Outlook for the stock markets: Can the bull trend continue?
Risk of a correction in the near term but potential for gain over the medium range

The stock markets have gone through a period of extreme volatility. When the financial crisis broke out in the summer of 2007, it brought on a stock market correction that degenerated into last fall’s wreck, following the Lehman Brothers’ bankruptcy, on September 15, and the imbroglio about the Paulson plan in the Congress in the following weeks. The situation then appeared to improve, with the stock markets climbing back by about 20% at the end of 2008. This type of temporary rally, called a “bear market rally”, is normal in stock market corrections. Another wave of panic took the indexes to new lows on March 6, 2009, however. At the time, the U.S. stock market was 57% below its record peak, while the Canadian stock market had lost 50%. In terms of both speed and magnitude, this correction is certainly one of the most violent seen since the Great Depression (graph 1).

For many, March’s depressed levels, which reflected apocalyptic scenarios, were a good entry point. Around the world, stock indexes began another impressive rise. For instance, the U.S. S&P 500 index has jumped more than 35% from its March 6 low. Although we had hoped to see the stock markets return to a bull trend this year, a rise this fast is somewhat surprising, especially given that the economic context is still tough. The issue is whether this ascent is nothing more than another «bear market rally» that will quickly correct or if, conversely, the indexes’ potential for growth remains strong.

In this Economic Viewpoint, we will analyze the indexes’ movements since the crisis broke out and attempt to determine whether the outlook for the North American stock markets remains good in the near and the medium term.

A CORRECTION THAT WAS HARD TO ANTICIPATE
One special trait of the U.S. stock market correction that began in 2007 was that it was not preceded by a period of euphoria. After posting a modest rebound subsequent to the tech bubble burst, the S&P 500 index rose by an annual average of 8.5% from 2004 to 2006: performance similar to its historical average. In fact, in July 2007, the S&P 500 had just edged over its previous peak, which dated back to the start of the new millennium. The Canadian stock market’s performance during this time was more spectacular, however, given its exposure to commodity prices, which would render it more vulnerable to a violent correction (graph 2 on page 2).

The classic way to gauge whether the stock market is overvalued is to compare stock prices with companies’ earnings forecasts. The thinking is that, in buying a share, we buy a part of the company and, in particular, a right to some of the company’s future earnings. In theory, the value of a share
should therefore correspond to the present value of a company’s present and future earnings per share.

This is why the ratio provided by the price of a stock index divided by the earnings per share of the underlying companies is often used to gauge whether the market is over- or undervalued. Given the steep earnings growth that occurred in previous years, in the summer of 2007, price/earnings ratios were very close to their historic averages in Canada and the United States (graph 3). This situation was very different from the situation during the tech bubble, when these ratios were peaking.

About the same thing happened to the S&P 500 index in the summer of 2007. The index’s low valuation, in term of price/earnings ratio, was partially based on huge profits in the financial sector (graph 4). The U.S. housing market correction, the liquidity crisis and the credit crunch, turned the earnings of the major international banks into record losses when they had to write off over $1,000B in assets. In addition to the write-offs, the entire model of investment banking based on very low risk and liquidity premiums crumbled in just a few months, and may never fully recover. In the months that followed, institutions that were thought to be unshakeable, such as Bear Stearns, Lehman Brothers and AIG either vanished or underwent quasi-nationalization.

THE FINANCIAL SECTOR’S COLLAPSE AND THE RECESSION CHANGED THE SITUATION

A lesson that all new investors learn quickly is that, no matter how useful they are, we cannot blindly rely on price/earnings ratios. These ratios are only valid if the past or forecast earnings used in the calculation are truly representative of the company’s situation. An extreme example would be Lehman Brothers shares, which seemed like a bargain to investors until the lack of liquidity pushed it into bankruptcy.

