

Special report



Wealth
Management

GLOBAL Insight 2022 Midyear Outlook

Inflation's path will
set the course for the
economy and financial
markets.



For important and required non-U.S. analyst disclosures, see page 28.
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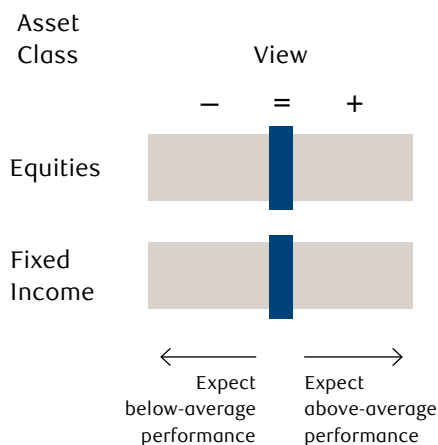
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RBC'S INVESTMENT Stance

Global asset class views



(+/-/-) 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 first half of the year saw persistent equity market weakness as major developed economies and central banks decisively pivoted toward more accelerated and larger interest rate hikes in response to higher-than-expected inflation readings, exacerbated by sanctions related to the Russia-Ukraine conflict. Given some of the unique inflationary forces are outside central banks' control, it's unclear at this stage if noticeably weaker headline inflation readings will materialize sooner, as in the next six to nine months, or later, as in a year from now or longer.
- Considering central banks' hawkish plans, the possibility of rate hikes unintentionally provoking a U.S. or global recession over the next year or two cannot be ruled out. However, neither can the possibility that slower economic growth and signs inflation has peaked will permit the Fed to back away from more aggressive tightening in early 2023, leaving the door open to a "soft landing" for the U.S. economy.
- The recessionary outcome is likely to bring with it a more sustained stock market downturn. The soft landing outcome, were it to prevail, could set up the economy, earnings, and share prices for another multi-year advance. The jury is likely to be out until early next year regarding which path inflation will allow the Fed and other central banks to follow.
- Meanwhile, under either outcome, the months immediately ahead will almost surely feature more outsized rate hikes from central banks. These are likely to push bond yields higher too, pressuring equity price-earnings multiples further and raising concerns that earnings estimates for this year and next will be revised downward.
- At this juncture, we think both outcomes are plausible, but lingering inflation combined with central banks' pivot toward more aggressive rate hikes are prolonging risks for equities. We would prefer to await the certain six months of aggressive tightening that we believe lies immediately ahead with modestly lower exposure to equities at the Market Weight level, down from our longstanding moderate Overweight position.

FIXED INCOME

- We maintain a Market Weight view on global fixed income markets as both current yields and total-return prospects look improved and even better than they have in years. A rough start to the year for global fixed income markets, with most regions and sectors seeing the worst performance in decades driven by a sharp repricing of global central bank rate hike expectations, should set the stage for a return outlook that is markedly improved from the beginning of the year.
- As a result of the recent repricing, the Bloomberg Global Aggregate Bond Index reached a level as high as 3.20% earlier this month, the largest yield on offer since 2009. We think the bulk of revised central bank rate hike expectations are embedded in market yields, which should stabilize around current levels, thus allowing fixed income markets to begin the process of clawing back performance in terms of coupons earned and stability in bond prices. However, we don't expect central bank rate cuts until 2023 at the earliest, keeping us from upgrading the fixed income outlook at this time.

MIDYEAR OUTLOOK

Focus



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Prospects for the equity market in the shadow of inflation

The trajectory of inflation in the coming months will have major implications for equities, in our view, but exactly what that trajectory will be remains unclear. We look for catalysts that could spark a new move higher for markets, or signal the approach of a recession.

Key points

- **Rapid rate hiking plans adopted by the U.S. Federal Reserve and other central banks have raised investor concerns that monetary tightening could eventually lead to a U.S. recession, at a time when Europe is contending with the heavy economic costs of the war in Ukraine and higher bond yields are pressuring price-to-earnings ratios.**
- **While monetary tightening doesn't necessarily preclude the stock market from trading back up to or near its old highs, we believe getting more than that over the next year would require the Fed to engineer a "soft landing" for the economy by ending its rate hiking cycle earlier than either policymakers or the market currently anticipate.**
- **In our view, it could take six months or more to determine whether the economy is landing softly or heading into a recession. Until greater clarity emerges, we prefer to hold a Market Weight exposure to equities, down modestly from our longstanding moderate Overweight positioning.**

Several important shifts occurred on the global economic and financial landscape over the first half of the year:

- First, the U.S. Federal Reserve shifted from being tolerant of higher inflation to being decidedly intolerant, and it was joined by other major central banks. Interest rate hikes have not only begun, they've become more aggressive in the past two months—as has the rhetoric about future rate increases.
- Central banks, for the most part, are no longer suppressing bond yields. Quantitative easing has turned into quantitative tightening. The result has been a pronounced upward shift in long bond yields.
- While most forecasters (ourselves included) expected last year's gradual inflation increase to turn into a price surge in the first half of this year, they underestimated the magnitude of that spike. In particular, the war in Ukraine has intensified the upward pressure on prices for oil, natural gas, and most agricultural commodities including fertilizer.
- Supply chain disruptions and port congestion have taken much longer than expected to resolve. The renewed shutdown of some Chinese cities has exacerbated this problem.
- As economies around the world reopen, consumer spending is shifting away from goods and toward services. Inventories of unsold goods are building as new orders weaken, which suggests manufacturing may be headed for a slowdown in the second half of the year.
- Meanwhile, ongoing labor shortages are hampering the reopening of the services side of the economy while simultaneously fueling inflation in those sectors.

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Prospects for the equity market in the shadow of inflation

Market impact

The surge in inflation and bond yields has pushed equity valuations downward by lowering the discounted present value of future earnings. (For example, an increase in bond yields to three percent from two percent reduces the present value of a dollar of earnings 10 years down the road by about nine percent.)

This trend has had the largest impact on the mega-cap growth stocks with high price-to-earnings ratios, of which the six largest comprised more than 25 percent of the value of the S&P 500 at the peak of the market in early January. Their performance over the first half of the year was not helped by the fact that three of the biggest—Amazon, Meta (Facebook), and Alphabet (Google)—reported Q1 earnings declines.

This outsized market influence of a handful of companies with very large market capitalisations can be seen by comparing the performance of the cap-weighted S&P 500 Index, which has fallen some 22 percent from peak to trough, with the less dramatic 17 percent decline of its unweighted counterpart. This effect also helps explain why stock markets in some other developed economies—notably Canada's TSX (down 14 percent) and the UK's FTSE All Share (down just 9.5 percent)—have seen far smaller declines: neither include any of these six stocks.

The combination of continuing supply chain issues, bloated inventories, and labour shortages has driven corporate confidence down to much-reduced levels, taking investor confidence down at the same time. It remains to be seen whether this will affect corporate forward guidance when the Q2 earnings season gets underway in mid-July. So far, earnings estimates for 2022 and 2023 have not come down appreciably; however, if guidance proves more cautious, we believe some downward revisions of earnings estimates are likely in the second half of the year.

Is there a plausible path to new highs?

Measures of investor sentiment have been remarkably negative of late. Such unanimous pessimism does not generally occur at market tops, but frequently appears at or near tradable lows. However, even if the market were to turn higher from here, views about how far it could rally and for how long are decidedly downbeat. “Bear market rally” is the consensus interpretation.

Perhaps—but not necessarily, in our view. It is useful to look at potential market outcomes through the lenses of the two prevailing schools of thought on the likely trajectory of inflation over the coming year or two.

Scenario 1: Inflation remains stubbornly elevated, forcing the Fed to tighten harder for longer.

This view holds that inflation is becoming a bigger and more intransigent problem than central banks or the market have yet recognised, as evidenced by the fact that U.S. consumers' medium-term inflation expectations have climbed above the range of two percent to 4.5 percent that had prevailed for more than two decades, recently touching 5.5 percent. According to this view, reining in those expectations will require the Fed to raise interest rates higher than currently envisioned and keep them there for longer—likely well into 2024.

This would greatly increase the likelihood that the federal funds rate eventually overshoots, producing the kind of tight credit conditions that would make an economic downturn inevitable. A recession resulting from restrictive credit conditions would almost certainly depress both corporate earnings and share prices, and such downturns have typically been associated with bear markets for equities.

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But this scenario is predicated on the Fed being forced to chase an overheated economy higher for much longer than expected—at least a year, perhaps two. That prolonged stretch might well see inflation-boosted sales and earnings grow faster than expected. It would be unusual, in our view, for new highs in sales and earnings not to be accompanied by new highs in share prices.

