GLOBAL
Insight

Perspectives from the Global Portfolio Advisory Committee

November 2023

Are equity markets entering the AI era?

Enthusiasm for generative artificial intelligence has helped drive 2023's stock market gains. We look at the investment implications of this potentially transformative technology rollout.

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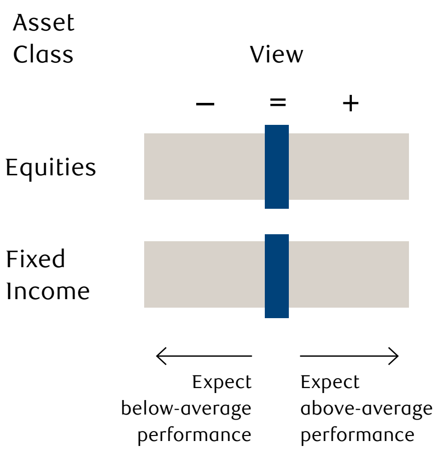


(+/=/–) represents the Global Portfolio Advisory Committee's (GPAC) view over a 12-month investment time horizon.

+ Overweight implies the potential for better-than-average performance for the asset class or for the region relative to other asset classes or regions.

= Market Weight implies the potential for average performance for the asset class or for the region relative to other asset classes or regions.

– Underweight implies the potential for below-average performance for the asset class or for the region relative to other asset classes or regions.

Source - RBC Wealth Management

Equities

- The three-month surge in Treasury yields has coincided with a three-month pullback in equity markets. The S&P 500 and MSCI All Country World Index ex USA have declined 8.6% and 11.9%, respectively, from their peaks in late July. More recently, the seven large technology-related stocks that had previously boosted S&P 500 performance have come off the boil, adding pressure on the index.
- We think returns over the next 12 months will largely depend on whether the U.S. economy succumbs to recession or achieves a soft landing. While leading economic indicators continue to send mixed signals, there is evidence underneath the surface that the lagged effect of the Fed's aggressive rate hike campaign could dampen consumer spending in the quarters ahead.
- We would maintain Market Weight positioning in equities overall, which attempts to balance the risks of a U.S. recession against the possibility that one may be averted. We recommend tilting portfolios toward higher-quality segments of the equity market, including companies with resilient balance sheets, sustainable dividends, and reliable cash flow generation.

Fixed income

- Global yields again achieved fresh highs in October with the average yield on the Bloomberg Global Aggregate Bond Index peaking at 4.4%, the highest level since 2008. This comes at a time when most central banks are likely at, or near, the end of their respective rate hike cycles as policymakers attempt to balance the economic risks of doing too much against the inflationary risks of doing too little. Longer-dated sovereign yields have moved sharply higher as markets reprice fewer central bank rate cuts in 2024, but we believe they will peak in Q4 before fading over the course of next year.
- We remain Market Weight U.S. fixed income with yields remaining near multiyear highs. While economic risks have subsided in the U.S., global recession risks are still elevated. Therefore, we continue to be broadly Underweight corporate credit with a slight bias toward government bonds.

MONTHLY
Focus

Are equity markets entering the AI era?

Joseph Wu, CFA
Toronto, Canada
joseph.wu@rbc.com

Two contrasting dynamics have shaped equity markets in 2023: while a handful of tech-linked behemoths have accounted for the lion’s share of gains, the rest of the market has followed a more tepid trajectory. A key driver of this trend has been the emergence of generative artificial intelligence. But despite the stock market’s AI enthusiasm, potentially transformative technologies often bring investors more questions than answers.

Key points:

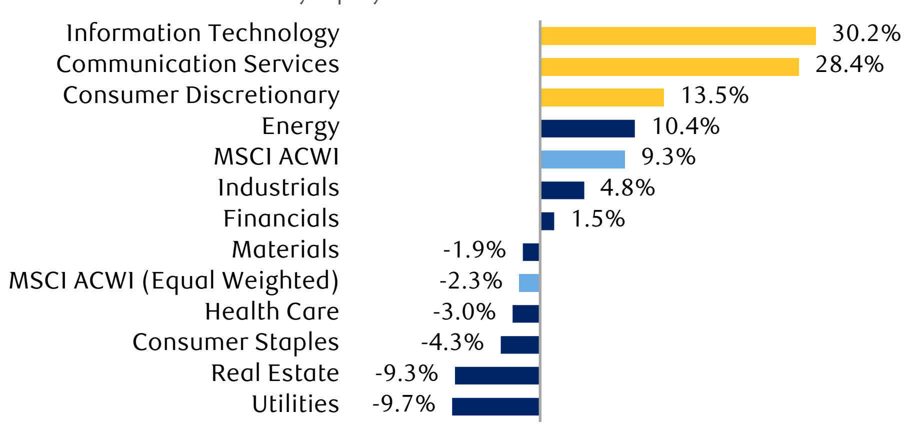
- **The transformative potential of artificial intelligence technology extends across virtually all industries, but identifying long-term winners is challenging.**
- **The emergence of the personal computer and the internet provide lessons on how AI adoption could filter through the economy and markets.**
- **As markets respond to the AI rollout, disciplined diversification can help investors guard against unintended risks.**

A year of solidly uneven performance

Viewed from a high level, 2023 has been a rewarding year for the stock market. Year to date, the MSCI All-Country World Index (ACWI) and the S&P 500 Index have advanced roughly nine percent and 13 percent on a total return basis, outpacing their respective average annual gains of 8.4 percent and 9.3 percent over the past 25 years. Trends beneath the surface, however, reveal that most of those above-average gains have been fueled by only three sectors.

