
EAFE						
Emerging Markets						
Value (vs. Growth)						
Small (vs. Large)						
Cyclicals (vs. Defensives)						
Alternatives & FX						
Inflation Protection						
Gold						
Non-Traditional FI						
Uncorrelated Strategies						
Canadian Dollar						

This table is for illustration purposes only. Bars represent the degree of preference of an asset relative to the maximum deviation allowed from a reference index. The further to the right (left) they are, the more bullish (bearish) our outlook for the asset is. No bars indicate a neutral view. The column under the delta sign (Δ) displays when our outlook has improved (↑) or worsened (↓) from the previous month. Consult Table 3 to see how they translate into a model balanced portfolio.

CIO Office

Market Review

Fixed Income

- › The Canadian fixed income universe ended April on a good note, supported by falling long-term bond yields and narrowing credit spreads.
- › The same was true in the U.S., where Investment Grade bonds and High Yield securities posted similar gains.

Equities

- › Equity markets were calm in April, especially compared to the very eventful month of March. The EAFE region outperformed, supported by strong performance from European equities, while emerging markets struggled.
- › Within U.S. equities, small caps (Russell 2000) continued to underperform significantly.

FX & Commodities

- › Oil prices increased slightly in April, buoyed by surprise production cuts from OPEC. On the other hand, copper prices fell significantly.
- › In currencies, the U.S. dollar continued to weaken against the euro as economic growth and inflation appear to be stronger on the European continent.

Table 2 Market Total Returns

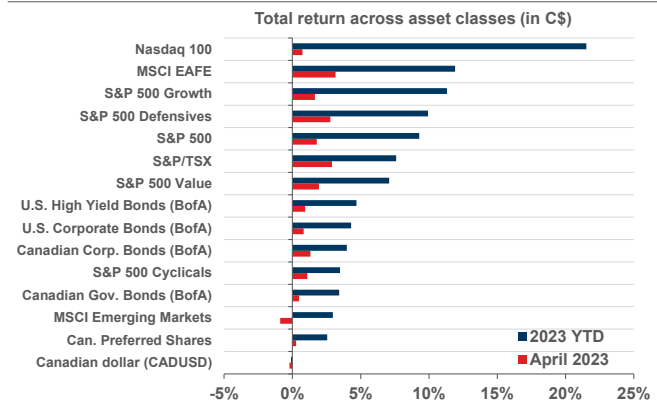
Asset Classes	April	YTD	12M
Cash (S&P Canada T-bill)	0.3%	1.5%	3.1%
Bonds (ICE BofA Canada Universe)	0.9%	4.0%	1.9%
Short Term	0.4%	2.1%	1.7%
Mid Term	0.5%	4.3%	3.3%
Long Term	1.9%	6.3%	1.0%
Federal Government	0.4%	3.3%	1.5%
Corporate	1.3%	4.0%	2.9%
S&P/TSX Preferred shares	0.3%	2.5%	-7.3%
U.S. Corporate (ICE BofA US\$)	0.8%	4.3%	0.6%
U.S. High Yield (ICE BofA US\$)	0.9%	4.7%	1.0%
Canadian Equities (S&P/TSX)	2.9%	7.6%	2.7%
Communication Services	6.6%	10.0%	-0.2%
Consumer Discretionary	1.4%	6.1%	11.1%
Consumer Staples	1.3%	9.2%	13.6%
Energy	4.6%	2.2%	0.7%
Financials	3.2%	5.0%	-0.7%
Health Care	5.7%	6.6%	-45.6%
Industrials	0.6%	7.1%	13.7%
Information Technology	1.5%	28.4%	19.2%
Materials	3.2%	11.6%	-0.7%
Real Estate	1.1%	7.0%	-6.2%
Utilities	2.4%	9.3%	-5.6%
S&P/TSX Small Caps	-1.2%	3.3%	-7.6%
U.S. Equities (S&P 500 US\$)	1.6%	9.2%	2.7%
Communication Services	3.8%	25.0%	1.1%
Consumer Discretionary	-0.9%	15.0%	-8.5%
Consumer Staples	3.6%	4.5%	2.2%
Energy	3.3%	-1.5%	19.2%
Financials	3.2%	-2.6%	-1.8%
Health Care	3.1%	-1.4%	4.2%
Industrials	-1.2%	2.2%	7.0%
Information Technology	0.5%	22.4%	8.1%
Materials	-0.1%	4.1%	-3.0%
Real Estate	1.0%	2.9%	-15.9%
Utilities	1.9%	-1.4%	-0.2%
Russell 2000 (US\$)	-1.8%	0.9%	-3.6%
World Equities (MSCI ACWI US\$)	1.5%	9.0%	2.6%
MSCI EAFE (US\$)	2.9%	11.8%	9.0%
MSCI Emerging Markets (US\$)	-1.1%	2.9%	-6.1%
Commodities (GSCI US\$)	-0.8%	-5.7%	-15.1%
WTI Oil (US\$/barrel)	1.4%	-4.3%	-26.7%
Gold (US\$/oz)	0.7%	9.6%	4.3%
Copper (US\$/tonne)	-4.7%	2.5%	-12.2%
Forex (US\$ Index DXY)	-0.8%	-1.8%	-1.3%
USD per EUR	1.6%	3.4%	4.6%
CAD per USD	0.3%	0.0%	5.4%

CIO Office (data via Refinitiv, as of 2023-04-28)

Time-out

Despite lingering uncertainty, markets remained relatively calm in April, with major stock and bond indices closing the period slightly positive (**Chart 1**).

