ECONOMIC VIEWPOINT

After Two Years of Growth, North American Stock Markets Are in the Danger Zone

By Lorenzo Tessier-Moreau, Senior Economist

After two years of extraordinary stock market gains, volatility is back with a vengeance this year. First we saw bond yields rise sharply, hitting high-valuation stocks hard. Then Russia invaded Ukraine, bringing back uncertainty and sending financial markets lower. However, it remains unclear how the war in Ukraine will end and how it will impact the real economy. The market noise generated by the crisis, along with more fundamental factors, all point to higher volatility. But even if the war ends quickly, market turmoil may not.

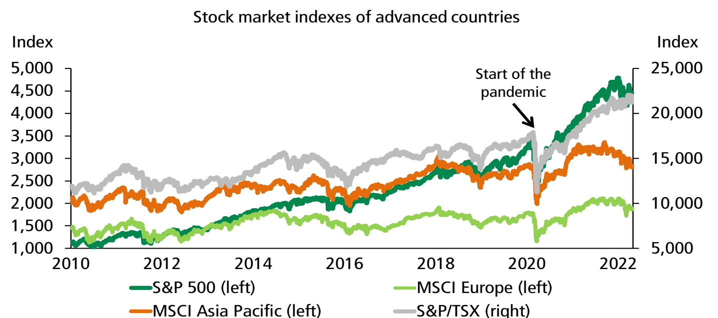
Big Gains over the Last Two Years Are Only Partially Justified

The market rebound following the initial shock of the pandemic was nothing short of spectacular. The S&P 500 gained a total of 47.5% in 2020 and 2021 and more than doubled from its March 2020 low to its most recent peak (graph 1). Canadian and global stocks also showed substantial gains, even if they were not as spectacular. During the first two years of the pandemic, Canada's S&P/TSX index gained nearly 25%. Globally, the MSCI EAFE Index comprising 21 developed economies excluding Canada and the United States rose 15% over the same period.

Profits Have Soared in the Past Year

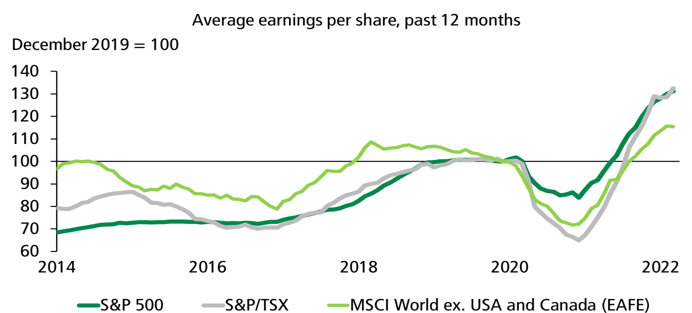
One reason behind the market rally? Publicly traded companies have posted higher profits. After plummeting in 2020, average earnings per share on most indexes bounced back in 2021, greatly surpassing pre-pandemic levels (graph 2). But publicly traded companies aren't the only ones seeing higher profits. In 2021, the pre-tax profits of all companies surveyed by statistical institutes were up an average of 33% in Canada and 25% in the United States. Companies in most economic sectors returned to profitability only as the economy roared back following the initial lockdowns. But the pandemic itself presented opportunities for some sectors. Earnings in the information technology, health care and consumer staples sectors of the S&P 500 started rising in the first few months of the pandemic (graph 3 on page 2).

GRAPH 1
North American stock markets posted strong gains during the pandemic



Sources: Datastream and Desjardins, Economic Studies

GRAPH 2
Corporate earnings are now well above pre-pandemic levels



Sources: Datastream and Desjardins, Economic Studies

NOTE TO READERS: The letters k, M and B are used in texts and tables to refer to thousands, millions and billions respectively.
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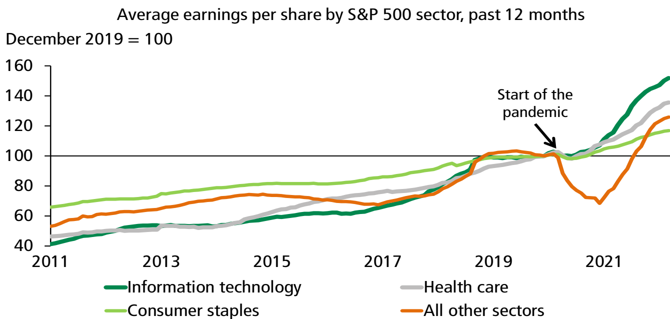
GRAPH 3
Some sectors saw immediate benefits from the pandemic while others profited from the recovery