AI-linked sectors set the pace

Year-to-date total returns by equity sector



Source - RBC Wealth Management, Bloomberg; data through 10/19/23; return calculations based on MSCI ACWI sector index series.

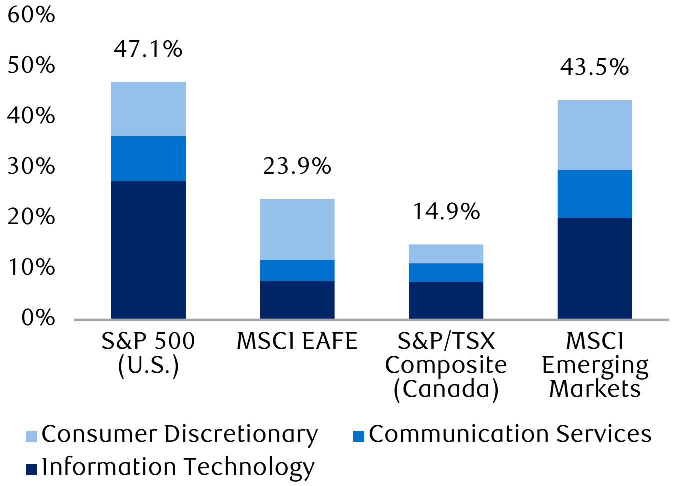
ARE EQUITY MARKETS ENTERING THE AI ERA?

A common factor propelling those three sectors has been burgeoning interest in artificial intelligence (AI) technologies, as recent significant breakthroughs kicked off a wave of optimism around the prospect of a new and durable growth pathway for a number of companies in the Information Technology, Communication Services, and Consumer Discretionary sectors.

The U.S. stock market has been the performance leader for most of the year, as it offers considerably more exposure to companies perceived to be major beneficiaries of the accelerating AI buildout. These range from firms that supply foundational hardware and infrastructure (such as semiconductor chips and data centres) to those that design software and provide related services (including end-user applications and cloud computing), amongst others.

Weights matter

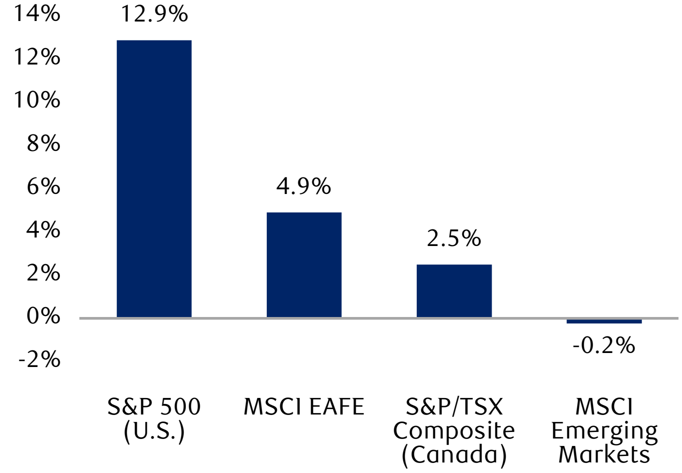
2023's leading sectors as proportions of global equity indexes



Source - RBC Wealth Management, Bloomberg, MSCI, S&P Dow Jones; data through 9/30/23

Regional performance is also uneven

Year-to-date total returns



Source - RBC Wealth Management, Bloomberg, MSCI, S&P Dow Jones; data through 10/19/23

The promise of generative AI

Artificial intelligence technologies are thought to hold immense promise because they are seen as possessing the capacity to impact virtually every industry. A defining attribute of a general-purpose technology lies in its capacity for wide application across all sectors of the economy.

For instance, consider ChatGPT, an acronym for "Chat Generative Pre-trained Transformer," a generative AI application that can produce startlingly humanlike conversational dialogue. Trained using vast amounts of textual data from the internet, ChatGPT's AI employs natural language processing algorithms that enable it to analyze, manipulate, and generate text in response to input from human users.

The potential for ChatGPT and other generative AI chatbots to turbocharge productivity has motivated companies across many industries to explore different ways of deploying and integrating these technologies in their businesses.

ARE EQUITY MARKETS ENTERING THE AI ERA?

