

Intrinsic Valuation Historical Update *Resetting of Average Historical Fundamental Valuations*

Summary: On November 7 of this year I updated the historical data sets used to calculate price-sales and price-earnings in the Tokeneke Research Intrinsic Valuation spreadsheet with data from 2/4/10 to 10/21/11. Inclusion of 2010 and 2011 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 February 5, 2010 to the current day on October 21, 2011. This information was subsequently incorporated into the Tokeneke Research spreadsheet beginning on November 7, 2011. The Tokeneke Universe totals 103 issues as of this writing.
- As noted in my previous update from 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 12 new issues over the 2010 and 2011 period including AOSL, BCDS, CODE, FSL, GGOX, IPHI, MX, MXL, NLST, NPTN, NXPI and SQNS. NLST was a 2006 issue with a limited available dataset.
- Price-earnings datasets are limited due to the cyclical nature of the chip sector. As expected, there were very few new highs established over 2010 and 2011 (a total of 6), but a large number of new lows (34). The historical average calculations dropped down for 78 issues and moved up for only 5.
- Price-Sales Updates:
 - A majority of 59 issues had historical average calculations that were nudged down, as expected.
 - There were 14 issues whose historical average price-sales ratios did not change.
 - A surprising number of stocks—13—had historical averages that actually increased, including: ACTS, AVGO, CAVM, CEVA, ENTR, GSIT, IDCC, MLNX, NETL, QUIK, SPRD, STEC and SWKS. Why? I categorize them into three buckets. First are those issues with limited datasets that were introduced as new during the last update in March of 2010 and have only been public since 2007, including AVGO, CAVM, ENTR, GSIT, IDCC, MLNX and SPRD. Second are those companies that underwent strategic changes to their businesses warranting richer fundamental valuations, including CEVA, STEC and SWKS. And third, are distressed companies whose revenues crashed, which then artificially (and mathematically) inflated their price-sales ratios, including ACTS, NETL and QUIK.
 - There were a total of 11 new highs, including: ACTS, AUTH, AVGO, CEVA, ENTR, GSIT, IDCC, MLNX, QUIK, SPRD and SWKS. This group of tickers largely correlates with the 13 noted above whose historical averages increased. AUTH is a 2008 issue with a limited dataset.
 - There were 12 establishing new lows, including: AMCC, HIMX, IDCC, IKAN, INFN, ISIL, MEMS, MOSY, SPWR, TRID, TSEM and VTSS. 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 whose historical average actually increased.

Background: Intrinsic 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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