But how high could those new highs be? A bit of history might be instructive. From the beginning of 1977 until the end of 1979, the Fed followed the course described above, chasing an overheated economy higher and raising the federal funds rate from five percent all the way to 15 percent in the process. The dollar value of the economy was growing at better than 10 percent per year (as it is now), and S&P 500 earnings per share advanced by a very satisfactory 40 percent over the three-year period. But the index itself was flat, starting and finishing at about 100. Bond yields rose from seven percent to almost 11 percent over the same period, compressing price-to-earnings multiples and limiting investors to no better than dividend returns.

In our view, the same dynamic would probably yield similar results if the harder-for-longer tightening scenario were to play out over the next couple of years. Therefore, although it would be possible for averages to get back to old highs and perhaps even surpass them, we think it likely that appreciation potential would be heavily dampened by rising bond yields.

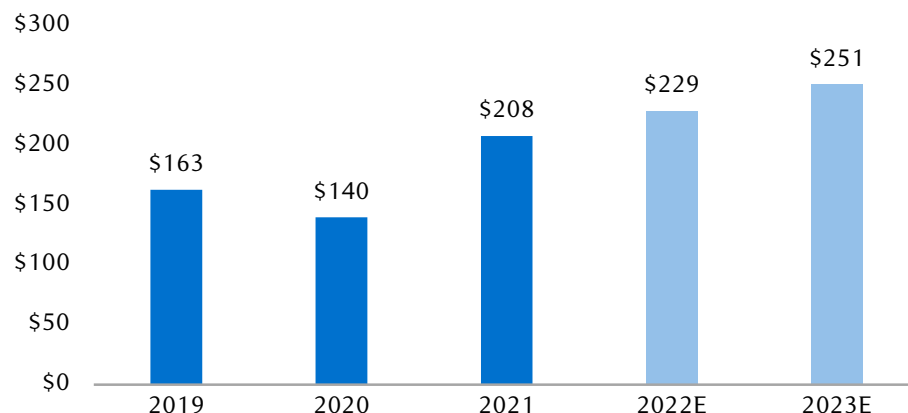
Scenario 2: Inflation ebbs, the economy slows, and tightening becomes less urgent, with the Fed perhaps even putting rate hikes on hold.

The other prevailing view—and one to which we subscribe; see “More inflation to bring more rate hikes ... but also rate cuts?” on [page 8](#)—has inflation subsiding somewhat over the second half of 2022 and retreating further next year. Today, with the two-year boom in stay-at-home spending on goods waning just as household budgets are being squeezed by rising food and fuel prices, the goods side of the economy finds itself needing to pare back bloated inventories of unsold merchandise. This should produce some price weakness for nonessential goods, in turn allowing the core rate of inflation to recede somewhat and the headline rate to peak. While the 12-month rate of change for both may still be uncomfortably high at year’s end, inflation’s momentum may have turned lower by then, according to this view.

Together with a further slowdown in the goods-producing side of the economy and some associated labour market weakness, we think this turn of events could induce the Fed to rethink how far and how fast interest rates need to

Consensus estimates for this year and next have held steady despite market turmoil

S&P 500 earnings per share



Source - Refinitiv I/B/E/S; data as of 6/24/22

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Prospects for the equity market in the shadow of inflation

rise. Any sign of the Fed backing away from further tightening would bring the possibility of a “soft landing” for the economy back into play, which would support an outlook for stronger earnings growth and higher share prices.

Catalyst needed

However, turning the equity market decisively higher, to the degree that new highs become plausible, usually requires the arrival of some catalyst that reignites investor optimism. Potential catalysts include a Fed rate cut, a marked downturn in energy prices, a couple of inflation readings that are significantly softer than expected, or a stronger-than-anticipated Q2 earnings season (especially on the guidance front, as improving forward guidance would greatly lessen fears of downward earnings revisions in the second half of the year). In our view, none of these appears likely at the moment. Until some catalyst emerges, we believe a convincing reversal in the equity market trend is unlikely to be forthcoming.

On the other hand, current readings of unusually deep investor pessimism suggest limited downside from here. We think the most likely path for equity prices through the remainder of this year will be generally sideways until evolving circumstances reinvigorate the case for sustained economic and corporate earnings growth—or, conversely, reveal that a recession is rapidly approaching.

At this juncture, we believe both outcomes are plausible, but we see lingering inflation and central banks’ pivot toward more aggressive rate hikes prolonging risks for equities. Accordingly, we would prefer to wait out the six months of aggressive monetary tightening that almost certainly lie before us with a modestly lower Market Weight exposure to equities, down from our longstanding moderate Overweight position.

MIDYEAR OUTLOOK

Focus



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More inflation to bring more rate hikes... but also rate cuts?

While rising inflation has led central banks to step on the rate hike accelerator, a shift may be on the horizon as inflation fears could soon give way to growth concerns, potentially driving central banks to tap the brakes.

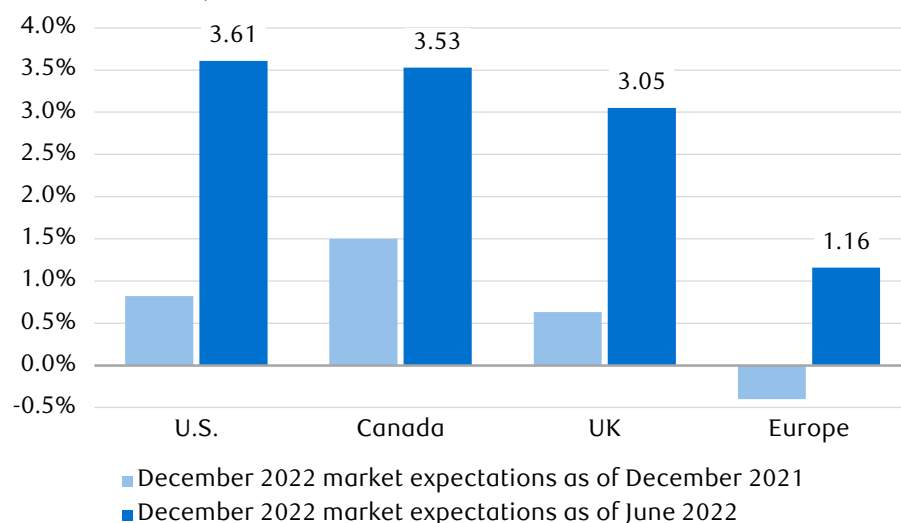
Key points

- Central banks are poised to accelerate the pace of rate hikes in coming months, but in our view the chances of rate cuts as early as next year are only rising.
- We expect that inflation fears, which have reverberated through markets throughout the first half of the year, will give way to growth concerns in the second half.
- The benchmark 10-year U.S. Treasury yield traded as high as 3.47% in June, but we now think that could prove to be the high for the year as yields could fade into year-end.

Expectations that inflation would peak during the first half of the year now see that point materializing in the fall. The anticipated high-water mark has been pushed back given few signs that broad-based price pressures are easing, even as central banks are in the early stages of their rate hike campaigns. As a result, markets continue to price faster rate hikes, ultimately reaching a higher level, from most major global central banks than seen at any point yet this year.

The Federal Reserve stepped up its tightening effort with a 75 basis point (bps) rate hike at its June meeting that took the fed funds rate to a target range of 1.50% to 1.75%. The latest move followed hikes of 25 bps in March and 50 bps

Where will central bank rates end 2022? Much higher than believed at the start of the year



Source - RBC Wealth Management, Bloomberg; calculations based on overnight index swaps, data as of 6/21/22

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More inflation to bring more rate hikes... but also rate cuts?

in May, and marked the largest incremental rate hike since 1994. Signs appear to point to at least one more such move when policymakers meet at the end of July—before the pace is likely dialed back to either 25 or 50 bps hikes at subsequent meetings.

Not to be outdone, after delivering a fifth 25 bps rate hike in June, the Bank of England (BoE) looks poised to pick up the pace as well. Markets are expecting a 50 bps hike at the next meeting in early August, which would bring the policy rate to 1.75%.

The Bank of Canada (BoC) has been leading the charge with three 50 bps hikes this year as policymakers have chosen to err on the side of predictability, but you guessed it, it is also now likely to kick things up a gear with a 75 bps move this month to a policy rate of 2.25% based on current market expectations.

But while rising inflation has led central banks to accelerate tightening, a shift could soon be on the horizon.