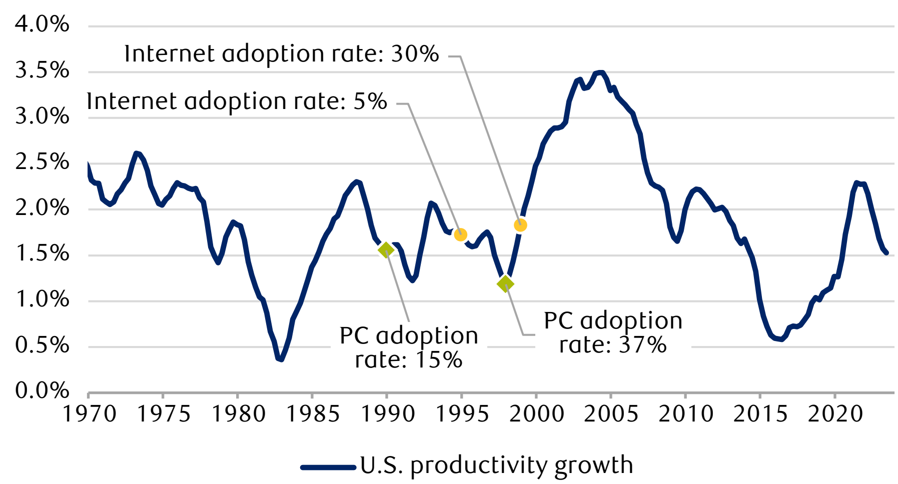
Yet text is merely one branch of the generative AI story. Rapid progress in similar "deep-learning models" stretches into the realms of images, audio, video, and software coding, to highlight just a few modes. These advances could eventually pave the way for so-called "multimodal" generative AI, enabling more powerful functions with wider-ranging applications than current models that are restricted to a single data mode.

Lessons from the emergence of other recent general-purpose technologies—such as the personal computer (PC) and the internet—offer three potential insights on how AI adoption could filter through the economy and markets: (1) it takes time for these technologies to achieve widespread acceptance; (2) the adoption will likely involve several waves of innovation; and (3) assessing the long-term winners and losers is difficult.

The personal computer and the internet were introduced in the late 1970s and early 1980s. But because it took several decades to build a critical mass of users, the U.S. economy did not see productivity improvements driven by these innovations until the latter half of the 1990s, in a trend that lasted through the mid-2000s.

U.S. productivity growth has come in waves

Five-year rolling average, y/y



Source - RBC Wealth Management, Bloomberg, U.S. Census Bureau, World Bank; data through 6/30/23

During this period, there was a pronounced boom-bust sequence in equity markets as investors first embraced an increasingly buoyant view on productivity gains and their presumed positive implications for profits, then tempered their expectations as the anticipated benefits took longer to materialize than initially expected. Despite a notable and durable improvement in productivity from 1997 to 2005, initial optimistic projections of profitability ultimately proved to be unrealistically high and premature. This can be partly attributed to the fact that so-called "killer apps"—products innovative enough to influence business and consumer trends, laying the foundations for durable business models—often take time to develop from an emerging technology.

ARE EQUITY MARKETS ENTERING THE AI ERA?

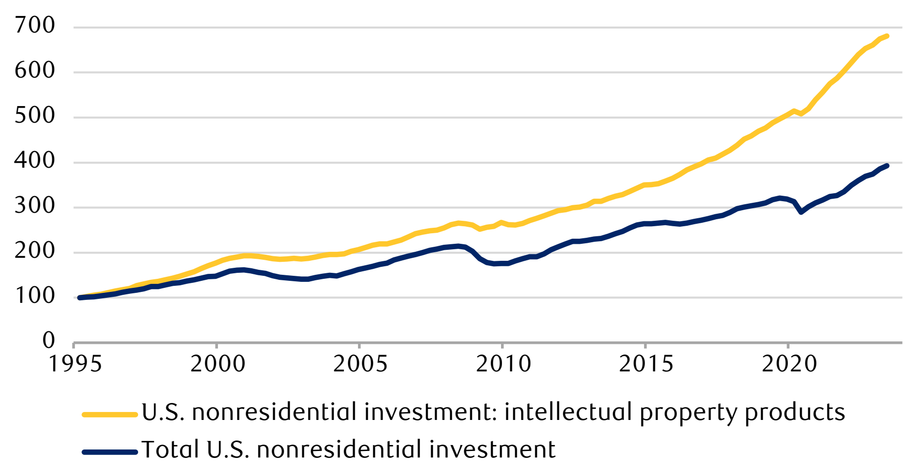
During the PC/internet era, the search engine emerged as a pivotal killer app, but Google did not really hit its stride until the early 2000s, about five to 10 years into the rapid-adoption phase for the PC and internet. Similarly in the mobile device era, social networks and instant messaging platforms, two of the leading applications (amongst many) created to monetize mobile device use, took more than five years to gain traction following the launch of the first iPhone in 2007.

In the initial AI adoption phase, immediate beneficiaries include the semiconductor industry and incumbent large-cap tech companies, which are already highly profitable and generate abundant cash flows that enable them to invest heavily in the AI space. Far more challenging to identify are the opportunities that will emerge from subsequent waves of innovation to spawn new businesses and disrupt existing operators across various industries.

It seems likely to us that these ambitious expectations will reinforce the recent trend of businesses reorienting their capital spending towards "soft investments" as the global economy continues to digitalize and become more efficient by reducing its reliance on physical structures and equipment. In Q2 2023, U.S. business investment in intellectual property reached nearly $1.5 trillion on an annualized basis, more than doubling over the past decade. Since 2010, investment in intellectual property has grown at an annualized rate of 7.5 percent, handily outpacing the 5.7 percent growth rate for overall business investment.

