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Technical Research

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The Role of Relative Strength in Technical Risk Management

"Technical Research" is drawn from our full *Market Interpretations*, dated May 26, 2004; order no. US05M134. The report is also available online on Smith Barney's Global Equities Online (GEO) system, Smith Barney Direct, and FC Linx.

The equity market has tried on several occasions to generate a rally, but so far to little avail. Caught now between the recent (May) lows at Dow 9906, S&P 1084, and Nasdaq 1876, and the resistance at Dow 10,300–10,500, S&P 1135–1150, and Nasdaq 1975–2050, there appears to be a temporary stalemate.

The Dow thus far is fulfilling the hypothesis of our special *TRENDS* report, struggling at the 10,000 level. The 11-point decline in **Altria Group, Inc.** (MO-46.65) alone translates into a shaving of 77 points for the Dow (the Dow divisor, now a multiplier, effectively translates each one-point move in a Dow component to a seven-point move for the average).

Relative Strength

The erratic behavior of the equity market inherently creates a confusing environment as to the broader intent of market direction. Readers know that relative strength (RS) analysis plays a dominant role in our approach to equities and sectors and carries a particularly beneficial *role in risk management*. RS can be used to measure performance of any stock or sector versus a specific equity market benchmark — in our case, particularly against the S&P 500 (as well as the S&P 400 and 600).

RS can also be used to measure performance of one index versus another. RS is a simple ratio using the price of the stock or sector to be measured, divided by the price of the benchmark against which that performance is to be measured. The resulting number can then be plotted to form the profile of relative performance.

The result is interpreted by the technical analyst as follows: *A flat RS line* indicates performance *in line* with the benchmark — that the equity, sector, etc. is going up or going down the same amount as its benchmark. *A rising RS line* indicates that one's stock or sector is *outperforming* the market — that is, going up more than, or going down less than, the benchmark. A *falling RS line* shows that one's stock or sector is *underperforming* — that is, going up less, or going down more, than the benchmark.

The equity market is a discounting mechanism. The reason for price action is rarely apparent until perhaps four to six months after the price action has occurred. So, RS can give us an indication of investor interest. A declining RS suggests that investment interest is moving elsewhere and can also imply a forewarning of a decline in price (as investors sell the underperforming names).