A change in narrative

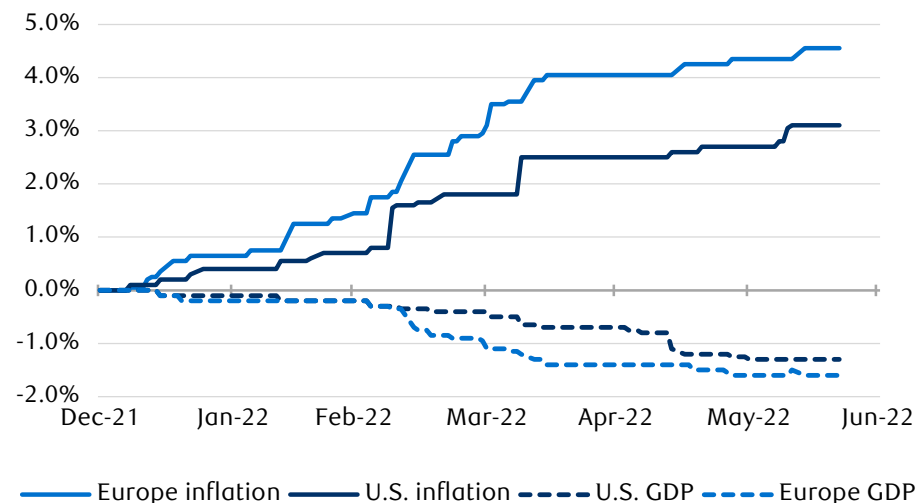
While the first half of the year was defined by a market increasingly focused on ever-higher inflation, the back half could see a shift to a market more concerned about ever-lower economic growth projections as tighter monetary policy takes a bite out of economic activity.

As the second chart shows, the divergence between consensus growth and inflation expectations has only grown larger over the course of the year as U.S. inflation forecasts for the year have climbed by 3.1 percentage points thus far to a 7.5% y/y rate. At the same time, GDP estimates have declined by 1.3 percentage points, with real economic growth, adjusted for inflation, now seen at 2.6% for the year. The same dynamic has played out, and to an even greater extent, in Europe. Inflation forecasts are up by 4.6 percentage points to 7.0% for the year, while real growth has faded by 1.6 percentage points to 2.6% for the year.

To be sure, both growth forecasts remain strong and above long-term trends, but the divergence between higher inflation and slower growth is also showing up in consensus forecasts for 2023.

2022 inflation & GDP growth forecast revisions have steadied since March

Net change in consensus forecasts



Source - RBC Wealth Management, Bloomberg Analyst Consensus Surveys through 6/21/22

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More inflation to bring more rate hikes... but also rate cuts?

And that could be the catalyst for an eventual shift not only in market expectations, but also in central bank sentiment.

Build them up, only to cut them down

Those central banks that have been the first out of the gate in raising rates, the BoE, the BoC, and the Fed, are now seen by markets as likely to cut rates at some point in 2023. The European Central Bank has yet to raise rates, but it is likely to bring the negative rate era to an end by September, and should remain in rate hike mode through next year.

It remains to be seen whether market expectations for modest rate cuts next year are because of rising recession risks or because of cooling inflationary pressures. But the latter remains the ultimate goal of central banks: to snuff out inflationary pressures as quickly as possible, but to not go so far as to choke off economic growth as a result.

But will it work? Well, history isn't exactly on the side of central banks, as the majority of tightening cycles have culminated in economic downturns of varying severity. In the U.S., the Fed is relying on a historically strong labor market and solid consumer balance sheets to buy policymakers some time for the supply side of the economy to recover and to offset weakness in the housing sector as mortgage rates rising beyond 6% have already significantly slowed housing starts and new home sales.

In our view, the Fed will end the rate hike cycle in December at a level around 3.25% before pausing to assess the economic landscape in early 2023. If inflation has shown "clear and convincing" signs of slowing by then, the Fed could deliver a few "insurance" cuts that would take policy rates back to the 2% to 3% "neutral" range—the level at which rates neither boost nor restrict economic growth—a range that Fed Chair Jerome Powell has cited in recent months. Such a scenario is now our base case as we think the Fed's efforts to this point in terms of forward guidance, rate hikes, and the subsequent tightening of financial conditions will ultimately do more to ease inflationary pressures and excess demand than is broadly appreciated by markets over the next 6–12 months.

Pushing the limits

The key takeaway for investors is that faster and more aggressive rate hike campaigns in upcoming months should mean that peak rate levels prove to be lower than otherwise might be the case, and that rate hike cycles prove shorter.

While global sovereign yields have risen sharply through the first half of the year, with the benchmark U.S. 10-year Treasury yield higher by 194 bps to 3.28%, and the German 10-year Bund yield up by 179 bps to 1.76%, we think it will be a different story in the second half. We believe short-term rates will continue to rise as central banks remain on the rate hike path, but yields at the longer end of sovereign yield curves could find a top sooner rather than later, and begin to fade into year-end—particularly if recession fears continue to grow.

After a historically poor start to the year for fixed income markets, we believe the downside protection and ballast provided by bonds could attract investors back to the asset class, helping to reverse first-half losses.

And as a result, yield curve inversions—historically a leading indicator of recession risks—could become the focus point for markets and the basis for a new prevailing narrative in a number of regions later this year, serving as a key indicator for investors in gauging whether central banks are at risk of tightening beyond the point of snuffing out inflation, and to the point of snuffing out economic expansions.

MIDYEAR OUTLOOK Focus



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Taking charge: The EV charging ecosystem opportunity

Accelerating the development of the electric vehicle (EV) public charging network is key to reducing hesitancy around electric cars and driving widespread adoption of EVs. We explore the budding EV charging ecosystem and the industries looking to tap into the growth potential of this nascent market.

Key points

- Demand for EVs will likely soar, underpinned by national targets to phase out internal combustion engine cars, manufacturers' efforts to electrify their fleets, the falling cost of ownership, and improved consumer perceptions.
- The installation of EV public chargers is being turbocharged given the imperative to stay ahead of demand as EV adoption increases.

Range anxiety vs. charging anxiety

"Range anxiety," the fear that an EV's batteries will run out of power before a driver reaches a destination, has diminished in recent years. Thanks to software advances, other technological developments, new battery materials, and improved designs, batteries can pack more energy into each kilogram of weight. In fact, the average battery charge has increased from a range of 70–100 miles (112–160 km) 10 years ago to approximately 250 miles (400 km) today, meaning EVs can now travel much farther down the road without a recharge.

But range anxiety has been replaced with "charging anxiety." EV drivers now fear running out of power at an inopportune time and being stranded due to an inability to easily, quickly, and efficiently recharge their cars while traveling. A survey from Consumer Reports, an independent product testing company in the U.S., highlights the lack of public charging sites as the leading reason U.S. consumers hesitate to buy an EV.

Solving charging anxiety is crucial to reducing hesitancy around electric cars and accelerating their adoption. EV use is key to climate change mitigation given that transport accounts for close to a quarter of global carbon emissions, with road vehicles generating about 75 percent of that.

Growing EV demand

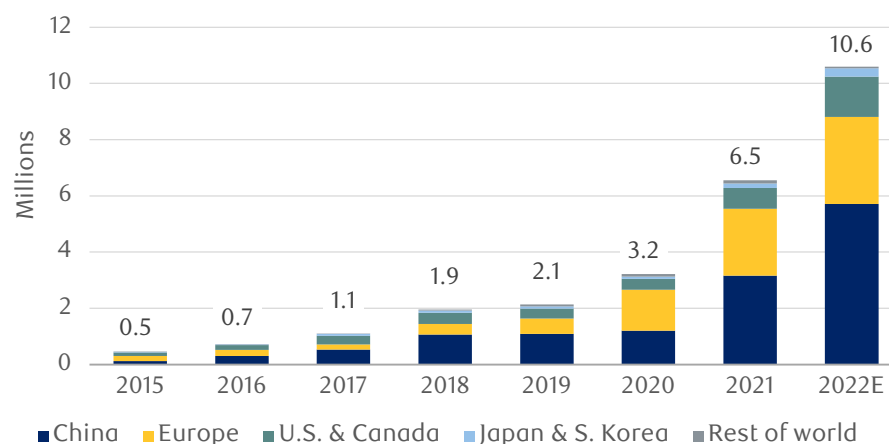
Some 6.5 million EVs were sold in 2021, twice as many as in 2020. BloombergNEF (BNEF), an energy research company, expects the total to grow by more than 60 percent this year to 10.6 million. China and Europe are the largest markets, though the U.S. should soon join these leaders. Globally, EV sales represented 13 percent of all auto sales in 2021, with plug-ins accounting for nearly one-third of all cars sold in Europe, and 19 percent in China in Q4 2021.

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Taking charge: The EV charging ecosystem opportunity

Forecasts for electric and hybrid passenger vehicles

China and Europe remain leaders for now



Source - BloombergNEF, Marklines. Notes: Total includes EVs and hybrids; "E" = estimated

BCG, a consulting group, expects EVs will account for more than 90 percent of light vehicle sales in Europe by 2035 thanks to strict environmental regulations. Uptake in the U.S. and China will likely lag this, though it should still advance rapidly. Progress will likely be far slower outside these three regions, with EVs constituting around one-third of light vehicle sales by then, according to BCG.

Demand for EVs is underpinned by several factors, which we look at in the following sections.

National targets

An increasing number of countries have pledged to phase out internal combustion engine (ICE) cars or have ambitious vehicle electrification targets for the coming decades.