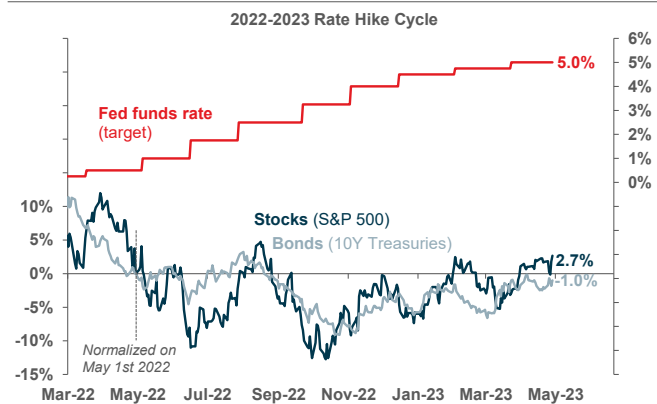
1 | A rather quiet month of April for markets



CIO Office (data via Refinitiv).

In hindsight, after a little more than a year of rate hikes and roller coaster rides for investors, the fact of the matter is that U.S. stocks and bonds are essentially at the same levels as they were this time last year (**Chart 2**).

2 | After a year of large fluctuations and rate hikes...

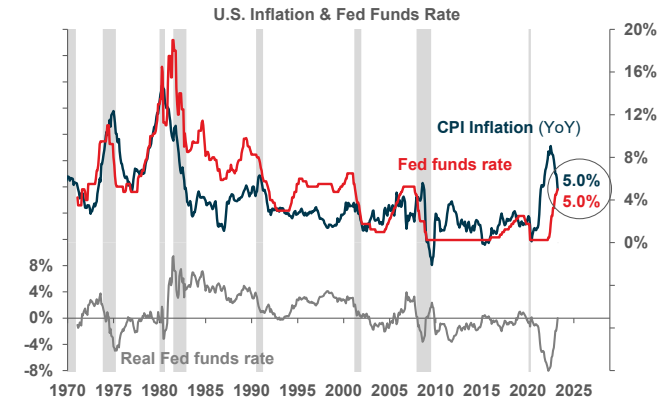


CIO Office (data via Refinitiv).

Now, a turning point seems to be looming – at least on the monetary policy front – as the Fed is visibly preparing to call a time-out on rate hikes (like the Bank of Canada has since January) after the one expected on May 3¹. In so doing, the Fed's

reference rate will move just above the annual inflation rate, which continues to decelerate – a convergence that comes at a time and level in line with our outlook² (**Chart 3, Chart 4**).

3 | ... a turning point seems to be looming...



CIO Office (data via Refinitiv).

4 | ... for U.S. monetary policy

Federal Reserve rate-hike cycles since 1972*

Fed Chair	First hike		Last hike		First cut	
	Date	Real rate	Date	Real rate	Date	Real rate
Burns	Mar-72	2.0%	Apr-74	0.9%	Jul-74	-2.3%
Miller - Volcker	Aug-77	-0.6%	Mar-80	1.7%	Apr-80	1.3%
Volcker	Aug-80	-1.9%	May-81	9.2%	Jun-81	9.4%
Volcker	Jun-83	6.4%	Aug-84	7.1%	Sep-84	6.7%
Volcker - Greenspan	Apr-87	2.7%	Sep-87	3.0%	Nov-87	2.3%
Greenspan	Mar-88	2.8%	Feb-89	4.9%	May-89	4.4%
Greenspan	Feb-94	0.7%	Feb-95	3.1%	Jul-95	3.0%
Greenspan	Jun-99	3.0%	May-00	3.3%	Jan-01	1.8%
Bernanke	Jun-04	-2.0%	Jun-06	0.9%	Sep-07	2.0%
Yellen - Powell	Dec-15	-0.2%	Dec-18	0.6%	Jul-19	0.7%
Average		1.3%		3.5%		2.9%
Powell	Mar-22	-8.0%	Current -->	0.0%	?	?

CIO Office (data via Refinitiv). *Need at least two consecutive moves in two different months of at least 25 bps each to change cycle. Real rate = target policy rate less headline CPI %YoY.

What does this impending "pause" imply going forward? Before we jump to conclusions, let's look at what history has to say.

What does the playbook say?

Over the last five decades, we count ten full cycles of interest-rate hikes by the Fed (excluding the current one). At the outset, it should be stressed that these periods present enormous structural,

¹ For now, the most likely scenario is a final hike on May 3, but another increase on June 15 cannot be ruled out.