A structural shift towards "soft capex"

Annual U.S. corporate investment spending since 1995 (indexed to 1/1/95 = 100)



Source - RBC Wealth Management, Bloomberg; data through 6/30/23

Disruptive technologies in an investment context

This year's equity market advance has been driven predominantly by a few stocks on the back of mounting excitement related to the AI theme. Some of this enthusiasm toward tech-oriented companies appears well founded; we see many large-cap firms in this space as well resourced and fundamentally sound, a view underscored by their strong balance sheets, consistent growth, and robust profitability. In our view, reliably strong cash flow generation afforded by sustainable competitive advantages has

ARE EQUITY MARKETS ENTERING THE AI ERA?

positioned such firms to reap more benefits from the evolution of AI than their peers, at least in the early stages.

All the same, the top-heavy nature of this year's equity market gains means many investors holding diversified portfolios are sitting on returns that aren't keeping pace with broad market-cap-weighted indexes, whose values are greatly influenced by the performance of their largest constituents.

In times when the stock market is infused with captivating narratives, there is a tendency for investor expectations to overshoot, and upward momentum in the share prices of perceived beneficiaries can be more powerful and enduring than some investors may consider rational. Historical market cycles show the feedback loop that drives an influx of capital towards certain stocks as they ascend to ever-greater heights can also work in the opposite direction.

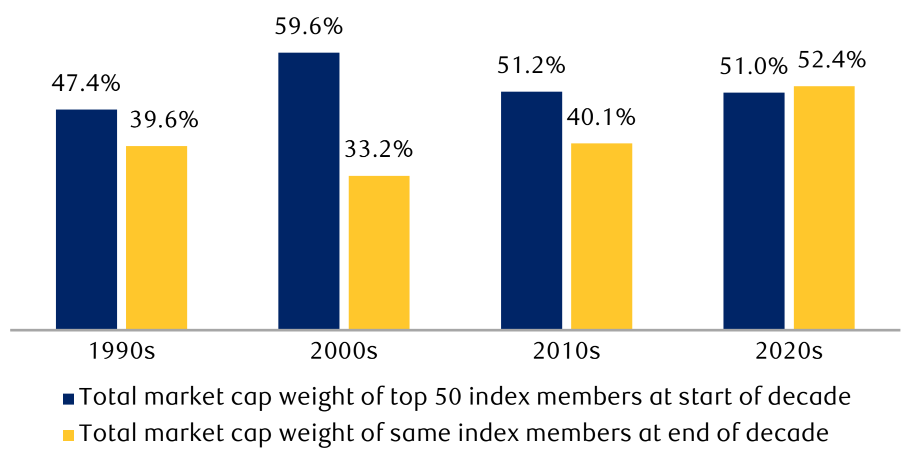
While we recognize the transformative potential of widespread AI adoption to enhance the long-term growth trajectory for the economy and corporate earnings, the magnitude and timing of these developments are inherently unpredictable and uncertain. Laying the foundations for novel technologies, upon which new applications, products, and services can be built and monetized sustainably, often requires more time than initially anticipated by investors.

The potential concentration of control over AI platforms could also provoke regulatory scrutiny. Furthermore, AI is surrounded by a plethora of thorny issues including data privacy, copyright, amplification of social biases, and the phenomenon of "hallucinations"—when an AI model generates content that appears highly plausible and persuasive despite having no basis in reality.

It is also worth bearing in mind that even the largest companies can see their once-dominant index shares fade over time, as new frontrunners emerge across subsequent economic cycles. Ascending to the top echelon in any decade does not ensure continued success in the next.

Leaders from every era tend to feel the pull of gravity

S&P 500 Index



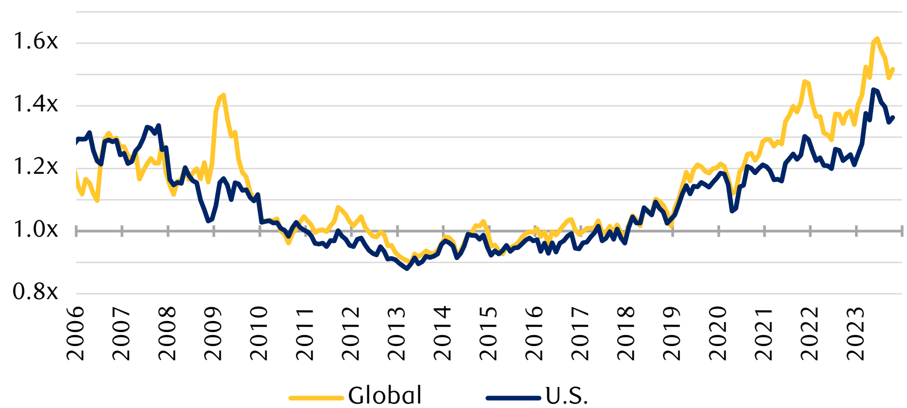
Source - RBC Wealth Management, Bloomberg; data for the 2020s through 9/30/23

ARE EQUITY MARKETS ENTERING THE AI ERA?