For instance, in the U.S., the Biden administration has tightened rules on tailpipe emissions. Fifteen states, including California, Minnesota, and Virginia, have agreed to establish zero-emission vehicle quotas for new passenger cars.

EU legislators drafted policies to reduce the average emissions of all cars in operation by 55 percent by 2030 from 2021 levels, while also stipulating that emissions from new vehicles sold should decrease to zero by 2035, effectively setting an expiry date for the ICE era in Europe. These policies should become legally binding in 2023–24. Both in the U.S. and the EU, governments are incentivizing consumers to switch to low-emission vehicles.

Manufacturers' targets

Meanwhile, we're seeing some car manufacturers moving ahead with plans to electrify their fleets that exceed national policy targets. As a result, with a larger number of models currently available, at some 450, consumers are enjoying a wider choice. Toyota and Volkswagen, the two largest automakers by sales, have committed a combined \$250 billion by 2030 to EV and battery programs. Manufacturers are adding their most popular brands and models to their electrification mix.

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Taking charge: The EV charging ecosystem opportunity

Falling ownership cost

BCG calculates that the five-year total ownership cost, which includes purchase price, maintenance cost, miles driven, and fuel or electricity costs, should move close to parity of an ICE car by the end the decade. Lower battery costs, which account for as much as 40 percent of the price of the car, as well as greater economies of scale due to higher production should help to narrow the cost gap.

Changing consumer perceptions

Finally, consumer attitudes are also evolving. In China, the success of emerging manufacturers such as Nio and Xpeng, currently selling 8,000 units and some 15,000 units per month, respectively, together with after-sales service/software upgrades, are convincing consumers of the staying power of these new cars. We're seeing similar experiences in the West.

What might get in the way?

There are two main headwinds that may make it difficult for EVs to reach their growth potential. One that's much discussed today is the availability of materials. The EV industry is being heavily impacted by post-pandemic global supply chain constraints that are affecting the availability of metals needed to make EV batteries, including lithium and nickel, and contributing to the resultant large price increases in the materials. The difficulties are being exacerbated by the war in Ukraine and the sanctions imposed on Russia. In time, we expect new production sources to be developed.

The other hurdle is charging infrastructure. As EV sales increase, demand for chargers increases proportionately. The challenge to widespread EV adoption is to stay ahead of this demand.

Charging EVs

EVs can be charged via several different methods.

Currently, most of the charging occurs at home and at the workplace (i.e., private). BCG calculates that in the U.S., 75 percent of the charging is done this way. This is possible because close to 70 percent of households have off-street parking where a charger can be installed (percentages are similar in Canada). With lower availability of off-street parking in Europe and China, 70 percent and 60 percent of charging, respectively, is performed at *public* charge points.

Two kinds of chargers can be used at home or the workplace to top up vehicles. The slowest type, Level 1, provides up to five miles (eight km) per hour of charging, while Level 2 charging offers 18 miles (30 km) per hour. Charging overnight at home or throughout the day at the workplace can give enough daily power for the average driver, or at least provide an adequate top-up given the average American drives 39 miles (63 km) per day.

But today's infrastructure is insufficient for long trips and for the new cohort of EV adopters in cities who are less likely to have off-street parking. Hence the need for public chargers.

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Taking charge: The EV charging ecosystem opportunity

Public chargers can be Level 2 chargers, such as the converted lampposts or charging pedestals at curbsides now common in London, or be “destination charging stations” that are increasingly found at common locations such as golf courses, shopping centers, and malls.

Alternatively, for long distance travelers, or city taxis that need a fast public charging network, Level 3, or “fast chargers,” can add some 155 miles (250 km) of range per hour charged. This technology is being installed in cities and on highways. Meanwhile, many high-end EV models come with mapping software that indicates where the closest dedicated fast charging network can be found.

One example of a fast charging station is located on the outskirts of London in Essex. The GRIDSERVE Electric Forecourt boasts what it calls “super fast,” reliable charging infrastructure that can deliver clean energy from solar for up to 36 cars simultaneously.

As an aside, this can also foster interesting retail opportunities. GRIDSERVE highlights that the charging station can provide an engaging customer experience with a variety of retailers on site. Customers tend to spend half an hour topping up their batteries—or five times as long as it takes to fill a gas tank—which gives the retailers a captive audience. UK and European highways are already peppered with these types of charging stations. More are planned and the concept is likely to proliferate in North America, in our view.

EV public chargers evolution

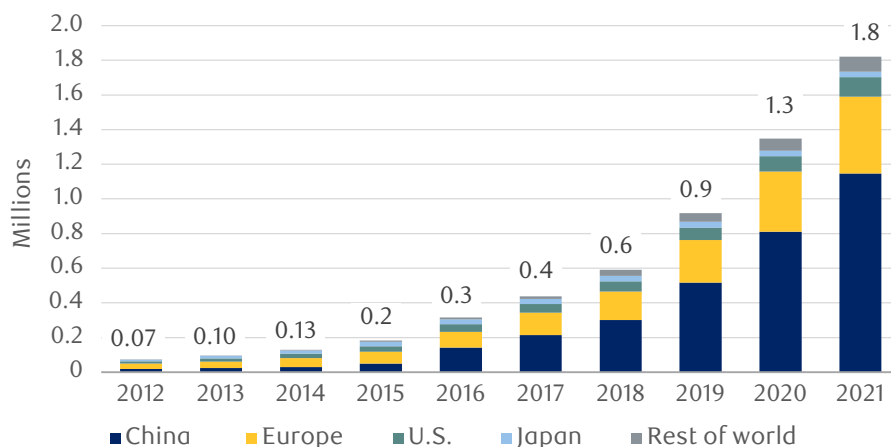
The installation of EV public chargers has been turbocharged in recent years, and there are currently 1.8 million public chargers worldwide.

The number of chargers per EV needed will vary by region depending on local specificities, such as typical traveling distances, population density, and reliance on home charging.

The number of charging outlets in China is increasing faster than in other countries. At the end of 2021, China had 61 percent of all public charging points installed globally.

Cumulative public EV charging connectors by country

A fast-growing market



Source - BloombergNEF, China Electric Vehicle Charging Infrastructure Promotion Alliance (EVCIPA), U.S. Alternative Fuels Data Center, Tesla, ChargeHub; numbers may be rounded

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Taking charge: The EV charging ecosystem opportunity

China requires more public charging infrastructure than the U.S. or Europe as most EV owners are city dwellers who do not have access to off-street parking. At present, China has one charging point per five EVs, compared to one per seven EVs in Europe, and one per 20 EVs in the U.S.

According to BCG, the U.S. will need 1.1 million public charging sites by 2025 and 2.3 million by 2030, up from 113,000 in 2021. The Biden administration is targeting 500,000 public charging points by 2026, with the Infrastructure Investment and Jobs Act likely to fund less than one-tenth of this, leaving the private sector and state governments to fill the gap.

Globally, the number of public chargers will have to expand by 8x to reach over 15 million units in 2030 in order to provide consumers with adequate and convenient coverage, according to the International Energy Agency. BCG calculates that two-thirds of electricity demand for EVs today is private—i.e., from the home or workplace. It forecasts that by 2030 the private-public infrastructure split will be 50-50, including semi-public stations, such as those in supermarket parking lots.

A complex process

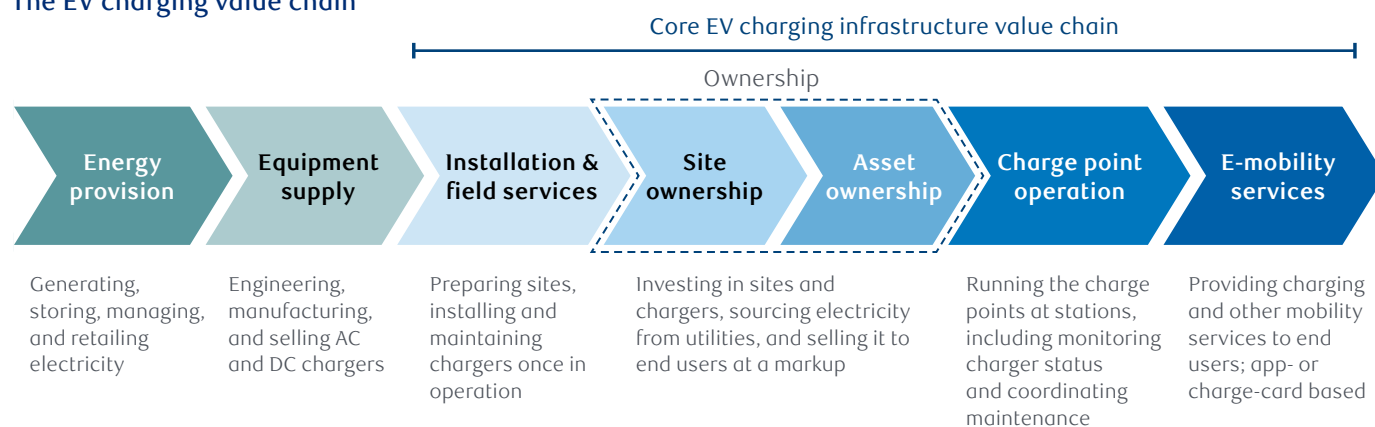
Expanding the public charger network is a complex task because the industry structure has many different layers that require coordination and obtaining permits from several parties along the EV charging value chain.