² Excerpt from our 2023 outlook published last December: "Putting these projections together with a certain margin of error, we thus obtain a potential crossover between annual inflation and the Fed's effective rate near 5% somewhere between April and June of 2023, at which point the Central Bank could therefore begin to pause its rate-hike cycle."

cyclical, and even punctual differences that make the interpretation of simple historical averages hazardous at times. Nevertheless, some interesting findings emerge (**Chart 5**):

- Although Fed rate decisions are much more sequenced these days than they were in the 1970s and 1980s, notice that the central bank doesn't usually stay on "pause" indefinitely (on average, eight months since 1990).
- On the economic front, these periods were often characterized by a certain stagnation, with unemployment (average increase of 0.1%) and inflation (average increase of 0.4% annualized three-month core CPI) remaining relatively stable.
- For markets, although average performances are distorted by the varying length of the pauses (ranging from one to 15 months), overall equities often did relatively well, especially during the last two episodes. For 10-year Treasury yields, the picture is more clear cut, with a definite downward trend and limited upside risk.
- Finally, while one can reasonably assume that the recent "pause" episodes are more pertinent, note that according to our neutral rate measure, monetary policy has not been this restrictive since 1981.

To provide the full picture, let's now look at historical facts during periods of rate cuts following these pauses (**Chart 6**):

- The time between a first and last rate cut varies considerably, ranging from three months around the episodic Black Monday of 1987 to 40 months from July 1995 to November 1998.
- Similarly, the magnitude of aggregate rate cuts differs greatly, with an average of 580 bps before 1990 and 350 bps since then.
- For the economy, this is usually where the damage really starts to show, with unemployment rates rising (and recessions occurring) seven times out of ten and in every instance where monetary policy was previously restrictive. Besides, the deflationary nature of economic slowdowns is apparent, with inflation slowing in all cases.
- As for markets, while the stock market often came out with positive returns in the past, the three most recent episodes (all characterized by a recession) were more painful. For bonds, these periods were associated with gains, although the potential for a momentary rise in 10-year yields seems greater in this situation than during the Fed pauses.

5 | Historical facts during periods of "pauses"...

Last hike	Months until first cut	Rate spread to neutral ²	Economy		Stocks (S&P 500)		Bond Yields (10Y)	
			UR change	Inflation change ³	Total return	Max DD ⁴	Change (bps)	Max increase ⁵
Apr-74	3	2.0%	0.4%	5.2%	-10.7%	-11.5%	26	28
Mar-80	1	4.0%	0.6%	-0.8%	4.1%	-2.2%	-188	5
May-81	1	3.4%	0.0%	1.4%	-1.3%	-1.5%	36	36
Aug-84	1	-0.4%	-0.2%	0.0%	1.1%	-1.7%	-33	31
Sep-87	2	-2.0%	-0.1%	0.3%	-21.1%	-29.0%	-39	92
Feb-89	3	0.1%	0.0%	0.3%	7.6%	0.0%	-40	14
Feb-95	5	-1.2%	0.3%	-0.6%	21.3%	0.0%	-161	1
May-00	8	0.4%	0.2%	-0.1%	-5.3%	-13.7%	-127	12
Jun-06	15	0.7%	0.1%	-0.9%	21.3%	-3.0%	-73	9
Dec-18	7	-0.5%	-0.2%	-0.6%	22.6%	-4.7%	-77	1
Average...	5	0.6%	0.1%	0.4%	4.0%	-6.7%	-68	23
... before 1990...	2	1.2%	0.1%	1.1%	-3.4%	-7.6%	-40	34
... since 1990	8	-0.1%	0.1%	-0.5%	15.0%	-5.4%	-109	6
May-23 ? ⁶	?	2.2%	?	?	?	?	?	?

¹Need at least two consecutive moves in two different months of at least 25 bps each to change cycle. ²CIO Office estimate. ³Change in 3m annualized core CPI. ⁴Maximum drawdown vs level at last hike. ⁵Maximum increased vs level at last hike. ⁶Assuming a 25 bps hike in May.

CIO Office (data via Refinitiv).

6 | ... and cuts in the Fed's target rate

First cut (R = Recession)	Months until last cut	Total rate cuts (bps)	Economy		Stocks (S&P 500)		Bond Yields (10Y)	
			UR change	Inflation change ²	Total return	Max DD ³	Change	Max increase ⁴
Jul-74 (R)	28	-625	2.3%	-8.4%	36.2%	-21.5%	-88	70
Apr-80 (R)	3	-525	0.9%	-8.7%	16.0%	-1.5%	0	0
Jun-81 (R)	18	-1050	3.3%	-10.6%	25.1%	-21.9%	-350	198
Sep-84	23	-556	-0.4%	-1.1%	62.8%	-3.5%	-532	28
Nov-87	3	-50	-0.1%	-1.1%	3.3%	-10.1%	-75	36
May-89 (R)	40	-675	2.4%	-1.7%	68.4%	-3.9%	-258	21
Jul-95	40	-125	-1.3%	-0.7%	134.3%	-1.0%	-117	100
Jan-01 (R)	29	-550	2.1%	-1.8%	-23.1%	-42.4%	-175	36
Sep-07 (R)	15	-500	2.6%	-1.8%	-38.0%	-50.5%	-221	21
Jul-19 (R)	8	-225	0.7%	-0.3%	-18.8%	-19.9%	-129	0
Average...	21	-488	1.3%	-3.6%	26.6%	-17.6%	-195	51
... before 1990...	15	-580	1.4%	-5.3%	35.3%	-10.4%	-217	59
... since 1990	26	-350	1.0%	-1.2%	13.6%	-28.4%	-160	39

¹Need at least two consecutive moves in two different months of at least 25 bps each to change cycle. ²Change in 3m annualized core CPI. ³Maximum drawdown vs level at last hike. ⁴Maximum increased vs level at last hike.