We firmly believe that AI is an important investment theme with a multiyear runway. But, as has been the case with previous innovations, we also think it is likely that some excesses tied to AI themes will manifest in equity markets along the multi-decade path of adoption and monetization. With the U.S. and global Information Technology sector now trading at a 30 to 50 percent premium valuation to the broader market, the market seems to have factored in the prospect of amplified profit growth. While it is not unreasonable, in our view, for disruptive technologies to garner premium valuations, we would point out that highly valued companies must constantly demonstrate and defend their competitive edge to retain these valuations. The AI arms race appears to have set off a capital spending boom, though which companies will see their capital allocations pay off in profits—and when—remains an open question.

A recent rally vaulted Tech valuations to significant premiums

Relative forward price-to-earnings ratios of the Information Technology sector vs. the broad market



Note: Based on the S&P 500 Information Technology Index relative to the S&P 500 Index (U.S.) and the MSCI ACWI Information Technology Index relative to the MSCI ACWI (global).

Source - RBC Wealth Management, Bloomberg; data through 10/19/23

We note that consensus forward-12-month earnings forecasts for global equity markets are not much higher today than they were at the start of the year. This implies that most of the stock market gains in 2023 have been powered by an expansion in valuation multiples. The same holds true for the global Information Technology sector, which now trades at roughly 25x forward-12-month earnings estimates, up from just under 20x coming into the year.

Corporate earnings growth may have a more difficult time living up to the heavier dose of optimism now embedded in stock prices. For this valuation expansion to be validated, generative AI must not only revolutionize businesses but also translate positive investment sentiment into sustainable earnings streams.

Keep a broader perspective

Against this year's backdrop of narrow leadership, we would emphasize the importance of a disciplined approach to diversification within equity portfolios. Admittedly, diversification can prove frustrating at times because it entails a tradeoff between risk and return. Maintaining a properly diversified portfolio essentially means always owning some assets that are underperforming, but this exposure to less-popular market segments can bolster portfolio performance when market leadership eventually rotates—as it often does.

This approach can help investors guard against potential unintended risks (and unpleasant surprises) stemming from an undue concentration in a single stock or a cluster of similar holdings, while positioning portfolios to navigate a broader spectrum of possible outcomes over the long term.

GLOBAL
Equity

Jim Allworth
Vancouver, Canada
jim.allworth@rbc.com

Two sides of the same coin

Since late July bond yields are up, by 88 basis points or 22% for the U.S. 10-year Treasury, while stocks are down, -8.3% for the S&P 500. Index earnings per share at $219 have been pretty much flat, as is the consensus forecast for the full calendar year. That means the price-to-earnings ratio for the S&P 500 has also shrunk by about 8%—from a rich 21x trailing 12-month earnings at midsummer to a still full 19x today. Cheaper, but far from compelling, in our view.

For U.S. equities to look attractive on a one-year basis at today's prices requires buying into Wall Street's much higher consensus earnings estimate for next year, currently standing at $246 (up 12% y/y). The forecast earnings and sales growth underlying this estimate implies a strong year for U.S. GDP. This is at odds with our own expectation for a recession arriving next year and with worsening negative CEO confidence about the direction of the economy from both the Conference Board's CEO survey and the monthly survey undertaken by Chief Executive magazine.

That said, the outright economic deterioration which typically arrives with a recession—i.e., negative GDP growth, job losses, falling earnings—is nowhere in sight as yet. As long as the hope for a soft landing hasn't been extinguished by unequivocally negative data, a plausible path higher for equity prices can remain open, in our view.

After sagging into the usually seasonally weak late summer/early fall period, the S&P 500 bounced convincingly off important technical support at the end of October. Seasonality is now helping, as November and December have historically been the best two-month period for stocks, often driven by corporate buyback windows reopening as earnings season progresses.

Equity views

Region	Current
Global	=
United States	=
Canada	=
Continental Europe	–
United Kingdom	=
Asia (ex Japan)	=
Japan	+

+ Overweight; = Market Weight; – Underweight
Source - RBC Wealth Management

On an index basis, stocks are much cheaper elsewhere (Europe, Canada, and Japan). But the most recent data strongly suggest Europe may already be in recession, while Canada is at no better than stall speed with no monthly GDP growth since May. Despite this weaker economic outlook, European and Canadian stock markets have turned higher in sync with the S&P 500, as have the UK and Japanese indexes.

From an investor's standpoint, the increase in fixed income yields is good news on two fronts. For more than a decade, bond yields were suppressed by extreme central bank policies dealing with the fallout from the global financial crisis, the European sovereign debt crisis, and the pandemic. With bond yields so low over that period, in order to reach long-term financial goals, many portfolio investors boosted equity exposure—at one point, more than 60% of S&P 500 companies sported dividend yields higher than the 10-year Treasury rate—or sought out higher-yielding (riskier) fixed income instruments. Today, government and investment-grade corporate bond yields are back up to levels that we think make financial plans work at asset allocations that entail less risk.

Second, higher bond yields are beginning to do much of the heavy lifting for the U.S. Federal Reserve

GLOBAL EQUITY

and other central banks by weakening the outlook for housing, credit-driven spending, and capital expenditure by businesses to a degree which may permit the already falling inflation rate to recede further without forcing the need for more central bank rate hikes.