Initially, the problems were concentrated in the real estate and finance sectors, but tightening credit and crumbling confidence became widespread, bringing on the current recession. The particularly violent contraction of economic activity almost worldwide has affected the earnings of all businesses (graph 5 on page 3) and has even driven two out of the three biggest U.S. automakers into bankruptcy. Countries such as Canada, Russia, Brazil and South Africa which produce commodities were relatively unscathed early in the financial crisis but then saw their stock markets collapse when the global recession was confirmed and resource prices fell.

THE TUMBLE WAS MAGNIFIED BY A WAVE OF PANIC

Fundamentally speaking, the change in corporate earnings over the last quarters completely justified a sharp stock market correction. In fact, every U.S. recession in the last few decades has come with a time of sharp downturn for the stock market.

However, we can wonder if the correction has overshot. The initial phase of the decline by the U.S. indexes, from the fall of 2007 to September 2008, seemed to be relatively normal. The AIG bailout and Lehman Brothers bankruptcy last September sent a shock wave that was a lot worst. All financial strain
indicators exploded and the stock indexes plummeted with great speed. Disregarding the fundamental value of the securities, numerous investors raced to sell off their holdings, as shown by the record flight of registered capital from stock mutual funds (graph 6). After several weeks of capitulation, the situation calmed down somewhat at the end of 2008. Renewed fears of large-scale bank nationalization after a disappointing financial sector rescue plan was presented, however, made the markets plunge again in early 2009, taking them to their March 6 low. At that point, investor pessimism was reaching a record peak (graph 7), when all that was on anyone’s lips were the words economic depression and collapse of the financial system. As graph 8 shows, financial strains have a big influence on the valuation of the stock market.

It is therefore no accident that the indexes’ spectacular rebound since March occurred at the same time as a substantial improvement in the financial environment. Efforts by monetary and government authorities have finally managed to ease fears of a collapse of the international financial system. The financing premiums demanded to the major banks have thus descended below where they were before the Lehman Brothers bankruptcy (graph 9 on page 4). Investors’ renewed confidence also made it possible for corporations to start issuing debt securities and stock again. This makes it much easier for them to find financing and secures adequate liquidity. A number of American banks have even started to pay the government back the amounts they had been advanced to get through the peak of the crisis.

DO EARNINGS JUSTIFY THE INDEXES’ LEVEL?

To date, the stock market rebound is primarily based on easing financial strains and a few signs of economic recovery. The scenarios of an economic depression and wreck of the financial system seem much less plausible than at the beginning of the year. However, although further improvement is still possible here, over the next few years, the indexes’ growth will have to

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1 To date, 10 banks, including J.P. Morgan and Goldman Sachs, have gotten permission to buy back the stakes taken by the American government, for a total of US$69B.
be based on stronger underpinnings, i.e. profits that are big enough to justify the stock prices.

The financial crisis and recession have had a spectacular impact on corporate earnings. From a record level, the S&P 500’s earnings per share plunged, sliding into negative territory at the end of 2008 for the first time since at least the Great Depression. However, this quarterly loss was mainly due to AIG’s difficulties. Despite the tough context, the profits of businesses that make up the S&P 500 returned to positive territory in Q1 of 2009, but they are still low. Analysts have continued to downgrade their projections in the last few months and are now expecting profits to decline 12% in 2009 in the United States and 27% in Canada (graph 11). The forecast for the S&P 500 has slightly been increased, however, in the last few days, an encouraging signal.

In addition to analysts’ expectations, our own economic forecasts provide us with an idea of how corporate earnings will move in the future. Profit evolution is usually highly correlated with the economy’s. The relationship is even stronger when we only factor in business activity (graph 12). The tumble by earnings in recent quarters is therefore a good fit with the U.S. economy’s evolution since the recession began. Given the financial crisis’ lasting impacts and a very modest rebound of consumption, we predict that the recovery, expected by the end of 2009, will be tepid. As a result, corporate earnings will not grow as spectacularly as they have in recent recoveries (graph 13).
The combination of the stock indexes’ quick rebound and another downward revision to profit forecasts has had a big impact on the markets’ valuation criteria. The price/earnings ratios, which early this year indicated that the market was very undervalued, have now come closer to their historical averages. Assuming that the stock indexes stay at current levels and profits come back as we expect, price/earnings ratios would quickly return to a down trend, however. This suggests that the U.S. and Canadian stock markets still have solid potential for appreciation over the medium range.