CIO Office (data via Refinitiv).

In sum, and taken at face value, this look at history suggests that a period of economic stagnation could continue for a few more months, with little immediate consequence for stocks and to the benefit of bonds. But once the "pause" expires, the transition to rate cuts could, unfortunately, mark the beginning of a more pronounced deterioration in economic activity and, hopefully, a more sustained slowdown in inflation.

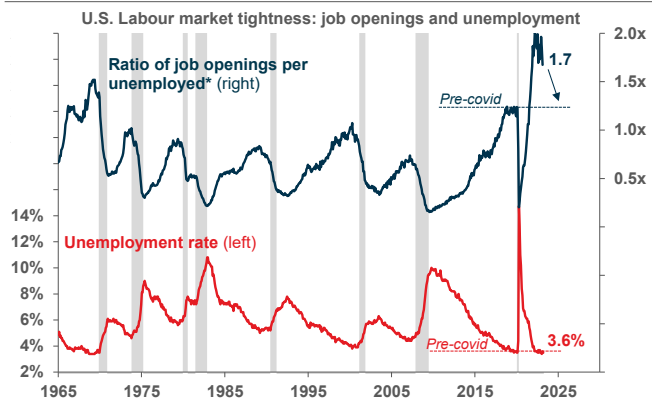
With the historical facts now established, let's go back to the specifics of the current backdrop.

Three scenarios going forward

Now that the Fed seems to have played its cards after more than a year of aggressive rate hikes, three key scenarios appear conceivable in its ongoing fight against inflation: (1) a resounding victory, (2) a hard-earned victory, and (3) an overtime period. Let's explain.

First, for a resounding victory to occur, the Fed's monetary policy would essentially have to succeed in bringing inflation back to target quickly, while preserving a reasonable level of economic activity. In this scenario, it is primarily job openings that would decrease, thereby limiting upward pressure on wages and thus inflation, without the unemployment rate climbing too much. In essence, a return to pre-pandemic normalcy (**Chart 7**).

7 | A return to pre-pandemic normalcy possible?



CIO Office (data via Refinitiv). *Based on the Help-Wanted index published by the Conference Board before 2001.

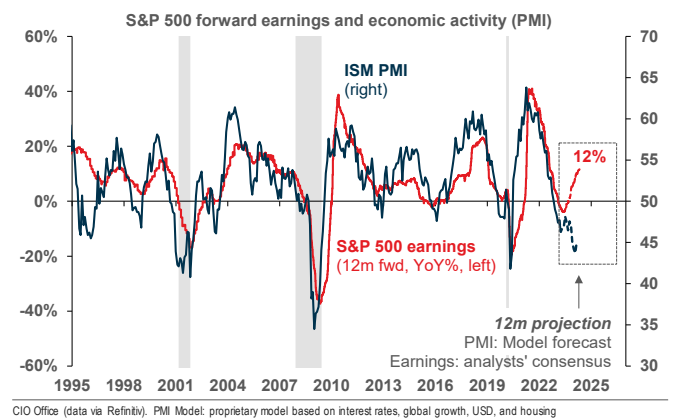
Based on S&P 500 earnings growth expectations, which foresee a significant rebound in the second half of the year, this is the scenario the equity market is primarily discounting (**Chart 8**).

8 | Equity markets seem optimistic...



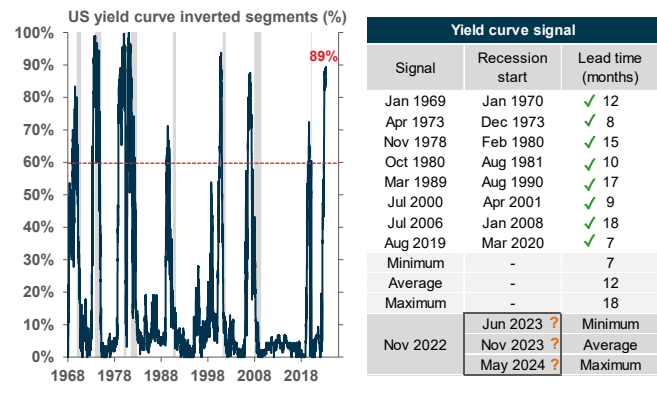
When taking into account the lagged effect of rate hikes (among other things), this seems to be the most likely scenario (**Chart 9**), as well as that expected, in part, by bond markets whose inversions signal an increased risk of a slowdown starting in the second half of the year (**Chart 10**, next page).

