Wow! Did You See What the Dow Did?

The Sound Investor by Ed Hynes, CFA
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This comment is really for all the index geeks in the world (or geek wannabes). The Dow Jones Industrial Average (DJIA), as is being widely reported fell 775.53 points or 8.8 percent in January. This was the worst January Dow performance since Charles Dow set his pencil to paper calculating the index 113 years ago.

But the real story is that the headline dramatically understates the decline of the stocks in the index. When one looks at the component stocks, on average they fell 12.7 percent in January. This is 3.9 percentage points or 44 percent worse than the DJIA would lead one to believe.

As the real geeks have already surmised, the story hinges on how the Dow is calculated. Mr. Dow began with a simple and for the most part, very effective way of measuring the market. He started his index in 1896 by taking the price of each of the 12 leading industrial companies, adding them together and dividing by 12, which on the first day came to around 60. Each day he would repeat the process and report if his index went up or down. (The divisor has changed over the years to keep the index “continuous” and is now 0.125552709).

As you can see immediately, the price change of each stock determines the change in the index. A dollar increase in any stock impacts the index in the exact same way and therefore, this method does not take into account a stock’s relative change in value. A dollar increase is a dollar increase even though it sends a $20 stock up 5 percent and a $100 stock up only 1 percent. One result of this calculation method is that higher priced stocks tend to have a greater impact on the index compared to lower priced ones.

Another issue, though not central to this article, is that every stock is treated equally, no matter how large or small. Taking both these factors into account, the DJIA is referred to as an Equal Weight Price Index.

Just for comparison, the S&P 500 measures the percentage change of each stock and then weights the stock’s impact on the index by the company’s market capitalization. One of the amazing things to me, given the substantial differences in the indexes is that over a long period of time, the Dow and S&P 500’s results are quite similar. (BTW, an S&P type calculation of the Dow would have it fall 11.5 percent in January.)

But let’s get back to this January and analyze the divergence between the DJIA and the underlying stocks. Looking back over the past 10 Januarys, this year’s divergence of 3.9 percentage points is much larger than previous years. In fact, the average divergence for the last 9 years was 0.72 percentage points and the largest was 1.73 points in 2001.

It appears that the presence of very low stock prices and the wide range of stock prices are partially responsible for the result. Some of the component stock prices in the index are much lower than usual. At the being of this year five stocks were below $15 and nine were below $20. During the previous 9 years no stocks had started below $15 and only one below $20.

Citigroup's stock helps illustrate the low price phenomenon. It started in January at $6.71 and fell $3.16 to $3.55. The fall was a dramatic 47 percent, but since it was only $3.16, its impact on the Dow was tempered. On a percentage basis the stock was the second worse performer in the index, but in terms of impact on the index, it was only ranked as the 15th worst stock.

On the flip side, IBM was the highest priced stock in the index, and luckily for the index, the best performer. It was up $7.49 which almost exactly offset the index's third worst point decliner – Bank of America (BAC) which fell $7.50. However, IBM's gain was 8.9 percent while BAC's fall was 53.3 percent. The largest point declines were recorded by Caterpillar ($13.82) and Wal-Mart ($8.94) while their percentage declines were 30.9 percent and 15.9 percent respectively.

The low prices of some stocks in combination with the price of other stocks staying relatively high, contributed to a much greater range of component stock prices. At the beginning of the month, IBM, the highest priced stock (at $84.16) was 26.3 times greater than the lowest price stock (GM at $3.20). This ratio dwarfs the average of the previous 9 years of 5.4 times and a high of 7.9 in 2003.

Even if the extremes are discarded, this year's 5th highest stock price was 4.2 times the 25th highest price versus an average for the period of 2.4 times.

Does this analysis offer any lessons for investors? For me, the first thing is to throw out one of my favorite rule-of-thumb shortcuts. For years I have used the Dow as a proxy for "very large caps" when looking at its performance versus the S&P 500 and the rest of the market. This will not work again until the index more closely resembles the performance of the underlying stocks.

The current situation will also make it difficult to gauge the relative benefits of strategies such as the Dogs of the Dow. Generally these strategies are implemented with equal dollars committed to each stock. In rising markets, this has lead to a slight positive bias when comparing an equal dollar Dog portfolio to the DJIA, but not so much as to rule out the comparison. Now a fairer comparison will need to be used although this can probably wait. Many recent "Dog" portfolios are so hammered that it is difficult to find any analysis to relieve the pain (these may be very interesting if the market turns around).

I always look for silver linings, and there are not many here. Stretching - maybe one can assume American consumers are less depressed by hearing the market fell 8.8 percent in January rather than if they heard it fell 12.7 percent, but we will never know. And stretching even further, with more low priced stocks in the DJIA than there were in November, the index will probably have a tougher time breaking its November low and therefore keep the technicians from forecasting another leg down!

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