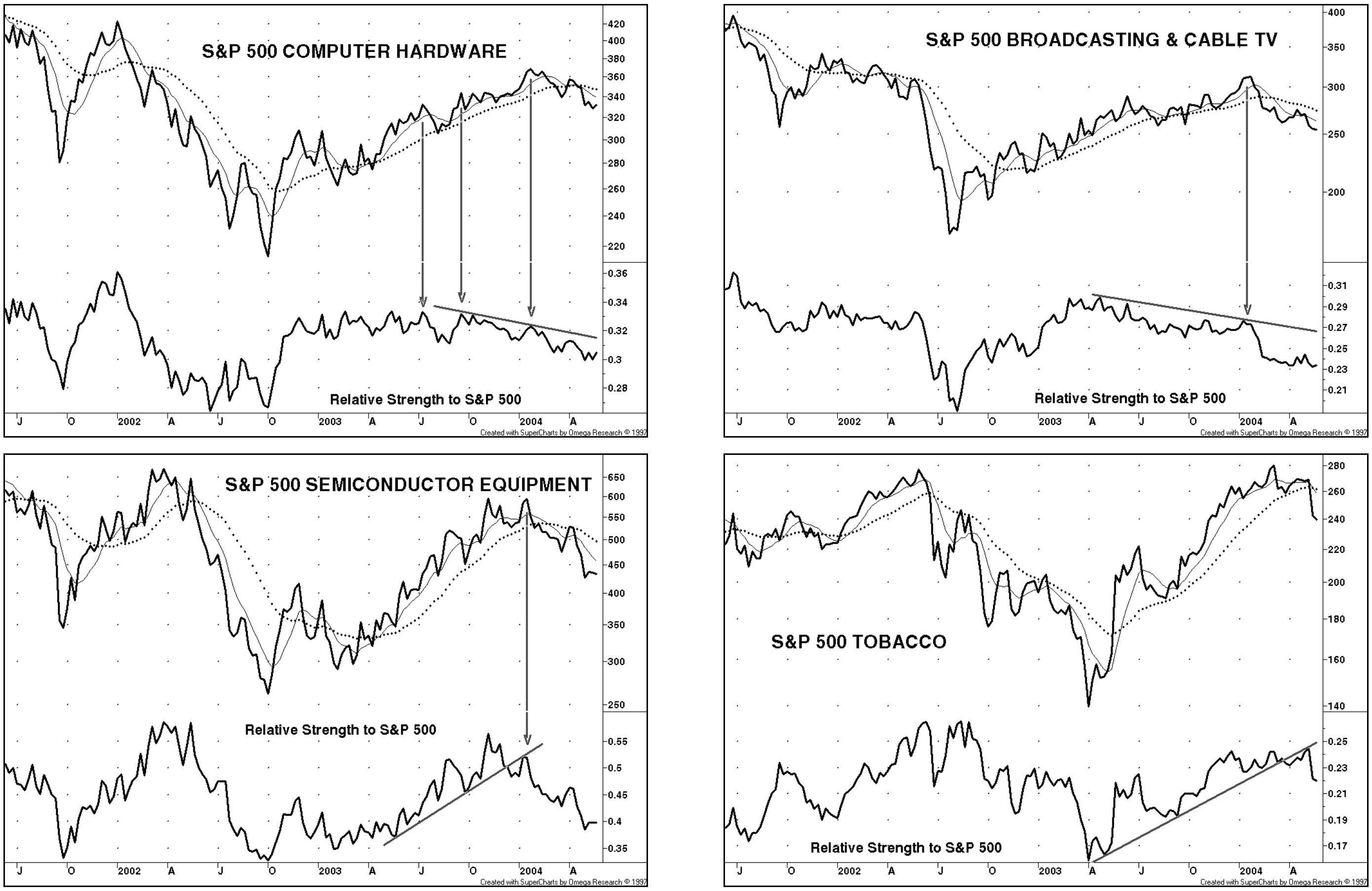
The application of this RS analysis to market sectors and/or sub-industries is an integral part of our weekly work, and its outcome can *help reflect* on the overall equity *market direction*. As more sectors look technically attractive, the more support exists for an upward move in the market; conversely, the greater growth in the number of underperforming sectors, the less support exists for a sustainable market advance and the greater the risk profile, as may be the case today.

The evidence of RS deterioration can evolve months prior to actual price deterioration, giving fair warning to lighten positions. As examples, notice the declining RS of Computer Hardware over the past nine months (see Figure 1). Notice, too (see arrows), the *failure* of RS to confirm the price rallies to new reaction highs (representing a negative divergence). **International Business Machines** (IBM-88.70) is the largest weight in this sector. Therefore, by definition, IBM will have the greatest influence on the RS behavior. IBM reached a new reaction peak in February 2004 at a price of 100. The deterioration in the RS profile (which results in a placement of the group on our technical *Avoid* list) suggests a lightening of positions in IBM might be prudent at that time. IBM has since slipped to 86 (off 14%). When a sector is downgraded to *Avoid*, we effectively sell out and move to the sidelines. The one question we cannot answer is: "How low can it go?"

Another example of RS in a slow erosion pattern has been evident for the Broadcast & Cable TV sub-industry (see Figure 1). Notice how the RS began to decline in early 2003 even as price inched higher. Each rally met with further RS deterioration, again in a negatively diverging RS pattern, allowing ample time to be easing out of positions. Our risk-averse discipline mandated a downgrade for the group to our technical *Avoid* list on February 9, 2004 (downgraded further to *Sell* in May 2004).

Figure 1

Price and Relative Strength of S&P 500 Sub-Industries



Source: Bloomberg

The component stocks, **Clear Channel Communications** (CCU-40.10), **Univision Communications Inc.** (UVN-33.24), and **Comcast Corp.** (CMCSA-29.57) have slipped 15%, 23%, and 20%, respectively, in a reflection of that underperformance.

But the RS profile does not always erode slowly. In these cases, a breakdown in RS can be identified by a trend line break. A case in point is the break of the RS uptrend that occurred for the Semiconductor Equipment sub-industry in early 2004 (see Figure 1), resulting in a downgrade to our technical *Avoid* list on February 2, 2004, after a final price rally was not confirmed by the RS (see arrow). Price then declined quite quickly for **Applied Materials** (AMAT-19.22), **KLA-Tencor** (KLAC-45.97), and **Novellus Systems** (NVLS-30.71), thereafter off 25%, 34%, and 34%, respectively.