9 | ... despite adverse signals



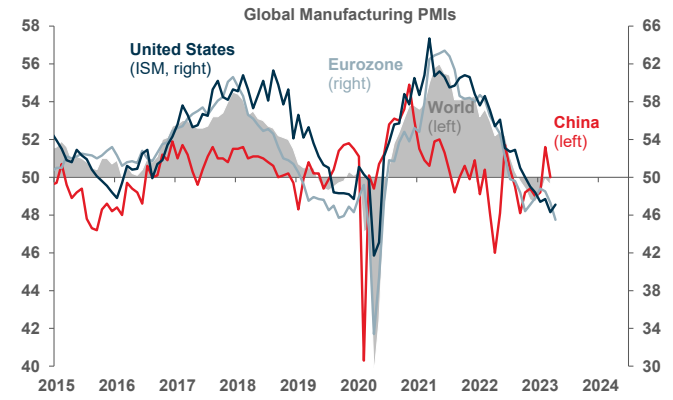
After all, it should be recalled that rising inflation largely boosted corporate sales growth via high sales prices in 2022. By definition, the slowdown in inflation the Fed is trying to bring about can therefore hardly occur without undermining private sector profits in aggregate (**Chart 11**, next page).

10 | Increased risks beyond June says bond market



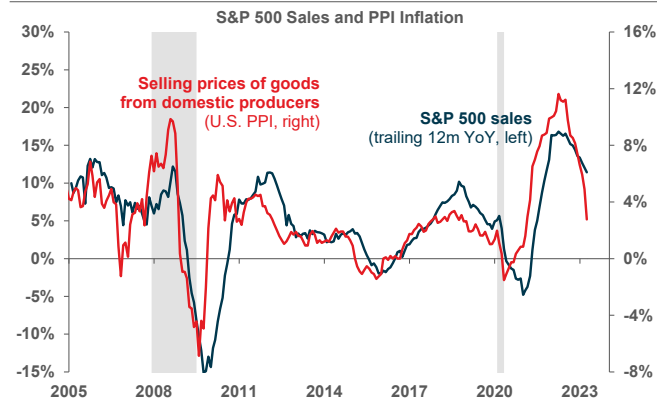
CIO Office (data via Refinitiv).

12 | China's rebound came at an opportune time...



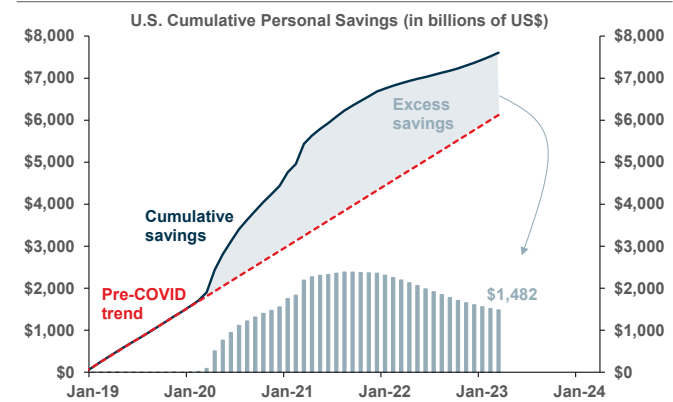
CIO Office (data via Refinitiv).

11 | Inflation (PPI) and sales (S&P 500) are linked



CIO Office (data via Refinitiv). *PPI Final Demand since 2009, PPI Final Goods before.

13 | ... while excess savings remain substantial



CIO Office (data via Refinitiv).

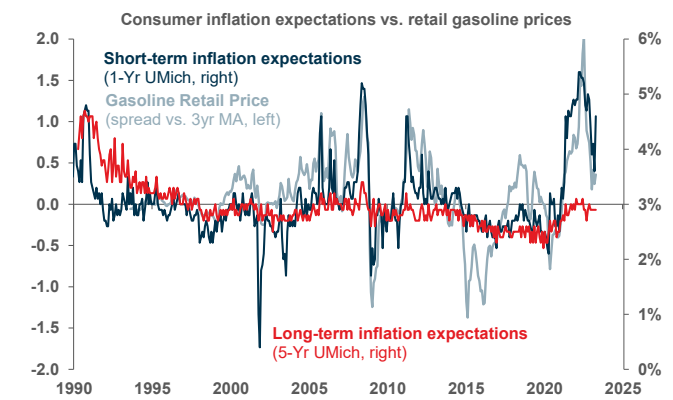
Nevertheless, we cannot rule out the possibility of an extended battle between the Fed and inflation, a scenario in which the resilience of the global economy would continue to surprise, supported in part by the reopening of the Chinese economy (**Chart 12**) and the extent of excess savings by American households (**Chart 13**).

In theory, this could support equity markets for some time, as it would likely come with better-than-expected corporate profits. However, the longer inflation takes to slow, the more likely it is to become entrenched, in which case the Fed would likely be forced to deliver a subsequent blow to the economy via one last round of rate hikes. Not exactly bullish for stocks.

For now, this seems unlikely. But, we must continue to monitor the evolution of consumer spending and,

above all, their inflation expectations – which have rebounded over the short term, although this mostly hinges on gasoline price movements (**Chart 14**) – to be sure.