In addition, the power grid will need to be expanded to deal with the higher demand for electricity. Moreover, as the electrification of road transport is occurring at the same time as the increase in decentralized and variable renewable energy, power grid distribution will become more difficult to manage. Digital grid technologies and “smart charging” could become important tools to deal with these challenges.

The participants

The anticipated growth in the EV charging ecosystem holds great promise for companies throughout the value chain, though as the market is still in its infancy, much change will take place over the coming years.

The EV charging value chain



Source - BCG

MIDYEAR OUTLOOK FOCUS

Taking charge: The EV charging ecosystem opportunity

We highlight below some of the industries that are involved in this theme, their function, and what they must get right to enhance their growth prospects.

Some companies are developing a footprint on their own, such as EV infrastructure company ChargePoint (California-based), Tesla, or General Motors. Others are partnering up, such as the joint venture between BMW, Mercedes-Benz, Volkswagen, Ford, and Hyundai to create an “ultra-fast” electric car charging network. In the U.S., the National Electric Highway Coalition, comprising 17 U.S. power companies, plans to install fast charging stations along intercity routes.

Finally, some energy companies are acquirers, such as Shell who bought Ubitricity, one of the UK’s largest public EV charging networks with plans for both curbside and fast charging connectors; BP and Total have also been scooping up EV charging companies, as have utilities firms.

We believe electric cars and the development of the related charging infrastructure are among the most vibrant spaces within the clean energy theme thanks to the commitments of governments and manufacturers. Much of the discussion today around the obstacles to EVs fulfilling their promise has centered on the shortage of raw materials for batteries. Yet a well-functioning, reliable charging network that can build public confidence is no less important.

Success factors for industries in the EV value chain

Industry	Function in value chain	Key success factors
• Equipment manufacturers	• Design and manufacture hardware components (pedestal, power receptacles, charge cords)	Strong and effective design and software capabilities, e.g., for payment solutions
• Electric service providers	• Install and maintain public charge points	Ability to maintain a high level of service
• Oil & gas companies	• Invest in sites or charging equipment	Location of charge points in high-demand areas
• Charge point operators	• Purchase electricity	Access to low-cost capital
• Retailers	• Earn revenue from those who rent these assets back (e.g., gas station owners shifting to electrification)	
• Infrastructure investors		
• Utilities		
• Equipment manufacturers	• Enable monitoring and remote troubleshooting of charging networks	Software compatibility with different types of vehicles and charging hardware
• Charge point operators	• Operate payment and billing systems	
• Specialty software developers	• Manage energy use	
• Big Tech companies	• Create networks of charging stations that enable drivers to use stations operated by different providers	Charging network size, density, and ease of use
• Automotive OEMs		

Source - RBC Wealth Management, BCG

U.S. RECESSION Scorecard

Where things stand entering the third quarter

Inflation readings that are disturbingly high and still rising, as well as aggressive Fed rhetoric about future rate hikes, have many commentators observing that “recession risks are rising.” Most, like RBC Global Asset Management Inc. Chief Economist Eric Lascelles, are stating that risks are high a U.S. recession will arrive “sometime over the next eighteen months.”

Our U.S. recession scorecard (see below) is designed to look forward six to 12 months. So far it continues to give the economy an expansionary green light, although one of the seven recession indicators—ISM New Orders minus ISM Inventories—recently shifted to a “Neutral” signal from “Expansionary.”

If the U.S. economy can avoid slipping into recession over that time frame, as the scorecard is suggesting, the Global Portfolio Advisory Committee (GPAC) believes equity markets will recover sooner rather than later. Below we summarise the state of each indicator.

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

This has been the most reliable leading indicator of recession. One-

year Treasury yields moving above the 10-year yield has preceded the start of every recession for the past 75 years, with an average lead time of roughly 11–13 months.

The positive gap between the 10-year Treasury yield and the 1-year yield narrowed abruptly as the accelerated Fed rate hike path became reality with the 75 basis point (bps) bump in June. Short-term rates are still roughly 30 bps below the 10-year yield. If that gap were to shrink to less than 30 bps and stayed there for a month, we would consider shifting this indicator to “Neutral.” But it should be remembered that “close doesn’t count” with the yield curve. It takes an inversion to make a recession historically “inevitable”—and then only after an average additional wait time of about a year.

Unemployment claims and unemployment rate

These two indicators should be looked at together. The smoothed trend of the monthly average of unemployment claims has typically turned higher two to six months ahead of the unemployment rate’s upward turn, giving fair warning of an approaching recession some

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

months in advance. It has produced occasional false signals, but none of those were subsequently confirmed by the unemployment rate.

The smoothed trend of the unemployment rate has usually turned upward at the start of a recession, or immediately before. Although it gives very little in the way of early warning, its negative signals have always been visible at the start of the economic downturn rather than months into it. This is especially useful because the start date of a recession is usually only announced definitively by the National Bureau of Economic Research about a year down the road.

The unemployment rate would have to move above 5% and the number of claims almost double from current levels over the next several months to turn their respective trends higher.

Conference Board Leading Economic Index

This indicator signals a recession is on the way when it falls below where it was a year earlier. It has always done so at least three months before the start of a recession, often six months before, and occasionally even earlier. The LEI may have peaked for this economic cycle in Q2 2021, but we don't think this indicator could turn negative on a 12-month basis until Q3 of this year at the earliest. This indicator has fallen close to a crossing point a number of times in the past before rebounding sharply. It is one of the most reliable recession indicators we follow, but takes an actual crossing to give a negative signal.

Free cash flow of non-financial corporate business

This indicator measures the free cash flow generated by non-financial corporate businesses as a percentage of GDP. It has given only one false positive signal in more than 65 years. In all other cases when this indicator has fallen below zero, a recession has followed—typically, two to three

quarters later. It looks to be in no danger of signaling an approaching recession anytime soon, in our opinion.

ISM New Orders minus Inventories

The difference between the New Orders component and the Inventories component 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. Therefore, we view this as a corroborative indicator—one to pay attention to if other, longer-term indicators are implying a recession is on the way. As of the release of the May data, the three-month moving average of the spread between New Orders and Inventories fell below zero—by just one-tenth of a point—resulting in the shift to Neutral.

Fed funds rate vs. nominal GDP growth

Since 1954, the fed funds rate has typically moved above the nominal (i.e., not adjusted for inflation) year-over-year growth rate of GDP prior to the onset of recession. It is not an ideal timing tool, but a fed funds rate in excess of nominal GDP growth has been a precondition of all U.S. recessions, except for two where the negative crossing occurred just as the recession was getting underway.

At the end of Q1, the nominal GDP growth rate stood at 10.6%, a long way above the 1% fed funds rate. We expect the year-over-year nominal GDP run rate will slow to between 7% and 8% by the end of 2022, and decrease further to between 4% and 5% by late 2023. Only a dramatic shift into a higher gear by the Fed would likely get the fed funds rate above the nominal GDP growth rate before the middle of next year.

REGIONAL Equity

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■ The U.S. equity market has endured the most difficult first half of a year since 1970. The selloff's primary catalysts are surging inflation, the Fed's aggressive rate hike plans, and concerns about how these two factors could impact economic and earnings growth. While a U.S. recession looked like a relatively moderate risk at the beginning of June, RBC Global Asset Management now believes "there are a significant number of rules of thumb that suggest a recession is more likely than not over the coming two years."

■ Regardless of whether a recession materializes, we think the market is in the process of factoring one in, rather than just pricing in a mere "growth scare." Whereas the previous four growth scares resulted in S&P 500 declines that averaged 17.4%, recessions typically produce deeper and longer-lasting downturns. Surrounding 13 U.S. recessions since 1937, the S&P 500 fell 32% and took a little over a year to bottom, on average, although there was a lot of variation in returns and duration. It's notable that the S&P 500 bottomed before the recession officially ended in all except one of the previous episodes, and often when economic headlines were rather troubling.