One problem with price/earnings ratios is that, as corporate earnings are volatile, the profits used in the calculation are not certain and can be heavily influenced by the current context. For this reason, it is sometimes better to use an earnings trend measure rather than simply using the profits for the last 12 or next 12 months. By using the average profits over the last 10 years, adjusted for inflation, we currently get a price/earnings ratio of 16 for the S&P 500 compared with an average of 19 since 1970 (graph 14).

Other major criticisms have been levelled at the Fed model. It is still logical, however, for there to be some relationship between the stock market’s valuation and the rate offered by the bond market, for at least two reasons. The first is, if investors have an opportunity to get a high return from not very risky bonds, it is normal for them to demand a high return from the stock market. Secondly, as a share’s value corresponds to the present value of future earnings, a higher bond rate will have an impact on a share’s price, if all else is equal, as it will increase the discount rate. We therefore drew up our own version of the Fed model for the Canadian and U.S. stock markets. Classic model shows that the two markets are still substantially undervalued. However, in our opinion, this model is a little skewed by the tech bubble episode. By controlling the tech bubble’s impact when estimating our equation’s coefficients, the results change slightly, showing that the U.S. market is currently slightly undervalued while the Canadian market is at the equilibrium level (graphs 15 and 16).

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**Graph 15 – Fed model for the U.S. stock market**

![Fed model for the U.S. stock market](image)

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**Graph 16 – Fed model for the Canadian stock market**

![Fed model for the Canadian stock market](image)

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The fact that the S&P 500’s dividend rate is now exceeding the yield offered by a federal bond also suggests that this market is not expensive (graph 17).

Tobin’s Q ratio is another useful criterion. This measurement calculates the ratio between the value of a company’s shares and the cost of replacing its assets. In theory, if the ratio is higher than one, the shares are overvalued, because it would be cheaper to buy the assets the share covers than to buy the share itself. This measurement can be calculated for the entire U.S. stock market (graph 18). This criteria also shows that the U.S. stock market was very undervalued in Q1 of 2009 and, according to our estimates, is still slightly undervalued.

Lastly, another indicator for market valuation simply can be obtained by looking at the stock index total capitalization compared with the country’s nominal GDP (graph 19). This measurement is more useful for a large and relatively closed economy, such as the United States, than for an open country like Canada in which business profits are more dependent on the international situation. At this time, this measure also shows that the valuation of the U.S. stock market is not exaggerated.

MODELING THE S&P 500’S MOVEMENT

In closing, an economic equation has been developed to incorporate various stock market valuation measurements in order to establish a more complete equilibrium value. Our estimates factor in the undeniable link between the stock market’s value and corporate earnings along with, despite some criticisms, a logical link that should exist with the bond market’s return. Lastly, given that our observations show that financial strains also impact stock market valuation, a measurement of the corporate bond market risk premium has been included in the equation. To avert an estimation bias associated with the tech bubble, that period was given special treatment.

The results seem to confirm that the factors discussed above are able to explain the recent movements in the U.S. stock market (graph 20 on page 7). The recent stock market rebound has taken the market just over the equilibrium level estimated by the model. However, assuming that risk premiums return near their normal levels by the end of 2010 and that our forecasts for corporate profits and interest rates are realised, the model indicates that the S&P 500’s equilibrium value would climb slightly over or 1 110 target. Of course, given the stock market’s inherent volatility, a forecast from such a model must only be read as an indication.