However, from an equity investor's standpoint, higher bond yields deliver some negative effects. They reduce the present value of a dollar of future earnings by raising the appropriate discount rate. For example, at 2.5% (the 10-year Treasury yield pre-COVID), a dollar of earnings 10 years out has a present value of 78 cents. But move the bond yield up to 5% and that drops by 22% to just 61 cents.

Higher bond yields also push borrowing costs and the carrying cost of existing debt upward, in the process reducing the spendable income available to households as well as pressuring corporate profits.

And better returns from high-quality debt instruments also offer stiffer competition to prospective equity returns, especially when the latter may be labouring under valuations that look too rich while the economic/earnings outlook for 2024 appears to be clouding over.

We think equity returns over the next 12 months will largely depend on whether the U.S. economy succumbs to recession or achieves a soft landing despite the pressure of the much higher interest rates and tightened credit conditions that now prevail. Our U.S. Recession Scorecard leans towards the former but hasn't definitively closed the door on a more benign outcome.

For now, we would maintain Market Weight positioning in equities for a global portfolio, which attempts to balance the risks of a U.S. recession against the possibility that one may be averted. We recommend tilting portfolios towards what we see as higher-quality segments of the equity market, including those companies with resilient balance sheets, sustainable dividends, and reliable cash flow generation.

GLOBAL

Fixed income

Thomas Garretson, CFA
Minneapolis, United States
tom.garretson@rbc.com

And now we wait

At long last, we now fully expect that the respective rate hike campaigns of the major regions we follow, the U.S., Canada, the UK, and Europe, have come to an end.

Inflation will, of course, continue to drive the decision-making of policymakers. But with the trajectory of inflation now firmly trending in the right direction, in our view, we believe policymakers will shift to a more cautious risk management mode.

We have already seen a notable shift in sentiment from numerous Federal Reserve policymakers who have touted their ability to take a "wait and see" approach, while Fed Chair Jerome Powell explicitly stated that the Fed plans to "proceed cautiously." A similar line of thinking is likely to guide other global central banks during the final quarter of the year and into 2024.

But while rate hikes have already likely ended, that hasn't stopped sovereign bond yields around the world from rising sharply, and in some cases to the highest levels in well over a decade.

In our view, the increase in longer-term bond yields is unrelated to fears around further rate hikes or to risks of a reacceleration of inflation. Rather, it simply reflects markets repricing the idea that central banks are indeed likely to keep short-term policy rates at elevated levels for longer than markets had previously expected.

In the U.S., the benchmark 10-year Treasury yield breached 5% for the first time since 2007, and is now up over 100 basis points (bps) from June levels that were around 3.75%. At that time, markets had expected the Fed to cut rates to approximately 3.75% by the end of next year; today, markets see the Fed cutting rates to just 4.75% by then, a similar 100 bps increase.

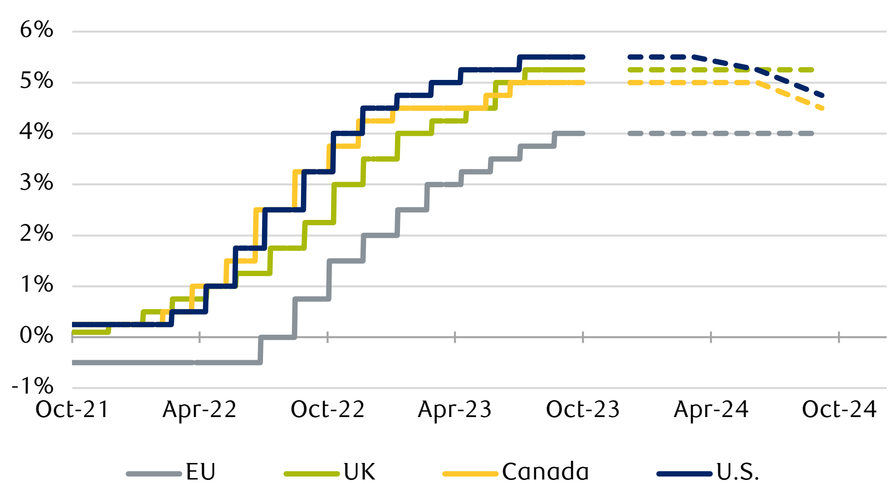
Fixed income views

Region	Gov't bonds	Corp. credit	Duration
Global	+	–	5–7
United States	+	–	3–10
Canada	=	+	3–7
Continental Europe	=	–	5–10
United Kingdom	=	–	5–10

+ Overweight; = Market Weight; – Underweight
Source - RBC Wealth Management

Interest rates have likely peaked, but how long will they stay there?

Central bank policy rates



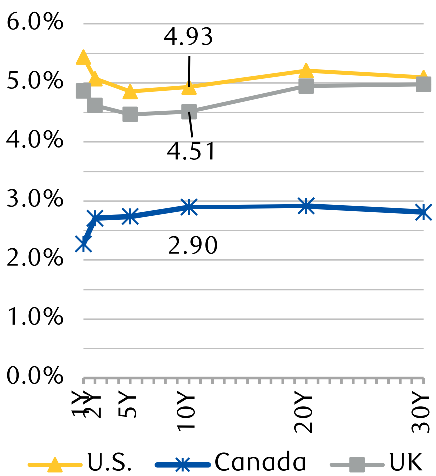
Source - RBC Wealth Management, Bloomberg; dashed lines show RBC Capital Markets forecasts

GLOBAL FIXED INCOME

In terms of how much higher yields can go, we maintain our view that the effective fed funds rate, currently at 5.33%, is a reasonable guidepost. Since the late 1990s, the 10-year Treasury yield has tended to peak at the same level as the peak fed funds rate. That said, we think Treasury yields will begin to move modestly lower as economic growth fears reemerge over the rest of the year and into 2024.