■ The S&P 500 consensus earnings-per-share estimates of \$229 in 2022 and \$251 in 2023 are vulnerable to

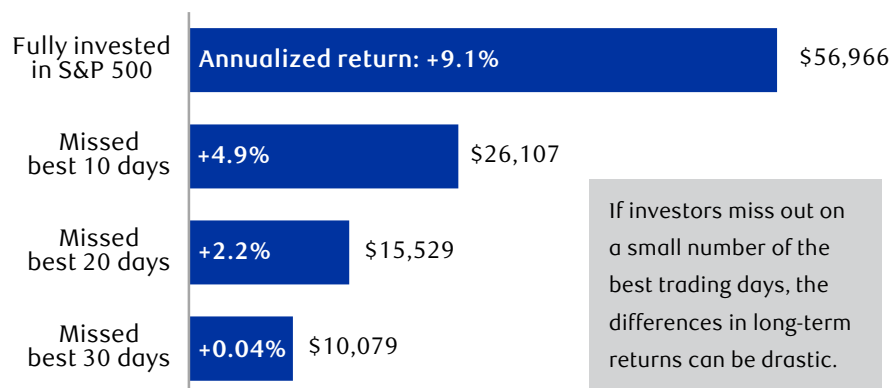
downward revisions, as we don't think they fully discount recession risks. However, estimates may not retreat as much this cycle as they would during a non-inflationary downturn. When the economy stumbles, sales volumes also slow. But, in an inflationary environment, selling prices are usually elevated. We think a number of large companies could continue to benefit from pricing power.

■ If recession probabilities rise further, there could be a longer bout of volatility and more downside before this episode ends. With the S&P 500 already down 20% from its peak and some widely owned stocks within the index down much more, and the Nasdaq Composite and small-cap Russell 2000 each down roughly 30%, much of the weakness seems to be priced in.

■ For the time being, we recommend staying relatively balanced between the value and growth segments of the market. While value shares have the potential to find support amid the ongoing economic uncertainty, some of the categories within the value segment are relatively expensive. The growth segment should gain traction over the medium term, once economic vulnerabilities become fully priced in. We would hold a Market Weight position in U.S. equities.

Attempting to time the market and pick the bottom can be fruitless

Dollar value of \$10,000 invested in the S&P 500 from May 2002 to April 2022



Source - FactSet, RBC Wealth Management; returns based on S&P 500 Total Return Index. Past performance is not indicative of future returns; individuals cannot invest directly in an index.

REGIONAL EQUITY

Equity views

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

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

Canada

■ The Canadian equity market has been a relative outperformer from a global perspective for much of 2022, primarily driven by the persistent strength in energy equities. While the S&P/TSX Composite continues to outperform many of its global peers, the index did reach correction territory earlier this month, proving it is not immune to the mounting “wall of worry” facing investors.

■ The outlook for global economic growth and corporate earnings has undoubtedly become murkier of late. At this point, global pressures have yet to weigh materially on Canadian corporate earnings estimates, which have recently experienced broad-based upward revisions, with particular strength, unsurprisingly, in Energy and Materials. Management commentary from Q1 reporting season was supportive of continued Canadian earnings growth, which is important, as we continue to expect earnings growth to be the primary driver of equity returns over the next year (as opposed to valuation multiple expansion).

■ Crude oil prices remain elevated, fueled by solid demand and tight supply, supporting strong free cash flow generation for the Canadian producers. We expect the group to continue to deleverage and increase cash returns to shareholders, supporting valuations going forward.

■ Despite a strong set of Q2 results for the Canadian banks, the group continues to struggle this year as recessionary concerns weigh on valuations. The consensus expectation is that residential loan growth will slow alongside housing activity and prices; however, credit at this time does not appear to be a concern. Non-residential consumer loan growth along with commercial loan growth should remain healthy, while net interest margins are expanding and should continue to do so as central bank rates push higher. We maintain a positive stance on the group, particularly as valuations are less than demanding.

Europe & UK

■ We maintain our Market Weight position in both the UK and European Equities.

■ The UK faces arguably the most challenging growth and inflation dynamics of any developed market. We expect private consumption to be restrained and a persistent weakness in exports, exacerbated by the adjustments to post-Brexit trading rules. The pound has weakened markedly year to date, reflecting these grim prospects, adding to inflationary pressures.

■ The Bank of England may be forced to continue to raise rates. Market participants now expect the Bank Rate to reach 3.25% at the end of the tightening cycle in 2023, up from 1.25% currently.

■ Yet, for all these difficulties, UK equities have outperformed so far this year, both in local and U.S. dollar terms, and may well continue to do so. The FTSE 100 is not representative of the UK economy; its higher exposure to the commodity-oriented Energy and Materials sectors, as well as its higher weighting to more defensive sectors and very low exposure to Technology stocks, have been suited to market trends so far this year.

■ UK equities remain inexpensive relative to other markets. We maintain our bias toward large caps, which have low exposure to the domestic economy.

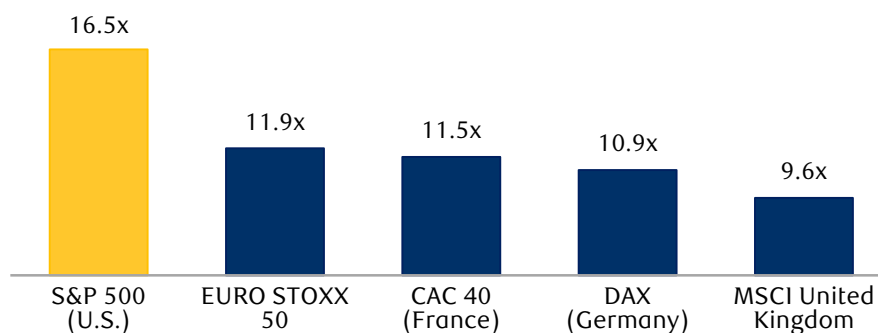
■ Europe faces a difficult environment on several fronts. Given its reliance on Russian energy, it is most vulnerable to geopolitical risk. It is also battling with high inflation. The European Central Bank (ECB) has joined the ranks of other hawkish central banks. Market participants expect the deposit rate to reach 2.10% by the end of 2023, up from -0.50% now. Higher interest rates may re-ignite sovereign default risk in euro area periphery countries, particularly Italy, a risk the ECB is alert to.

■ With valuations for European markets remaining inexpensive

REGIONAL EQUITY

European stocks trade at a discount to U.S. stocks

2022 price-to-earnings (P/E) ratios



Source - RBC Wealth Management, FactSet; as of 6/24/22, based on consensus estimates of 2022 earnings per share

relative to those of the U.S., we would focus on quality companies with strong cash flow that can pay and grow dividends. We think stocks related to the green energy transition, which is now seen as a security issue rather than just an environmental matter, will benefit from a strong secular trend.

Asia-Pacific

■ The worst period for China's equity markets may have passed, in our view, but conditions could remain somewhat volatile through the third quarter. We think part of the volatility will continue to come from the zero-COVID policy. With COVID-19 containment measures still in place, some cities could be in strict or partial lockdown until at least the 20th Party Congress, which will occur at a date to be determined in the second half of the year. As a result, the recovery in consumption would be affected and company earnings estimates would be vulnerable to further downward revisions. The trading patterns of global markets may also bring about volatility in China shares. Inevitably, China Tech stocks, especially the ones listed in the U.S., will be affected by perceptions about Federal Reserve rate hikes and U.S. market dynamics, in our opinion.

■ However, strong policy stimulus is coming to support China's economy, and the regulatory crackdown seems to be easing. We believe opportunities to turn more positive

on Chinese equities may come later in the year when volatility has been largely priced in, consumption and business activity gradually return to normal, and the future direction of government policies becomes clearer.

■ For Japan, we continue to see normalization of economic activity following the lifting of the COVID-19 State of Emergency in late March. Despite rising food and energy prices, economic data suggests consumption activity is gaining momentum. We expect the recovery in service sector activity to partially offset the softening in manufacturing. Business sentiment is also recovering, albeit unevenly across sectors. There are concerns about the sustainability of the Bank of Japan's (BoJ's) Yield Curve Control policy. We think the BoJ's patience is warranted given domestic inflation remains low compared to developed market peers. Japan is the last major developed economy that is continuing with quantitative easing policies.

■ TOPIX valuations are trading below historical forward price-to-earnings and price-to-book averages, and return on equity is close to an all-time high. Japan stocks usually outperform global stocks when U.S. long-term interest rates and real interest rates are rising. The risk is that Japan's wage growth and inflation are picking up. We remain positive on Japan's near-term prospects but have a more neutral view on the mid- to longer-term outlook.

REGIONAL

Fixed income

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■ If the first half of 2022 was all about higher inflation and higher Treasury yields, we think the back half of the year will be all about slower growth and lower Treasury yields—but not all Treasury yields. We believe yields at the front end will continue to rise as the Federal Reserve marches on with its rate hike plans, while yields 10 years and beyond should begin to fade, with the 10-year holding below the peak 3.50% level achieved earlier this month, particularly if recession fears continue to ramp up. As a result, we believe currently flat yield curves should give way to more frequent, and perhaps deeper, yield curve inversions. That could stop the Fed in its tracks by December, and would likely leave the federal funds rate below 3.50%.