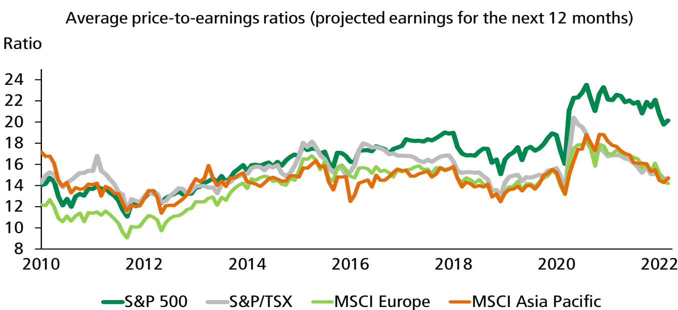


Sources: Datastream and Desjardins, Economic Studies

Two Years of Pandemic Spending Have Also Inflated Stock Valuations

The price-to-earnings ratio is a good indicator of a stock's valuation. It's computed by dividing a company's share price by its actual or projected earnings per share. It gives a sense of how much investors are willing to pay for every dollar of earnings generated. Average price-to-earnings ratios surged on the leading stock indexes in 2020. And though strong earnings growth over the past year has pushed this ratio down on Asian, European and Canadian indexes, the ratio remains very high for the S&P 500 (graph 4). The information technology sector now accounts for nearly 30% of the S&P 500 by value. It is inflating the average with an average ratio of nearly 25, compared to around 18 for all other sectors. Typically, a high price-to-earnings ratio indicates better prospects for future earnings growth, hence the distinction between so-called value and growth stocks. Value stocks generally have lower price-to-earnings ratios and pay higher dividends, but investors expect weaker earnings growth. On the other hand, growth stocks typically pay lower or no dividends because investors expect higher future earnings. While growth prospects remain good in the United States, other factors may be behind the higher valuations we are seeing.

GRAPH 4
Price-to-earnings ratios have fallen from their pandemic peaks but remain high in the US



Sources: Datastream and Desjardins, Economic Studies

BOX 1
Opportunity Cost

Opportunity cost is a key economic concept in order to understand valuations of stocks and other asset classes. It's defined as the potential return one has to pass up when making an investment decision. It can be summarized by the best return available between all other investment opportunities. When making investment decisions in an uncertain economic setup, the money market return corresponds to the minimum opportunity cost to which any investment under consideration must be compared. Investors always have the option of investing in the money market and getting a riskless return dictated by the central bank's policy rate rather than investing in a risky asset. Any risky investment should then minimally match the money market return and additionally offer a risk premium as well as a term premium. Opportunity cost is, amongst other things, the basis of the discounted cash flow analysis which is widely used to determine the theoretical value of individual stocks.

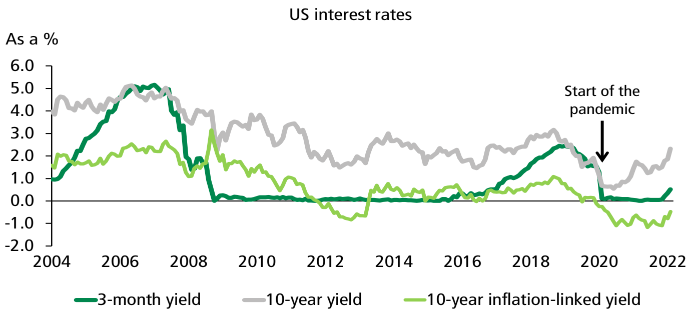
Individuals Have Poured Their Savings into the Financial Markets