14 | Inflation expectations must remain anchored



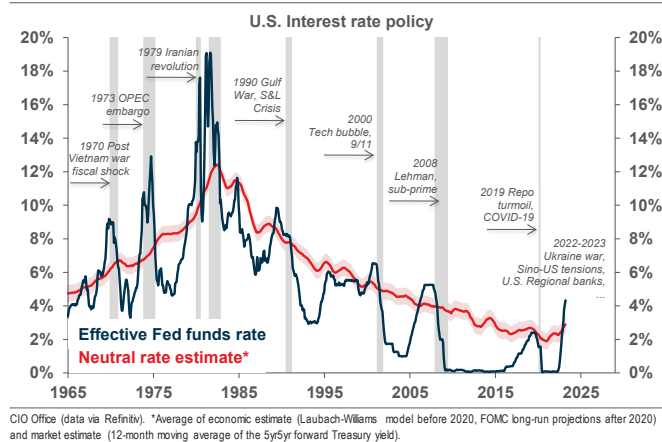
CIO Office (data via Refinitiv).

The bottom line

While the imminent truce in rate hikes south of the border marks a turning point, the spectrum of possible economic scenarios remains unusually broad.

At this point, we still see the most likely outcome as a period of economic stagnation coupled with a significant risk of recession, especially from the second half of the year onward. Despite a growing list of surprises, the post-pandemic economy is still showing considerable resilience. But, with monetary policy at its most restrictive in four decades, there is no guarantee this will hold forever (**Chart 15**).

15 | Restrictive policy rate + surprise = recession?



Clearly, a lot of hope seems to be pinned on potential rate cuts supporting both the economy and financial markets. Maybe, but for now, the risk is that persistent U.S. inflation – wages have rebounded recently (**Chart 16**) while the Fed's preferred measure of inflation remains above its comfort zone (**Chart 17**) – compels the Federal Reserve to do too little, too late.

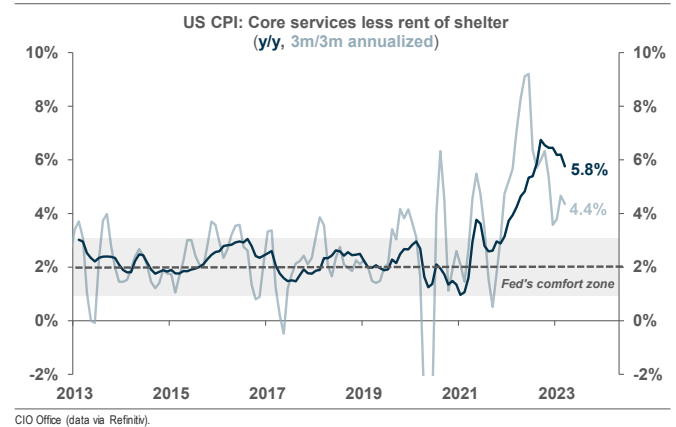
In parallel, we can visibly not count on Washington to save the day. Quite the contrary, the U.S. government seems to be on course to push the country back into a third debt-ceiling dispute this Summer, with the cost of insuring against default on its debt having recently reached an all-time high (**Chart 18**).

In any event, as investors, we never aspire to predict the turn of events with precision; no one

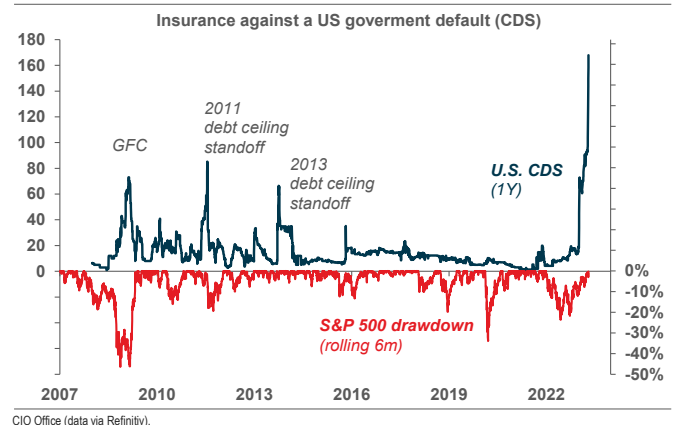
16 | Rate cuts are not for tomorrow...



17 | ... with inflation still uncomfortably high



18 | U.S. government debt ceiling standoff: again?



can. Much simpler, our approach focuses on assessing whether macroeconomic conditions are conducive (or not) to risk assets' outperformance, and with what degree of confidence. At the moment, virtually all the indicators we monitor

through our quantitative model are sending a cautious signal. The only exception is market momentum, which seems convinced there is no reason to be wary (**Chart 19**).

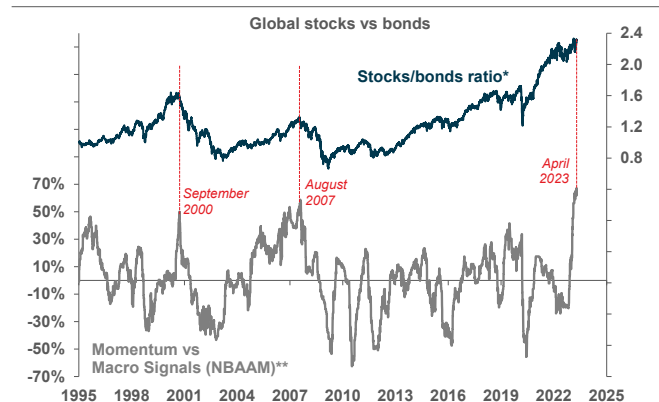
19 | Equity momentum at odds with macro signals...