CONCLUSION: THE STOCK MARKET SHOULD PROVIDE ATTRACTIVE RETURNS IN THE NEXT FEW YEARS

Our model and most of the other indicators are thus sending a similar message. After the rapid surge seen since March, the stock market is not as undervalued as it was, but it’s still relatively attractive. The market return could be high in the coming years as financial strains will continue to moderate and profits gradually improve.

However, this conclusion is valid from a medium- and long-term perspective since a gain is less sure in the short term. For
example, the stock markets’ plunge in the first two months of 2009 occurred even though the markets already looked appealing, historically speaking. Investor mood swings seem to have much more of an influence on short-term movements of the market than rational factors do. After the last few months’ spectacular surge, which is already comparable to the best stock market rebounds (graph 21), some consolidation or even a temporary correction is very likely in the near term, particularly as the hopes of a V-shaped recovery may not materialize.

Despite the risk of short-term volatility, the stock market is currently a very attractive choice for most investors. The medium-term bull trend appears to be underway and, as we have shown, the North American indexes offer solid growth potential for the coming years. Table 1, which contains our return forecasts for the various asset classes, shows the degree to which the stock market’s return should surpass the bond market’s in the next few years. Note that bond market return will be limited by very low rates and forecasts that rates will gradually rise as the recovery shapes up.

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### Table 1  
Asset classes return

<table>
<thead>
<tr>
<th>End of year</th>
<th>Cash</th>
<th>Bonds</th>
<th>Canadian stocks</th>
<th>U.S. stocks</th>
<th>International stocks</th>
<th>Exchange rate</th>
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<tr>
<td></td>
<td>3-month T-Bill</td>
<td>Scotia Capital Bond Index</td>
<td>S&amp;P/TSX Index*</td>
<td>S&amp;P500 Index (US$)*</td>
<td>MSCI EAFE Index (US$)*</td>
<td>CANS/US$ (var. in %)**</td>
</tr>
<tr>
<td>2000</td>
<td>5.50</td>
<td>10.20</td>
<td>7.40</td>
<td>-9.10</td>
<td>-14.00</td>
<td>3.80</td>
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<tr>
<td>2002</td>
<td>2.50</td>
<td>14.50</td>
<td>-12.40</td>
<td>-22.10</td>
<td>-15.70</td>
<td>-1.50</td>
</tr>
<tr>
<td>2003</td>
<td>2.90</td>
<td>26.70</td>
<td>28.70</td>
<td>39.20</td>
<td>-17.70</td>
<td></td>
</tr>
<tr>
<td>2004</td>
<td>2.20</td>
<td>14.50</td>
<td>10.90</td>
<td>20.70</td>
<td>-7.10</td>
<td></td>
</tr>
<tr>
<td>2005</td>
<td>2.70</td>
<td>24.10</td>
<td>4.90</td>
<td>14.00</td>
<td>-3.30</td>
<td></td>
</tr>
<tr>
<td>2006</td>
<td>4.00</td>
<td>17.30</td>
<td>15.80</td>
<td>26.90</td>
<td>0.20</td>
<td></td>
</tr>
<tr>
<td>2007</td>
<td>4.10</td>
<td>9.80</td>
<td>5.50</td>
<td>11.60</td>
<td>-14.40</td>
<td></td>
</tr>
<tr>
<td>2008</td>
<td>2.30</td>
<td>6.40</td>
<td>-33.00</td>
<td>-37.00</td>
<td>-43.10</td>
<td>22.10</td>
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<tr>
<td>2009f range</td>
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<td>target: 3.0</td>
<td>target: 22.0</td>
<td>target: 10.0</td>
<td>target: 15.0</td>
<td>target: -11.8 (US$0.93)</td>
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<td>2010f range</td>
<td>target: 0.5</td>
<td>target: 3.0</td>
<td>target: 13.0</td>
<td>target: 16.0</td>
<td>target: 18.0</td>
<td>target: -7.0 (US$1.00)</td>
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f: forecasts; * Dividends included; ** Negative = appreciation and positive = depreciation.
Sources: Datastream and Desjardins, Economic Studies