Occasionally, there is an abrupt reversal, often triggered by an external event. A recent example of this might be the Tobacco sector, which broke its RS uptrend in tandem with the drop in MO. We downgraded the group to *Avoid* on May 17.

In a declining equity market environment, entities that hold up in price the longest will, by definition, carry a strong RS — unfortunately, even right up to the point of ultimate price decline. The concept here is that the strongest names decline last in a general declining market. In this case, the growing observation of weakening general market underpinnings must alert us that even the last few areas that remain strong may become vulnerable before a general market decline is over. However, their rising RS should imply that they may “go down less” than the general market.

As more sectors underperform, we can, even in a frustrating equity market environment, gain some guidance from the RS profiles as to overall developing risk, enabling one to take a defensive stance for preservation of capital. We can always return when the perceived risk abates and the technical evidence turns more favorable for reward.

See Appendix A-1 for Analyst Certification and Important Disclosures.

We have only two types of losses to report to our clients — a loss of capital or a lost opportunity. We know which one is easier to report, and we know there is always another opportunity if we have been able to protect the capital. ***Louise Yamada***

Groups: S&P 500 Actionable Shifts

Agricultural Products, Diversified Commercial Services, and Health Care-Distributors & Services were downgraded to *Hold* from *Buy*. Brewers was upgraded to *Hold* from *Avoid*.

Archer Daniels Midland (ADM-16.43), the sole component in Agricultural Products, remains in its long-term uptrend progression; however, intermediate-term overbought momentum readings have dissipated, and consolidation may ensue over the short to intermediate term. Support at 15 is critical from an intermediate-term trend perspective. Long-term, monthly momentum models remain bullish.

In Diversified Commercial Services, the heavyweight, **Cendant Corp.** (CD-22.87), is rated *Hold* but needs to maintain support at 22, which also intersects with the 200-day moving average. An 18-month uptrend has been broken, and a breach of 22 could follow with risk toward 19. **Apollo Group** (APOL-91.87) has thus far maintained its upward trend but is overextended. We recommend using stops under support levels at 88 and 83 to lock in profits. **Cintas Corp.** (CTAS-45.76) remains in a neutral trend progression, with resistance levels at 47 and 52 and support levels at 41 and 37. **Deluxe Corp.** (DLX-42.25), also neutral, is rated *Hold* and would need to clear 43–44 resistance to look more technically appealing. At that point, a target toward 50–51 would be readable. Support levels lie at 41 and 36. **Equifax Inc.** (EFX-24.15) is rated *Lighten Positions*, with 22 and 18 the next support/risk levels. The stock remains in a three-year downtrend and would need to clear 27 for a more neutral profile. **H&R Block** (HRB-48.07) recently violated an 18-month uptrend, but has established some support at 45–46 thanks to the recent oversold rally. However, with intermediate-term momentum models remaining oversold, we would lighten positions on any move toward resistance at 51.

In Health Care-Distributors & Services, also downgraded to *Hold*, **Cardinal Health** (CAH-67.17) has advanced the most and has the most to give back. We would lighten positions in this issue, anticipating a test of support at 64 with possible risk toward next support at 59 upon a break. **AmerisourceBergen Corp.** (ABC-60.20) has been trending lower for two years and would need to clear 62 to revert to a more neutral stance. Support levels lie at 57 and 52; resistance is at 66. Since ABC is rated *Hold*, monitoring support is particularly important. **McKesson Corp.** (MCK-34.94) is the better-looking component in the group from a technical standpoint. The stock is poised to challenge resistance at 37, and secondary resistance comes into play at 42. Now that the two-year downtrend has been penetrated and intermediate-term momentum models are overbought (bullish), MCK may follow through to the upside. Support levels lie at 33 and 30.