■ The Fed looks set to deliver another 75 basis point rate hike in July, which would bring the policy rate to a range of 2.25%–2.50%. We expect the pace to slow from there, as policy rates would be within the 2%–3% range that Fed Chair Jerome Powell has identified as “neutral” for the economy. Therefore, we see the Fed throttling back to a more-standard pace of 25 basis point rate hikes until December, culminating in a 3.00%–

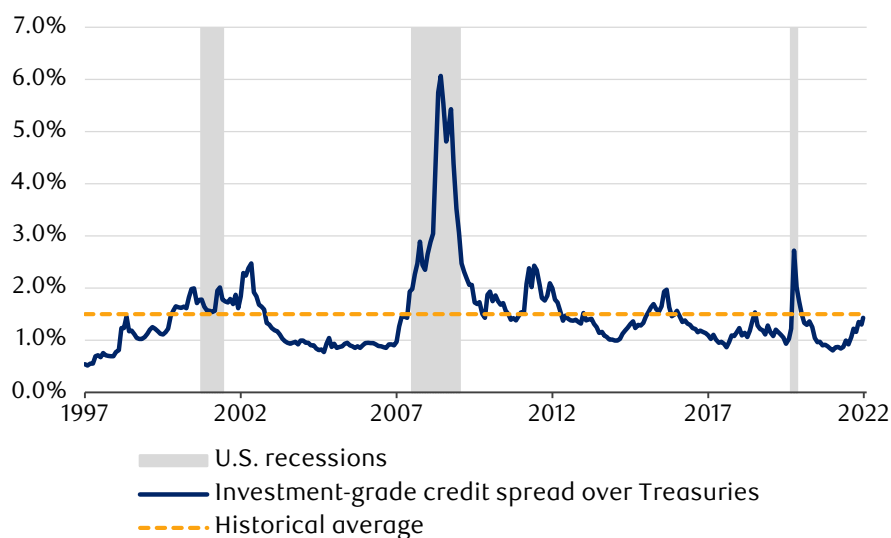
3.25% policy rate, before pausing to weigh risks to the economic outlook.

■ Valuations have improved in U.S. corporate bond markets; investment-grade securities currently yield nearly 1.5% over Treasuries for an average yield of 4.9%, and speculative-grade securities yield nearly 5.0% over Treasuries for an average yield of 8.5%, as stock market volatility and increasing recession concerns have led investors to demand more yield for associated credit risks. But those levels may not yet fully reflect recession risks. During the 2020, 2008, and 2001 recessions, investment-grade and speculative-grade credit spreads averaged about 1.6% and 5.5%, respectively, over Treasury yields. So we may not be there quite yet, although entry points are becoming increasingly attractive, in our view.

Canada

■ Fixed income markets saw bond prices reprice rapidly in H1 2022 as it became clear that elevated inflation was considerably more persistent than originally expected and would require a strong response from monetary policymakers to bring it under control. The result of this repricing is that in a period of just

Credit spreads have risen to historical averages, but may not yet fully-reflect recession risks



Source - RBC Wealth Management, Bloomberg US Agg Corporate Bond Index Option Adjusted Spread; monthly data through 6/21/22

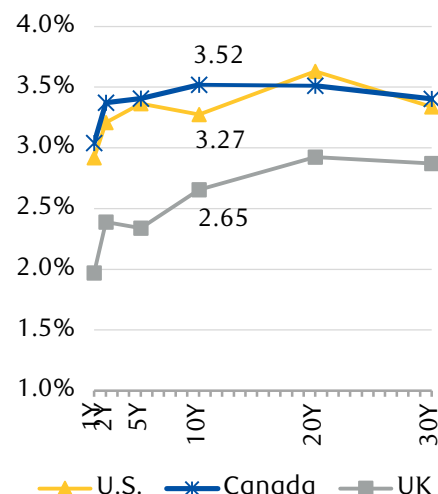
REGIONAL FIXED INCOME

Fixed income views

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

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

Sovereign yield curves



Source - Bloomberg; data through 6/21/22

18 months, Canadian yields went from all-time lows to their highest levels in over a decade. Although surging inflation and this year's forceful response from central banks is a global phenomenon, the Bank of Canada (BoC) has been one of the most aggressive central banks in terms of withdrawing monetary stimulus from the economy. Nonetheless, the BoC was also surprised by the resiliency of high inflation prints, and for multiple consecutive quarters had to adjust its inflation projections higher.

■ Credit spreads—the extra yield bond investors receive for assuming credit risk—also increased in the first half of the year. Throughout much of 2021 these spreads were within arm's reach of record low levels, but in 2022 have widened to multi-year highs. Wider credit spreads reflect a market that is becoming gradually more skeptical that the ultra-low default rates of recent years will be sustainable in an environment of rapid monetary tightening.

■ The combination of surging government yields and wider credit spreads has meant corporate bonds in aggregate are currently paying higher yields than at any point since 2008. This may be of little comfort for fixed income investors who in some cases are looking at double-digit drawdowns in their bond portfolios. However, this shift has transformed the bond market into one where new money can be put to work locking in yields that are competitive with other asset classes on a risk-adjusted basis from a bond market where yields were so low that respectable returns could only be achieved if yields continued falling. Fixed income markets remain highly volatile, and the anticipated endpoint of rate hikes continues to be a fast-moving target. Nonetheless, investors today can achieve greater than 4% yields even while taking just modest levels of credit and interest rate risk. Despite the risks that remain to fixed income markets, we believe the rate hike expectations built into bond prices

are relatively aggressive, and are reflected in multi-year high bond yields. Within fixed income we view short- and intermediate-term high credit quality corporate bonds as the most attractive places to allocate funds on a risk-adjusted basis.

Europe & UK

■ The European Central Bank (ECB) will enter a new era in monetary policy when it brings the Asset Purchase Programme (APP) to an end on July 1. The central bank plans to hike interest rates by 25 basis points (bps) in July and is likely to deliver an outsized 50 bps hike in September. The market now expects around 160 bps of policy tightening to reach a deposit rate of 1% this year, in line with our expectations.

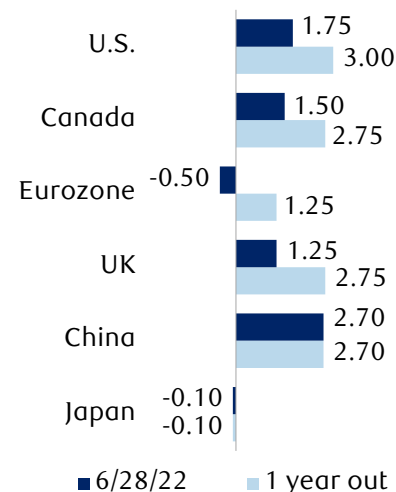
■ The ineffective transmission of monetary policy across the euro area, known as fragmentation, remains a considerable risk. The velocity and magnitude of sovereign spreads widening recently in Greece and Italy compared to Germany alarmed the ECB and prompted an emergency meeting in June. Though spreads in 10-year Italian-German bonds have tightened back to averages of around 200 bps, we maintain our Underweight to lower-rated sovereigns in the region until there is clarity on how the new “anti-crisis tool” will contain spreads.

■ The withdrawal of crucial ECB purchases for corporate bonds through the Corporate Sector Purchase Programme (CSPP) is a headwind, and we forecast further widening in spreads in H2. Therefore, we prefer allocating to higher-quality credit and to financials, which will likely outperform owing to the fact they were never eligible for purchase under the CSPP.

■ The Bank of England's (BoE) forward guidance has shifted to indicate unanimous support for more aggressive tightening and backing for larger moves, opening the door to 50 bps moves in the future. At the June meeting, the BoE highlighted a

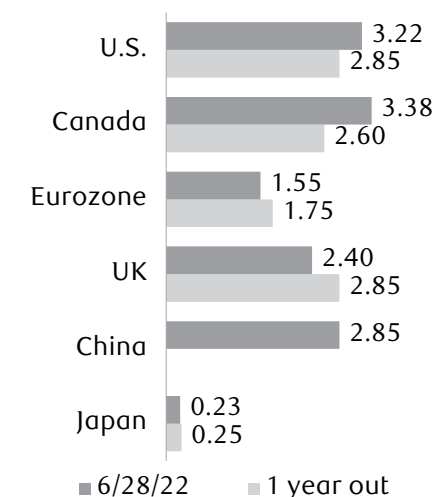
REGIONAL FIXED INCOME

Central bank rate (%)



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

10-year rate (%)



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

need to “act forcefully” in response to persistent inflation, now forecast by the BoE to reach 11% in October 2022 up from 10% previously.

■ We expect the Bank Rate to reach around 2.25% at year end, and we view current market expectations of around three 50 bps moves at the upcoming meetings as excessive, given the weaker growth outlook. That said, higher inflation and a tightening labour market present a risk to that view. Thus, we expect Gilts to underperform over the coming months.