National Bank Asset Allocation Macro Model (beta version)		
Indicator	Signal	Brief description and components
NBAAM		Converts global macro indicators into a tactical recommendation between stocks (risk-on) and bonds (risk-off).
Cyclical conditions		Monitors business cycle indicators.
U.S. Economy		Labour market, earnings, consumption, manufacturing
Global Economy		Global growth, earnings, eco surprises, manufacturing
Financial Markets		Equities, bonds, foreign exchange, commodities
Monetary conditions		Monitors global monetary indicators.
Quantity of money		Money aggregates, central banks assets, credit growth
Cost of money		Policy rates, long-term rates, yield curve, credit spreads
Momentum		Monitors global stocks & bonds trends.
Valuations	neutral	Watch for stocks & bonds valuations overshoots.
Sentiment	neutral	Watch for investors' sentiment overshoots.

CIO Office (data via Refinitiv). The objective of the NBAAM (National Bank Asset Allocation Macro) model is to convert a combination of macro and financial indicators into a tactical asset allocation recommendation between stocks (risk-on, in green) and bonds (risk-off, in red).

So, who is right? It's impossible to know for sure. However, if this divergence of opinion between equity momentum and macro indicators is at its highest level ever (as far back as we can go), the last two times similar situations occurred are noteworthy: (1) September 2000, right near the peak of the tech bubble and (2) August 2007, right near the peak just before the financial crisis (**Chart 20**).

20 | ... as in the summers of 2000 and 2007

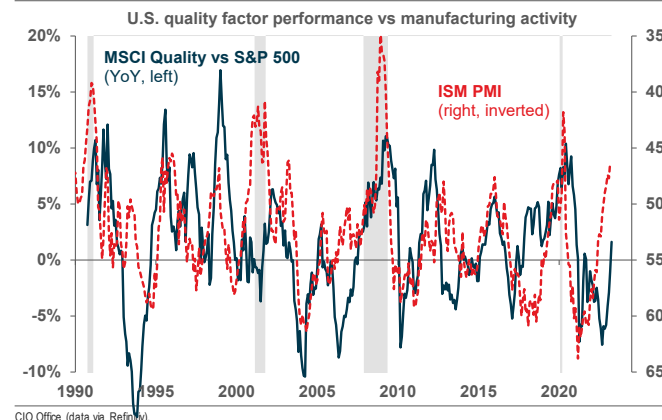


CIO Office (data via Refinitiv). *Global equities (in CAD) vs Canadian bonds universe (FTSE). **Difference between (A) NBAAM equity momentum signal and (B) cyclical ex financial markets and monetary conditions signals. Beta version.

Against this background, we are keeping our defensive asset allocation in place. Within equities, for several months we have been advocating the Quality Factor – to which several large technology companies subscribe – in the U.S. for its

countercyclical properties. This factor has indeed regained its luster since the beginning of the year, and we see this trend continuing, at least on a relative basis (**Chart 21**).

21 | A supportive backdrop for quality stocks



CIO Office (data via Refinitiv).

Table 3 Global Asset Allocation - Model Portfolio Weights (in CAD)

	Benchmark		Model Portfolio				Comments
	Total	Asset Class	Total		Asset Class		
			Allocation	Active Weight	Allocation	Active Weight	
Asset Classes							
Cash	0%	-	3.0%	3.0%	-	-	With global growth expected to trend below potential and non-trivial recession risks, the outlook for equities is precarious in the short term, while bond yields offer attractive risk/reward properties. Alternatives and cash allow for better control of the total risk of the portfolio and offer some protection against sustained inflation.
Fixed Income	40%	-	38.0%	-2.0%	-	-	
Equities	60%	-	56.0%	-4.0%	-	-	
Alternatives	0%	-	3.0%	3.0%	-	-	
Fixed Income							
Government	29%	74%	25.9%	-3.5%	68%	-5.4%	Attractive yields and strong balance sheets should lead corporate bonds to outperform government securities. For risk control purposes, we are sticking to investment grade credit. With rate hikes coming to an end and inflation slowing, Treasury yields should stabilize and even decline in the event of a more pronounced economic slowdown.
Investment Grade	11%	26%	12.1%	1.5%	32%	5.4%	
High Yield	0%	0%	0.0%	0.0%	0%	0.0%	
Duration	7.4 yrs	-	8.3 yrs	0.9 yrs	-	-	
Equities							
Canada	21%	35%	22.0%	1.0%	39%	4.3%	Canada's valuations and peristent momentum are tailwinds, but an allocation to the low volatility factor helps reduce cyclical exposure. In EM, while monetary conditions are a constraint, we favour value sectors with less exposure to China (RAFI Fundamental). In the U.S, we favour the high-quality and dividend-paying (Div. Aristocrats) companies for their diversified and defensive properties.
United States	21%	35%	20.0%	-1.0%	36%	0.7%	
EAFE	12%	20%	11.0%	-1.0%	20%	-0.4%	
Emerging markets	6%	10%	3.0%	-3.0%	5%	-4.6%	
Alternatives							
Inflation Protection	0%	0%	0.0%	0.0%	0%	0.0%	A systematic quantitative strategy that takes advantage of market trends while aiming for maximum decorrelation with equities and tight control of volatility (NALT) play an important role as diversifier, while offering exposure to high risk-free rates.
Gold	0%	0%	0.0%	0.0%	0%	0.0%	
Non-Traditional FI	0%	0%	0.0%	0.0%	0%	0.0%	
Uncorrelated Strategies	0%	0%	3.0%	3.0%	100%	100.0%	
Foreign Exchange							
Canadian Dollar	61%	-	66.0%	5.0%	-	-	The overall portfolio strategy entails an overexposure to the Canadian dollar primarily against foreign currencies (emerging markets). This positioning is not an expression of a specific currency view, but rather reflects geographic allocation within equities and an overweight in cash (C\$).
U.S. Dollar	21%	-	20.0%	-1.0%	-	-	
Euro	5%	-	4.2%	-0.4%	-	-	
Japanese Yen	3%	-	2.8%	-0.3%	-	-	
British Pound	2%	-	1.5%	-0.1%	-	-	
Others	9%	-	5.5%	-3.2%	-	-	