Over the past two years, governments and central banks have provided an incredible amount of monetary and fiscal stimulus. Personal savings are up sharply as a result of government income support programs and pandemic-constrained consumer spending. Much has been said about the influx of small investors that have entered the stock market during the pandemic, especially through discount brokerage platforms targeting young investors. Groups of small individual investors organizing on online discussion forums have even caused major market upheavals, including the now infamous GameStop episode. This new trend has encouraged market speculation and brought a huge inflow of new cash. But most individuals still save and invest with financial institutions. A lot of the excess savings was also injected into the stock markets through traditional channels.

Low interest rates and quantitative easing have also played a role

Lower interest rates and increased liquidity from quantitative easing at the beginning of the pandemic allowed institutional investors to borrow at low cost and make much riskier investment choices. This phenomenon can be understood better by looking at the opportunity cost. When interest rates were cut in March 2020, the opportunity cost of investing in the stock market also dropped sharply. The yields on US Treasury bills of 3 months or less fell back near zero while longer term yields hit historically low levels (graph 5 on page 3). Meanwhile the average dividend yield on the S&P 500 remained at about 2%, making it much more attractive than risk-free investments. But to take into account all possible risks, the opportunity cost must also include the effect of inflation. With the yield on 10-year US TIPS (inflation-linked treasury bonds) hovering around

GRAPH 5
The drop in interest rates slashed the opportunity cost of risky investments



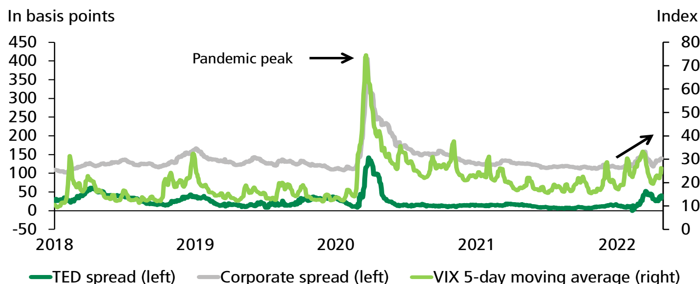
Sources: Datastream and Desjardins, Economic Studies

-1% over the past two years and real money market returns that kept declining as inflation soared, the real opportunity cost has continued to fall. And since corporate profits tend to rise with the price level, stock markets have continued to be very attractive.

2022 had a Rocky Start, with War and Rate Hikes in the Background

The drop of US stock indexes since the beginning of the year makes a lot of sense when considering the opportunity cost. The S&P 500 and Nasdaq declined about 7% and 12% respectively between December 31 and February 11, and that was before war broke out in Ukraine. The drop in stock prices was the reflection of increasing interest rates, with the yield on 5-year US bonds soaring more than 60 basis points and key rate hike expectations spiking. Since Russia invaded Ukraine, the stock market has continued to decline, but we've also seen a marked increase in volatility and certain variables associated with financial stress (graph 6). Investors initially saw the war in Ukraine and sanctions on Russia as a risk to the economic outlook and global financial stability. The surge in oil and other commodity prices is also darkening the outlook for economic growth, which could negatively affect corporate profits. Under such circumstances, capital usually moves to safer assets like government bonds, and that's exactly what we saw in the first few weeks of the crisis.