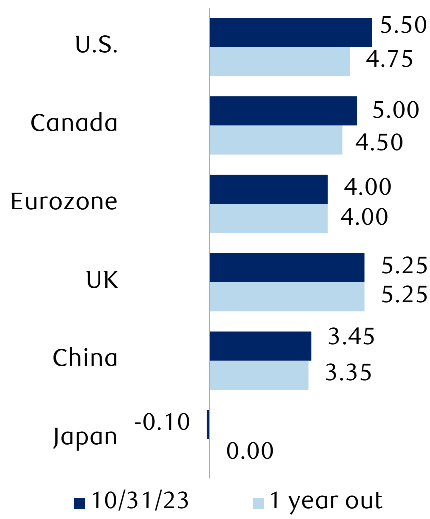
For bond investors, we believe the recent rise in yields is yet another opportunity to invest in the asset class and to reposition current portfolios. But after the recent rise, we would keep in mind that higher yields can disappear just as quickly as they appeared.

Sovereign yield curves



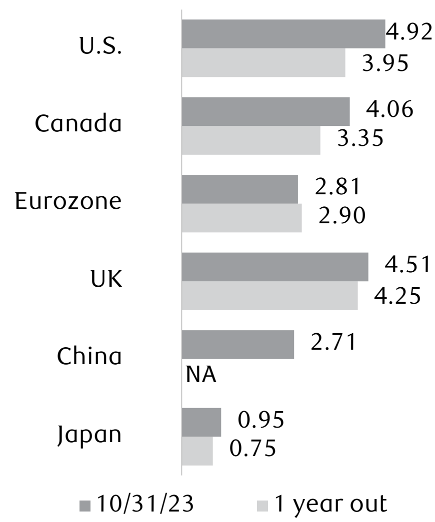
Source - Bloomberg; data through 10/31/23

Central bank rates (%)



Source - RBC Investment Strategy Committee, RBC Capital Markets forecasts, Global Portfolio Advisory Committee, RBC Global Asset Management

10-year rates (%)



Note: Eurozone utilizes German Bunds.
Source - RBC Investment Strategy Committee, Global Portfolio Advisory Committee, RBC Global Asset Management

U.S. RECESSION
Scorecard

Different month, same status

With some data still to come, there have been no sufficient changes this past month necessitating adjustments to the positioning of our seven U.S. recession indicators on the Scorecard.

The average time gap from giving a negative signal to the onset of recession for the two indicators that are rated as outright negative so far point toward a recession getting underway as early as the summer that just passed, in our view. However, both have histories with instances of much longer signal-to-recession intervals. Note that the official start date of any recession may not be announced until many months or quarters after the fact.

Three are in the "cautionary" yellow column while the other two indicators, still green, continue to suggest there is further to go in the economic expansion.

Yield curve (10-year to 1-year Treasuries)

The 1-year Treasury yield rose above the 10-year yield decisively in July 2022, and the negative gap widened further over most of the following year, peaking in June. The average historical experience of this indicator after crossing into negative territory suggests the U.S. economy would have been in recession by this summer. However, while the average time interval between "inversion" of the yield curve and the onset of recession is 11 months, in four instances the gap was longer than average.

Yield curve inversion is an unequivocal indication that credit conditions are tightening, a fact underscored by the message delivered consistently for five consecutive quarters by the Fed's Senior Loan Officer Survey (most recent issue released on July 31). A majority of U.S. banks continue to raise lending standards on almost every category of business and consumer loan including commercial and industrial loans for businesses of all sizes, credit card loans, consumer installment loans, mortgage loans, and commercial real estate loans.

The same survey also revealed that most banks are reporting reduced demand for commercial and industrial loans, as well as indicating a reduced willingness to make such loans. Most are also requiring higher credit scores for consumer loans and larger down payments

U.S. Recession Scorecard

Indicator	Status		
	Expansionary	Neutral	Recessionary
Yield curve (10-year to 1-year Treasuries)			✓
Unemployment claims		✓	
Unemployment rate	✓		
Conference Board Leading Economic Index			✓
Free cash flow of non-financial corporate business	✓		
ISM New Orders minus Inventories		✓	
Fed funds rate vs. nominal GDP growth		✓	

Source - RBC Wealth Management

U.S. RECESSION SCORECARD

for car loans as well as increasing the premium charged for loans to riskier businesses. Also, in the most recent survey a substantial majority of respondent banks indicated that conditions would remain tight or even be tightened further through the second half.