CIO Office. The fixed income benchmark is 100% FTSE Canada Universe. There are no alternative assets in the benchmark as their inclusion is conditional on improving the risk/return properties of traditional assets (60/40). The amplitude of the color bars under the "Active Weight" columns are proportional to the maximum deviations of the portfolio (+/- 10% for stocks and bonds, +10% in cash, +20% in alternative assets).

CIO Office
CIO-Office@nbc.ca

Martin Lefebvre
Chief Investment Officer
martin.lefebvre@nbc.ca

Louis Lajoie
Director
Investment Strategy
louis.lajoie@nbc.ca

Simon-Carl Dunberry
Director
Portfolio Strategy
simon-carl.dunberry@nbc.ca

Nicolas Charlton
Associate
Quantitative Strategy
nicolas.charlton@nbc.ca

Mikhael Deutsch-Heng
Associate
Investment Strategy
mikhael.deutschheng@nbc.ca

Zaid Shoufan
Associate
Portfolio Strategy
zaid.shoufan@nbc.ca

Julien Gordon
Associate
Quantitative strategy
julien.gordon@nbc.ca

Diego Pinochet-Lapointe
Analyst
Investment Strategy
diego.pinochetlapointe@nbc.ca

General

The information and the data supplied in the present document, including those supplied by third parties, are considered accurate at the time of their printing and were obtained from sources which we considered reliable. We reserve the right to modify them without advance notice. This information and data are supplied as informative content only. No representation or guarantee, explicit or implicit, is made as for the exactness, the quality and the complete character of this information and these data. The opinions expressed are not to be construed as solicitation or offer to buy or sell shares mentioned herein and should not be considered as recommendations.

Views expressed regarding a particular company, security, industry, market sector, future events (such as market and economic conditions), company or security performance, upcoming product offerings or other projections are the views of only the CIO Office, as of the time expressed and do not necessarily represent the views of National Bank of Canada and its subsidiaries (the "Bank"). Any such views are subject to change at any time based upon markets and other conditions, which could cause actual results to differ materially from what the CIO Office presently anticipate(s) or project(s). The Bank disclaims any responsibility to update such views. These views are not a recommendation to buy or sell and may not be relied on as investment advice.

These index providers may be included in this document: BofA, Merrill Lynch, Standard & Poor's, FTSE, Nasdaq, Russel and MSCI. These companies are licensing their indices "as is," make no warranties regarding same, do not guarantee the suitability, quality, accuracy, timeliness and/or completeness of their indices or any data included in, related to or derived therefrom, assume no liability in connection with their use and do not sponsor, endorse or recommend National Bank of Canada and its wholly owned subsidiaries any of their products and services. The above index providers do not guarantee the accuracy of any index or blended benchmark model created by National Investment Bank using any of these indices. No responsibility or liability shall attach to any member of the Index Providers or their respective directors, officers, employees, partners or licensors for any errors or losses arising from the use of this publication or any information or data contained herein. In no event shall the above Index Providers be liable to any party for any direct, indirect, incidental, exemplary, compensatory, punitive, special or consequential damages, costs, legal or other expenses, or losses (including, without limitation, lost revenues or profits and opportunity costs) arising out of or in connection with the use of the content, even if advised of the possibility of such damages.

The FTSE/TMX indices are trademarks of the LSE Group. S&P Indices are trademarks of S&P Dow Jones Indices LLC, a division of S&P Global. MSCI indices are trademarks of MSCI Inc. BofA indices are trademarks of Merrill Lynch, Pierce Fenner & Smith incorporated ("BofAML"). Nasdaq index is a trademark of Nasdaq Inc. Russell 2000 ® is a trademark of the Frank Russell Company.

© 2023 National Bank Investments Inc. All rights reserved. Any reproduction, in whole or in part, is strictly prohibited without the prior written consent of National Bank Investments Inc.

© NATIONAL BANK INVESTMENTS is a registered trademark of National Bank of Canada, used under licence by National Bank Investments Inc. National Bank Investments is a signatory of the United Nations-supported Principles for Responsible Investment, a member of Canada's Responsible Investment Association, and a founding participant in the Climate Engagement Canada initiative.