■ We also expect sterling spreads to widen further mainly due to increased supply when the BoE commences bonds sales in September. Against a deteriorating growth outlook, investor preference for lower-quality credit will likely deteriorate leading to underperformance. Therefore, we prefer allocating to higher-quality issuers.

Asia-Pacific

■ The Asia credit market continues to be overshadowed by global central banks rapidly hiking rates to combat inflation. On June 7, the Reserve Bank of Australia hiked by 50 basis points (bps), twice as much as the market expected. Stubborn inflation trends in the U.S. have also prompted the Federal Reserve to quicken the pace of rate increases, which will likely lead to credit headwinds for the market.

■ In China, investors have been largely disappointed by the lack of direct monetary stimulus, but investor sentiment has been stabilized somewhat by market-friendly actions such as the conclusion of cybersecurity investigations into a U.S.-listed Chinese technology

company. COVID-19 infections also appear to have been brought under control, allowing the Chinese government to open up the economy. As a result, industrial production, which contracted in April, expanded in May. Overall, the favorable shift in regulatory rhetoric as well as the improving COVID-19 situation in China have worked to help credit spreads stabilize, especially in the Tech sector.

■ Heading into the second half of the year, we believe hawkish central banks will continue to dictate the terms of the Asia credit market. This should ultimately bring valuations to even more attractive levels, in our view. According to the J.P. Morgan Asia Credit Index, average credit spreads for the investment-grade sector are now close to 200 bps. With U.S. Treasury yields currently around 3%, Asian investment-grade papers are now trading at around 5% on average—levels not seen since 2009.

■ Once central banks’ hawkish moves have been priced in, we believe the market will likely adopt a more constructive tone. That said, investors should bear in mind that economic growth could be hampered by higher interest rates, which would heighten credit risk. Therefore, we believe investors should continue to choose good quality investment-grade over high-yield bonds, and position on the shorter end of the credit curve to minimize the potential impact of mark-to-market volatility driven by rate fluctuations.

Commodities

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Crude oil: Utilization

Robust demand and limited supply growth continue to act as solid backstops for oil prices, in our view. Utilization rates are running above 90%; therefore, we believe a meaningful increase in refined products is unlikely in the short term. We maintain a constructive view for the balance of the year but acknowledge that a resolution in the Russia-Ukraine war would be a key driver of downside risk.



Natural gas: Normalizing

Natural gas prices corrected in mid-June following an explosion at a U.S. liquefied natural gas (LNG) facility that took out roughly 13% of U.S. export capacity. Increased LNG export demand has been a key driver of higher prices given the European crisis. Looking ahead, RBC Capital Markets believes the supply and demand environment will remain tight and prices will further normalize in the year ahead.



Copper: Pullback

Slowing global economic growth prospects and Chinese lockdowns have weighed on copper prices, which are down mid-single digits for the year. Heading into H2 2022, we believe modest supply growth could drive downward pressure, but we acknowledge that RBC Capital Markets is still forecasting a relatively balanced market. Copper will remain sensitive to fluctuating macroeconomic conditions, in our view.



Gold: Flat

Despite a risk-off environment and runaway inflation, gold is essentially flat for the year. We still think hawkish monetary action will likely prevent meaningful upside for the balance of the year. Gold has a strong negative correlation to real interest rates, which have inflected from negative to positive yields for the first time since March 2020.



Commodity forecasts

Commodity	2022E	2023E
Oil (WTI \$/bbl)	\$100.16	\$96.29
Natural gas (\$/mmBtu)	\$5.00	\$4.25
Gold (\$/oz)	\$1728	\$1614
Copper (\$/lb)	\$4.25	\$3.75
Soybeans (\$/bu)	\$15.84	\$14.40

Soybeans: Higher

Soybean prices are trading near 18-month highs, driven by tight supplies and strong export demand. According to the USDA, purchase commitments for the spring planting season are up 68% y/y, which we think reinforces the healthy demand outlook.



Wheat: Support

While wheat prices have retraced from their year-to-date highs, prices are still approximately 33% higher than their 18-month average. India, the world's second-largest producer, announced export bans in May, citing unfavourable weather conditions. Reduced export capacity and a demand outlook that is expected by the USDA to outpace supply growth should provide downside support, in our view.



Source - RBC Capital Markets forecasts (oil, natural gas, gold, and copper), Bloomberg consensus forecasts (soybeans and wheat); data as of 6/16/22

Chart source - RBC Wealth Management, Bloomberg; date range: 1/4/21-6/15/22

Currencies

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Currency forecasts

Currency pair	Current rate	Forecast June 2023	Change
Major currencies			
USD Index	104.19	106.26	2%
CAD/USD	0.77	0.75	-3%
USD/CAD	1.29	1.33	3%
EUR/USD	1.05	1.04	-1%
GBP/USD	1.22	1.14	-7%
USD/CHF	0.96	1.04	8%
USD/JPY	136.2	135.0	-1%
AUD/USD	0.69	0.70	1%
NZD/USD	0.62	0.66	6%
EUR/JPY	143.9	140.0	-3%
EUR/GBP	0.86	0.91	6%
EUR/CHF	1.01	1.08	7%
Emerging currencies			
USD/CNY	6.70	6.80	1%
USD/INR	78.38	76.50	-2%

Change is defined as the implied appreciation or depreciation of the first currency in the pair quote. Examples of how to interpret currency data can be found in the Market Scorecard.

Source - RBC Capital Markets forecasts, Bloomberg; data as of 6/22/22

U.S. dollar: Aggressive Fed rate hikes

The Federal Reserve hiked interest rates by 75 basis points earlier this month, the biggest increase since 1994, in an effort to fight surging inflation that rose to 8.6% in May. The greenback continues to benefit from aggressive pricing of future Fed interest rate hikes, but with the sharp rally since the start of the year, we expect more moderate gains into year's end.

Euro: ECB confirms rate lift-off in July

The euro remains under pressure from the ongoing war in Ukraine as soaring inflation from high energy prices led to the European Central Bank confirming an interest rate hike as early as July. RBC Economics retains its target of parity on the EUR/USD by year's end, based on yield differentials between the U.S. and eurozone.

Canadian dollar: High oil prices and hawkish BoC

The Canadian dollar was the second-best performer among the G10 currencies in Q2, supported by high crude oil prices and the Bank of Canada raising interest rates to 1.5%, with a warning that it could be even "more forceful" if needed. RBC

Economics expects a 2.5% policy rate by year's end, with risks tilting to the upside, and targets the USD/CAD at 1.31 in Q4.

British pound: Weaker despite BoE rate hikes

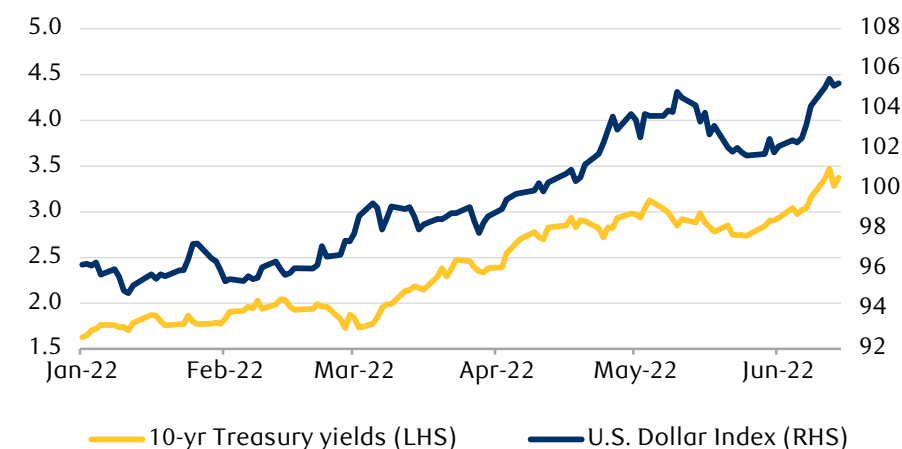
The British pound fell 8% in Q2, despite the Bank of England (BoE) raising the Bank Rate to 1.25%. With the UK economy decelerating at a much faster rate than forecast, RBC Economics retains its bearish view on the GBP and expects the BoE to be less aggressive on future interest rate hikes. Sterling also faces political risks, such as uncertainty over the fate of the agreement with the European Union regarding Northern Ireland.

Japanese yen: Reaches 24-year low at 135

The Bank of Japan (BoJ) stands out among major central banks with its commitment to maintaining an ultra-loose monetary policy, which has resulted in a 14% drop in the JPY this year. While BoJ officials have stated that the rapid weakness in the JPY was negative for Japan's economy, RBC Economics still expects JPY underperformance even if the BoJ decides to intervene to smooth the path of USD/JPY appreciation.

Moderate gains on the U.S. dollar likely after strong rally

U.S. Dollar Index (DXY) reaches 20-year highs



Source - RBC Wealth Management, Bloomberg; data through 6/16/22

Research resources

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			Count	Percent
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