The negative spread between the 1-year yield and the 10-year yield reached its widest point this cycle so far in June at 158 basis points (bps). It has since narrowed dramatically to just 60 bps, strongly suggesting the period of "de-inversion" is underway. The return trip to "normal" from "inverted" usually gets underway just as the recession is starting or a few months before. There is also a reasonable correlation between how long the total period of inversion runs and how long the ensuing recession lasts. This latest inversion is at 15 months and counting.

ISM New Orders minus Inventories

The difference between the New Orders and Inventories sub-indexes of the ISM Purchasing Managers' Index has turned negative near the start of most U.S. recessions. But it has also registered occasional false positives—signaling a recession was imminent when none subsequently arrived. Moreover, this indicator only relates to activity in the manufacturing sector (some 15% of the U.S. economy) and is derived from a survey rather than hard data. For those reasons, we look at it as a corroborative indicator rather than a decisive one taken on its own.

After setting its most recent low in September 2022, this series has steadily moved higher and August 2023 data (we use a three-month moving average) has moved back above zero. As a result, we shifted the indicator back to yellow from red two months ago. However, the New Orders sub-index by itself has remained in contractionary territory and slumped further in the October report. Although the United Auto Workers strike undoubtedly had an impact on the new orders data for the month, the weakness was more widespread with 10 of 13 manufacturing industries reporting a drop in new orders.

Conference Board Leading Economic Index

Historically, this series has given reliable early warnings of recession. When the index has fallen below where it was a year earlier, a recession has always followed—usually two to three quarters later.

This indicator turned decisively negative in Q3 2022, shifting it to the red column on our Scorecard. As of the October report, the index had fallen for 18 consecutive months moving deeply into negative territory. Its past record strongly suggests a U.S. recession will be underway sometime in H2 2023.

Unemployment claims

The monthly low for this cycle occurred in September 2022. The cycle low for claims has typically been registered about 12 months before the start of the next recession. So, if no lower reading is posted in the coming months, its history would suggest a recession could get underway as early as this fall.

Claims surged higher in June but settled back into October. The fact that both temporary employment and job openings are falling on a year-over-year basis adds to the likelihood the tide may be turning for unemployment claims. While we wait for that shift to be confirmed or for claims to subside once again, this ambiguity warranted shifting the indicator's status to yellow back in April.

Unemployment rate

The unemployment rate jumped to 3.8% in August and ticked up to 3.9% in October, its highest posting since January 2022. Any move above 4.0% in the next few months would turn the smoothed trend of this indicator higher and, in our view, signal a recession is on the way. Once that

U.S. RECESSION SCORECARD

signal is given, on average, it has been eight to nine months from the lowest monthly posting (which was 3.4% in April) until a recession gets underway—although there have been several instances when the time gap was only two to three months.

Free cash flow of non-financial businesses

This gives an indication of the ability of such businesses, in aggregate, to internally fund any capital spending they want or need to do. Historically, whenever it has posted a year-over-year negative reading, a decline in corporate capital spending has typically followed, either indicating a recession is coming or deepening one that is already underway. This number declined in both Q4 2022 and Q1 of this year before ticking fractionally higher in Q2, and it remains well above a negative crossing point. There is a long lag time before this data is reported with the Q3 release not coming until December.

Fed funds rate vs. nominal GDP growth

The fed funds rate has risen above the six-month annualized run rate of nominal GDP either before or at the start of every recession in the past 70 years. (Nominal GDP is GDP not adjusted for inflation.) That GDP run rate has been declining since its pandemic reopening high of 23% recorded in Q4 2020. By the end of last year, it had slowed to 7.2% but was still well above the fed funds rate, which at the time had risen to 4.50%. Now the fed funds rate is up to 5.50%, and Q3 GDP data shows the six-month run rate of nominal GDP growth is marginally above that at 6.1%. We expect nominal GDP growth will slow markedly in Q4 leaving the funds rate above the growth rate of the economy and meeting a necessary pre-condition of a recession. But, for now, that line in the sand has not been decisively crossed.

Clock still ticking

Weighing up the current positioning of all seven indicators and projecting their likely paths points to a growing probability the U.S. will enter a recession this quarter, in our view.

Research resources

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Thomas Garretson, CFA – Fixed Income Senior Portfolio Strategist, RBC Wealth Management Portfolio Advisory Group, RBC Capital Markets, LLC

Ryan Harder, CFA – Fixed Income Portfolio Advisor, Portfolio Advisory Group, RBC Dominion Securities Inc.

Patrick McAllister, CFA – Manager, Equity Advisory & Portfolio Management, Portfolio Advisory Group, RBC Dominion Securities Inc.

Alan Robinson – Senior Portfolio Advisor, RBC Wealth Management Portfolio Advisory Group – U.S. Equities, RBC Capital Markets, LLC

Michael Schuette, CFA – Multi-Asset Portfolio Strategist, RBC Wealth Management Portfolio Advisory Group – U.S., RBC Capital Markets, LLC

David Storm, CFA, CAIA – Chief Investment Officer, BI & Asia, RBC Europe Limited

Yuh Harn Tan – Head of Discretionary Portfolio Management & UHNW Solutions, Royal Bank of Canada, Singapore Branch

Joseph Wu, CFA – Portfolio Manager, Multi-Asset Strategy, RBC Dominion Securities Inc.

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