GRAPH 6
According to a number of indicators, financial stress is up since the start of the war in Ukraine



TED (Treasury-EuroDollar rate) spread: spread between 3-month US Treasury yield and 3-month LIBOR
Sources: Datastream and Desjardins, Economic Studies

BOX 2
The Canadian Stock Market Could Fare Better

Unlike US markets, Canadian stock markets have performed relatively well since the start of the year. Stock valuations on the S&P/TSX are starting at much more reasonable levels, making the index somewhat less sensitive to interest rate hikes. The S&P/TSX started the year with an average price-to-earnings ratio of around 15%. However, the index is up mostly on higher oil and other commodity prices. Just before the late April drop, the index was up about 3.8% for the year, with energy and materials contributing 4.6 and 2.8 percentage points to that figure, respectively. Without these two sectors, the S&P/TSX would be down about 3.6%. Although the geopolitical situation remains very tense, commodity and energy prices should moderate until the end of the year. These sectors could therefore post weaker or even negative growth from here on out. We'll also be keeping an eye on the financial sector, which accounts for nearly 30% of the index. A high interest rate environment is usually good for banking sector profits, but rapid rate hikes could increase the risks to the financial system. Canada's economy is especially sensitive to interest rate hikes because of its high mortgage debt and the high vulnerability of its housing market. A housing market correction could therefore spell trouble for the profits of Canada's big banks.

But It Seems Money Has Nowhere to Go—for Now

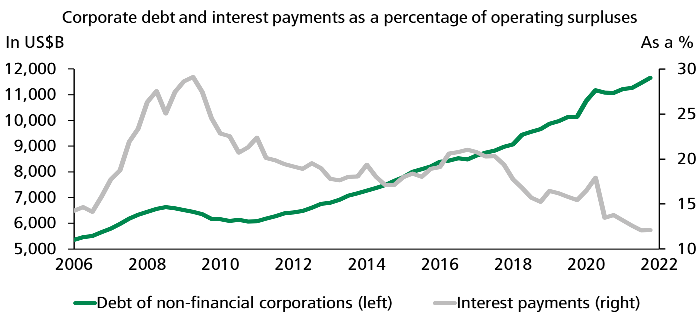
The war in Ukraine is not affecting asset returns the way we're used to seeing. The outlook for economic growth is deteriorating, but the war and sanctions will also likely mean more inflation in the short term. New lockdowns against COVID-19 in China also increase the risk of stronger inflation by causing more supply chain hurdles. And while strong price pressures were already being felt around the world, central banks' tolerance seems to have reached a limit. The most recent messaging from European and North American central bankers is clear: interest rates will have to rise quickly to curb inflationary pressure, even if it poses downside risks to economic growth. Consequently, bond yields, which initially fell when Russia invaded Ukraine, have risen sharply since. Money markets are usually an alternative as they offer low but stable returns on highly liquid assets. But with inflation north of 8% and key rates still at near-record lows in the United States, money markets still offer very negative real returns. Even safe havens like gold and some other precious metals aren't such an attractive option since interest rates are expected to rise. On balance, stock markets may still appear like a good option in the short run, as long as corporate profits continue to grow.

Pace of Earnings Growth Will Be Hard to Sustain in 2022

The extraordinary economic growth we've seen during the post-pandemic recovery will give way to more moderate growth in 2022. In the United States, real GDP is expected to expand 3%

this year compared to 5.7% in 2021. Inflation will remain high, which could continue to fuel corporate revenue growth, but it could have a much smaller impact on profits going forward. So far, strong demand has allowed companies to pass along rising input costs to consumers. However, demand is likely to moderate. Personal disposable income rose spectacularly over the past two years thanks to generous government stimulus programs, but it should decline in real terms in the US and elsewhere around the world. Consumer confidence has also been impacted by the war in Ukraine and will remain weaker due to inflation and higher interest rates. Rising interest rates will also have a more direct effect on corporate profits. Despite a significant increase in corporate debt in 2020, interest payments accounted for a smaller share of business spending due to lower interest rates (graph 7). We will likely see the opposite this year, with interest payments taking a bigger bite out of profits.

