

Historical Valuation Update

Insight into the Resetting of Historical Average Valuations

Summary: On February 1 of this year I updated the historical data sets used to calculate price-sales and price-earnings in the Tokeneke Research Universe Valuation spreadsheet with data from 10/21/11 to 1/18/13. Inclusion of 2012 into the dataset generally lowered historical average valuations as would be expected during this period of financial market stress and multiple compression in the overall equity markets.

Observations:

- I used the Bloomberg terminal in the Darien, CT public library and downloaded historical price-earnings, price-book, and price-sales data on a weekly interval for the period from October 21, 2011 to January 18, 2013 during the MLK Holiday, January 21, 2013. This information was subsequently incorporated into the Tokeneke Research spreadsheet beginning on February 1, 2013. The Tokeneke Universe totals 103 issues as of this writing.
- As noted in my previous updates from November 7, 2011 and March 8, 2010, there is no data available prior to 1/1/08, so there is a structural defect in my dataset between 9/28/07 and 1/1/08. There is also limited availability of data for smaller and international and lesser-followed issues.
- Datasets were introduced for four new issues over the 2012 period including ADNC, INVN, MTSI and RDA. No data was available yet for the more recent issues AMBA and PSMI.
- Price-earnings datasets are limited due to the cyclical nature of the chip sector. Somewhat surprisingly there were a large number of new highs established over 2012 (a total of 19 mostly newer issues from recent years) and a small number of new lows (9). The historical average calculations dropped down for 41 issues and moved up for 29.
- Price-Sales Updates:
 - A majority of 66 issues had historical average calculations that were nudged down, as expected.
 - There were 19 issues whose historical average price-sales ratios did not change.
 - Ten stocks had historical averages that increased, including: AVGO, CAVM, CEVA, CRUS, GIG, MLNX, MX, NXPI, QUIK and SWKS. I categorize them into three buckets. First are those issues with limited datasets that have only been public since 2007, including AVGO, CAVM, GIG, MLNX, MX, and NXPI. Second are those companies that underwent strategic changes to their businesses warranting richer fundamental valuations, including CAVM, CEVA, CRUS, MLNX and SWKS. Notice that CAVM and MLNX get to double-dip. And third is a distressed company, QUIK, whose revenues crashed which then mathematically inflated its price-sales ratio.
 - There were a total of six new highs, including: CRUS, GIG, GSIT, MLNX, MX and QUIK. This group of tickers largely correlates with the 10 noted above whose historical averages increased. GSIT is a 2007 issue with a limited dataset.
 - There were 17 stocks establishing new lows, including: BCDS, CODE, FSL, HIMX, IDCC, INFN, IPHI, MEMS, MXL, NLST, NPTN, RMBS, SIMO, SPWR, SQNS, TSEM and VIMC. These are all financially distressed companies—or at least were for a period of time. IDCC is the exception with a limited dataset beginning in 2010 that enjoyed a one-time spike in revenue that mathematically depressed its price-sales ratio.

Semiconductor Fundamental Valuations: Historical Valuation at Tokeneke Research reflects fundamental equity valuation metrics compared against the history of those metrics for the life of that equity. Specifically, I compare current trailing-12-month price-sales and price-earnings ratios against the average history of those criteria for a specific equity issue. I use the Bloomberg data base to capture historical price-earnings, price-book and price-sales ratios on a weekly basis. I then capture the high and low numbers and calculate the mean average for each ratio.

I do not consider price-book to be a meaningful valuation ratio for the semiconductor industry, in general, mostly because of the huge variance in book values between integrated manufacturers, foundries, fabless and IP business models, but also because of a significant portion of intangible book value reflected in goodwill and acquisition-related intangibles on balance sheets across the sector. While book value appears to be a more relevant metric for valuing the share prices of semiconductor capital equipment issues, it does not appear to carry much relevance for semiconductor suppliers.

Price-earnings is an extremely robust fundamental valuation metric. However, it is inherently problematic in the highly cyclical and volatile chip sector. The volatility of the business itself leads to a very wide range of earnings over the course of a business cycle, and the cyclical nature of the sector results in meaningful periods of financial losses that render historical datasets incomplete and truncated to a significant degree. Even worse, periods of highly depressed earnings render meaningless quadruple-digit price-earnings ratios that skew averages into useless magnitudes in the mid- and high-double digits. Very few issues have big enough data sets available to calculate meaningful averages, and those relatively limited datasets are polluted by exorbitant ratios associated with periods of depressed earnings. Complicating matters even further is the extensive use of pro forma earnings with the lack of consistent definitions thereof. I generally use price-earnings ratios consistent with expected long-term growth rates to establish price targets—but only in concert with other valuation metrics. Specifically, price-sales.

Price-sales is by far the best fundamental valuation metric to employ when addressing the semiconductor sector: the historical datasets are comprehensive and extensive, and the inherent volatility of the sector is limited to the single-digit multiple variances in revenue gyrations across business cycles. The historical trailing 12 month average is a meaningful metric by which to gauge the relative fundamental valuation of a given equity issue in the semiconductor sector.

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