Brewers, upgraded to *Hold* from *Avoid*, includes **Anheuser-Busch Cos.** (BUD-52.73) and **Coors (Adolph) Co.** (RKY-64.53). BUD is rated *Hold*, as the four-year uptrend line was violated in the beginning of April. Should the improvement in RS spill into the absolute price picture, perhaps the all-time high of 55 could be challenged, whereby a breakout would provide target readings toward 64. Support levels lie at 49 and 46. For RKY, there is little in the way of support until 56, the February 2004 low. Should RKY slip under minor support at 64, lightening positions would be in order. ***Susan Stern***

Energy: Crude Oil Closes at an All-Time Contract High; Further Target to $67.00 a Barrel Now in Place

Crude oil has rallied a little over 8% to $41.72 a barrel since our U.S. Sectors energy *tech@lert* dated May 5, 2004, which listed upside targets for crude oil to $46.00 and $51.00 a barrel. Crude oil has now established an all-time contract high just above $41.15, eclipsing its high of $39.50 in mid-1980 (current support levels can be identified at 40 and 38). Figure 2 shows the price of West Texas Intermediate (WTI) crude oil from 1945.

Crude oil has now successfully broken out of a 24-year consolidation phase. We view this as an extremely important structural technical development.

At this point, due to the new high and the extent of the multiyear consolidation through which price has lifted, we can now project an additional longer-term upside target for crude oil to $67.00 a barrel. The target is arrived at by measuring the height of the 24-year consolidation phase and projecting it upward.

Throughout the 1990s, the price of crude oil essentially traded between $15.00 and $25.00 (Figure 2 — point A). However, in late 1999, crude oil broke out of that range and since then established a higher price range between $25.00 to $35.00 a barrel (point B), or one could observe the channel showing the price of crude has carried an uptrending bias for nearly 20 years (see *Market Interpretations* dated March 24, 2004; order no. US03M112). We might now be able to suggest that a

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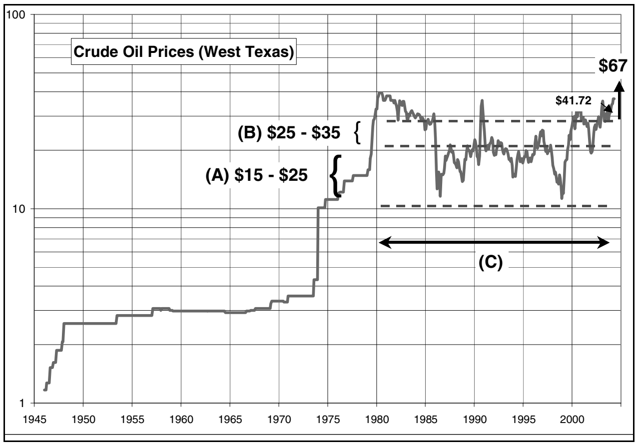
Figure 2

Crude Oil Prices (West Texas)



Source: Economagic.com

new and higher price range for oil could be in the process of developing (point C).

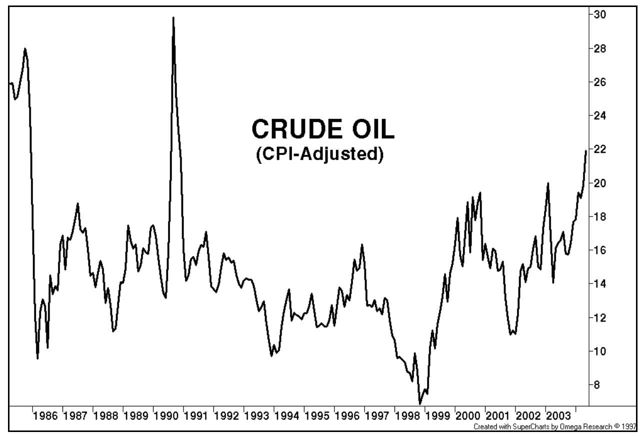
While $67.00 a barrel seems an extreme target, that may not be the case once one takes inflation adjustment into consideration. The mid-1980 high of crude oil at $39.50, adjusted for inflation, would be the equivalent of $89.79 a barrel in today's dollars, leaving a price of $67.00 still well below the 1980 equivalent.

Taking a different viewpoint, if we were to adjust the *current* price of crude at approximately $41 to the equivalent price in 1982–84 dollars, the price would equate to only $22.22 versus the 1980 level at $39.50.

(Inflation adjustments have been calculated using the Consumer Price Index [CPI], which has a base of 100 for the years 1982–84. The CPI was at 82.70 in mid-1980 and is at 188.00 today.) ***Ronald F. Daino***

Figure 3

Crude Oil (CPI-Adjusted)



Source: Bloomberg

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