GRAPH 7
US corporate debt is up, but interest payments accounts for less of corporate spending



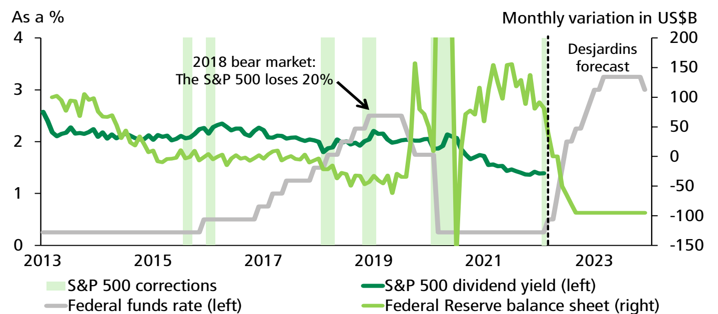
Sources: Datastream and Desjardins, Economic Studies

Even Strong Earnings Growth May Not Be Enough to Justify Stock Prices

While future earnings growth remains uncertain, one thing is becoming increasingly clear: short-term interest rates will be significantly higher at the end of this year. The Federal Reserve and the Bank of Canada will also shrink their balance sheets, which will withdraw liquidity from the financial system. Together, these measures will affect stock market valuations. Policy rate hikes will make money market returns more attractive by increasing the opportunity cost of riskier securities. Stock markets may also be directly impacted by central banks trimming their balance sheets. As central banks reduce their footprint in bond markets, private investors will have to pick up the slack. If they don't, long-term bond yields will rise, affecting earnings prospects and valuations. But if investors do step up, they'll have to reallocate part of their portfolios to bonds. As returns on money markets and liquid securities rise, equity portfolios are likely to bear the brunt of this reallocation.

Interestingly, during the last monetary tightening cycle in 2017 and 2018, the S&P 500 entered a bear market just as the federal funds rate surpassed the average dividend yield (graph 8). The

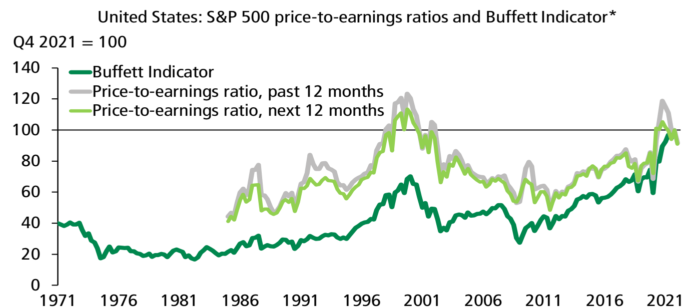
GRAPH 8
Stocks are at risk in periods of monetary tightening



Sources: Datastream and Desjardins, Economic Studies

Fed was also reducing the size of its balance sheet at the same time. The end of the correction in late 2018 also coincided with a change in tone from the Fed Chair. Like today, US stock valuations were high in the run-up to monetary tightening. But the S&P 500's average price-to-earnings ratio* is even higher today. It's at a level not seen since the tech bubble burst in 2000. More broadly, the market cap to GDP ratio recently hit an all-time high (graph 9). This ratio, also known as the Buffett Indicator, is a measure of the total value of all publicly traded US stocks divided by GDP.

GRAPH 9
US stock valuations measures are still historically high



*Total market cap/nominal GDP
Sources: Datastream and Desjardins, Economic Studies

The Big Takeaway? Volatility Is Here to Stay

Even in the best-case scenario where the war in Ukraine and COVID lockdowns in China end quickly, volatility could stick around for a while or make a comeback later this year. Despite the disruptions and uncertainty clouding the short-term outlook, one thing seems relatively certain: interest rates will have to rise to curb inflationary pressure. Stocks can provide some protection against inflation, but not when inflation is accompanied by rapid interest rate hikes. And interest rate increases are even more painful when valuations are high. We expect US stock markets to

end 2022 moderately lower than they did last year. This scenario is predicated on weaker earnings growth and a federal funds rate not much higher than 3.0% at the end of the year. It's also based on more moderate inflation and solid GDP growth. But even in our baseline scenario, a further S&P 500 correction is still a possibility. If the situation deteriorates further, we could easily see a correction or even a bear market, defined as a loss of 20% or more of an index's value. Canadian stocks are better positioned to offer positive returns this year, but they too are in the danger zone as heightened US market volatility could drag down the Canadian index.