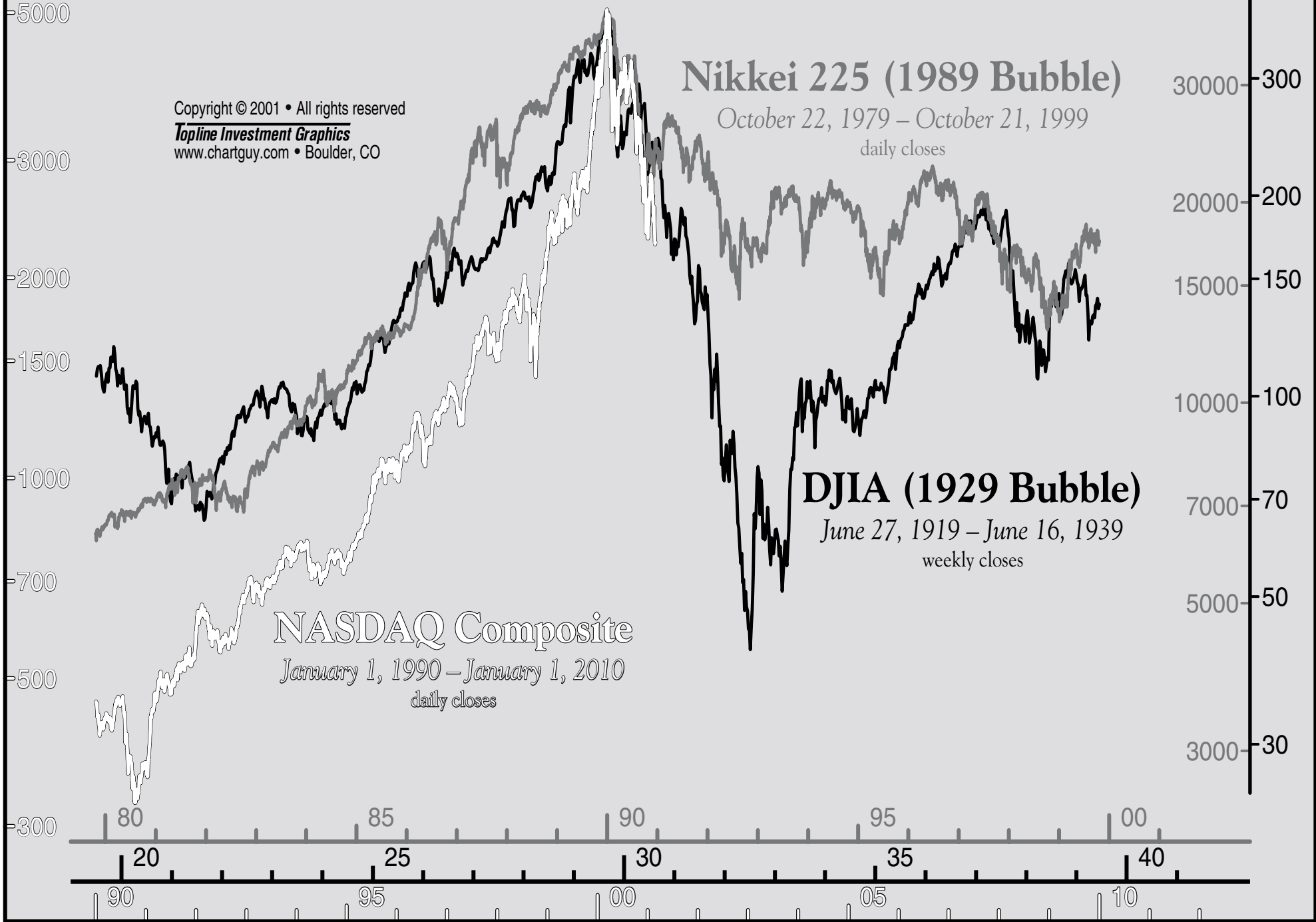


NASDAQ

Comparable Log Scales

Nikkei DJIA



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Nikkei 225 (1989 Bubble)

October 22, 1979 – October 21, 1999
 daily closes

DJIA (1929 Bubble)

June 27, 1919 – June 16, 1939
 weekly closes

NASDAQ Composite

January 1, 1990 – January 1, 2010
 daily closes

80 20 85 25 90 30 95 35 00 40
 90 95 00 05 10

A version of this chart appeared in *The Wall Street Journal*, on Friday, March 2, 2001 (page C1, above the fold). It illustrated the article, *Bursting of the Tech Bubble Has a Familiar 'Pop' to It*, by Steven E. Frank and E.S. Browning. I want to thank Patricia Minczeski of *The Wall Street Journal* for her ingenious suggestion to squeeze three price axes onto one chart.

Adapted from a chart that Topline originally prepared for [Ian McAvity's](#) newsletter, [Deliberations](#), *over a year before that!*

A Bubble is a Bubble is a Bubble ...

This chart compares three financial bubbles. Buyers and sellers in any market are human, and have always been subject to the emotions of fear and greed. Their behavior, *as a crowd*, tends to look the same across both centuries and markets. The Nikkei (1989 peak) and the DJIA (1929 peak) show how two previous bubbles ended. By overlaying them on the Nasdaq (2000 peak), this chart suggests a range of possible outcomes following the bursting of the recent Nasdaq bubble.

Some observers consider the recent bubble to have been a tech stock bubble, some say it was a Nasdaq bubble, some say it was a US stock market bubble, and some even feel it was a global bubble in financial assets. It is clear that the Nasdaq grew further, and faster, than the earlier two did.

The peaks in all three bubbles are drawn at the same point. The Nasdaq data line shows the twenty-year period from 1990 through 2009 that surrounds its March 10th, 2000 all-time high. The Nikkei 225 data line covers the analogous twenty-year window surrounding its December 29th, 1989 peak.

Comparable Log Scales:

The three indexes are scaled using the same logarithmic scaling factor. At Topline, we call that a *Comparable Log Scale*.

Because the scaling is logarithmic, a given percentage change is represented by the same vertical distance, *at any price level*. For example, on the Nasdaq scale, the distance from 500 to 1000 (a 100% advance) is the same as the distance from 1000 to 2000 (another 100% advance), even though one advance is 500 points and the other is 1000 points.

Because all three scales use the same logarithmic scaling factor, a given percentage change in one series is represented by the same vertical distance as the same percentage change in another series. For example, the distance from 200 to 300 on the DJIA scale (a 50% advance) is the same as the distance from 20,000 to 30,000 on the Nikkei scale (another 50% advance).