Chartwell Consulting

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"An Almost Year-end Review - Thoughts on Asset Allocation"

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A remarkable quarter at the end of a remarkable year for investors is rapidly drawing to a close. Things are happening so fast in the markets we thought it better to provide you some of our thoughts before the traditional "year in review" cottage industry starts up. Our hope is to spur some thought and forward planning during the traditional holiday season, in order that we might all hit the ground running come January. Perhaps you might wish to pass this on to all of your Plan's fiduciaries. Please don't hesitate to contact us with any feedback.

Summary & Action Plan

There has been a sharp equity market rally since the last week of September. The equity markets' current levels are supported by historically high levels of investor "exuberance" (i.e., risk taking and speculation). The current yield curve and market inflation assumptions are apt to keep fixed income returns quite low for risk-adverse buyers of government bonds. Taking on much credit risk in a recession is the scary thing, but that's where reasonable fixed income returns will most probably be achieved.

Given these countervailing forces, we continue with our October recommendation to keep actual asset allocations at your plans' **neutral** long-term target as we move into 2002. With only a few days left in this quarter, equity returns have been generally quite positive and bond returns flat or negative. Those who were neutral in October may now need to rebalance (reduce equity managers, increase bond managers).

There is very strong evidence in favor of adopting a policy to *automatically* rebalance your plan's assets back to a long-term asset mix target. There are a number of methods to use, but **all** of them are better than the default "set it and forget it" approach.

The upcoming year will be one of transition in a number of very important areas for investors and fiduciaries. It will be crucial to have an updated strategic plan in place that explicitly integrates current spending and contribution/distribution expectations with strategic asset allocation policy.

Update on the 4th Quarter's Market Activity

The broad equity markets began tracing a robust upward path following a September 21st low-point. The trend continued strongly throughout October, November, and the first half of December. Using the S&P 500 as our proxy for the domestic large-cap equity market, we observe this index closed at 1092.5 on September **10th**, fell to a panic-induced 965.8 by September 21st - a nearly 12% drop - but had risen to 1149.6 as of December 19th. This is a rise of 19% from the panic low, and a 5.2% increase from September 10th (the tech-stock dominated NASDAQ has risen 17% above its September 10th close, while the Dow 30 is up 4.9%). The broad small-cap equity market dropped more sharply through 9/21, but has also rebounded more sharply. The Russell 2000 index is now 8.3% higher than it was on September 10th. All major domestic equity market indices are now higher than their August 31st ending values.

The Federal Government announced in late-October that it will curtail issuance of 30-year bonds. This has formally shifted focus onto the 10-year T-bond as the best proxy for the current long-term risk-free return potential from fixed income investments. Most long-term "credit risk" bonds and fixed-rate residential mortgages are priced off the 10-year.

The 10-year Treasury closed on September 10th with a yield to maturity of 4.78%. Price appreciation took this down modestly to 4.57% by 9/30/01. Price gains accelerated in October (particularly after the 30-year bond's news), briefly dropping the 10-year market yield to a very low 4.25%. That likely represents at least a medium-term nadir, and the current yield had retraced a path to 5.05% as of December 19th, or nearly 50bps higher then at the end of the 3rd quarter. An investment in the risk free 10-year Treasury bond on September 30th would have lost 3% (including coupon payments) through mid-December due to rising long-term interest rates. A similarly timed investment in the broad U.S. investment grade bond market (corporate, mortgage, and government bonds combined) would have just about broken even.

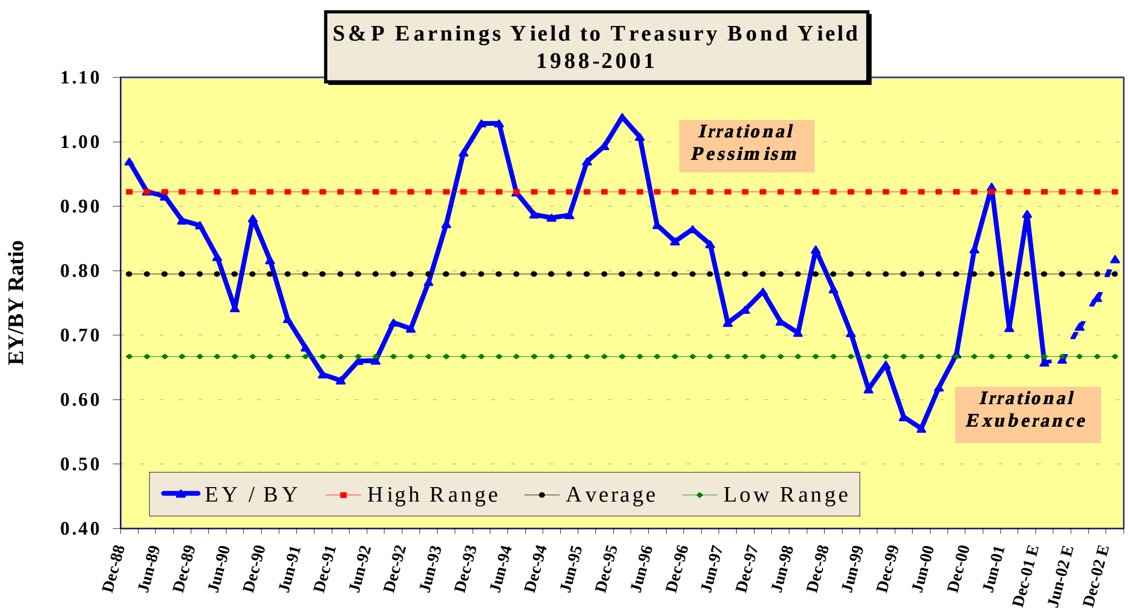
While long-term interest rates have been rising, short-term rates have been plummeting. Three-month T-bills yielded 3.2% on September 10th, 2.37% at quarter's end, but only 1.66% as of December 19th. This was primarily driven by cuts in the fed funds rate from 3.0% to 1.75%, together with what is estimated to have been the largest ever injection of market liquidity by the Federal Reserve (about $200 billion).

As the equity markets indices rallied higher and the fixed income market turned flat-to-down, the other market fundamental – corporate earnings, has begun to take shape. Disappointingly, reported 3rd quarter "bottom-line" earnings for the S&P companies were down *60%* from last year's already depressed level, and down 34% at the operating profits level. While there is much less clarity than usual (i.e., companies have less of a handle on forward operating levels) S&P operating profits for the full year 2001 are currently projected to be in the $38-40 range, or about 30% below last year's record results (forget about this year's reported bottom-line profits; they are expected to be around $28.50, or more than *40%* below 2001). Equity managers we've talked to in the past three months are not at all optimistic about 2002 corporate profits, but sell-side equity analysts are. The former group is hoping for a 10-15% rise from this year, to around $44. The latter group foresees the S&P 500 companies earning nearly $54 in 2002 operating profits (1999 was $51.68; 2000 was $56.13), which would be 35-40% better than 2001! Chartwell's analysis uses a $38.00 estimate for 2001, and $47.50 (+25%) for 2002.

Current Market Valuations

The issue of next year's corporate profitability is not idle chatter. Since September 10th, equity indices have risen, long-term interest rates have risen, current corporate profitability has plummeted, current manufacturing activity continues to decline (14 straight months and counting), unemployment rates have shot up, and consumer spending is down (except for autos with 0% financing). As the following "Fed Rule" chart reflects, the current equity market's fundamental valuation (i.e., Prices vs. Earnings) compared to risk free long-term interest rates is approaching the "irrationally exuberant" levels of late 1999 and early 2000.

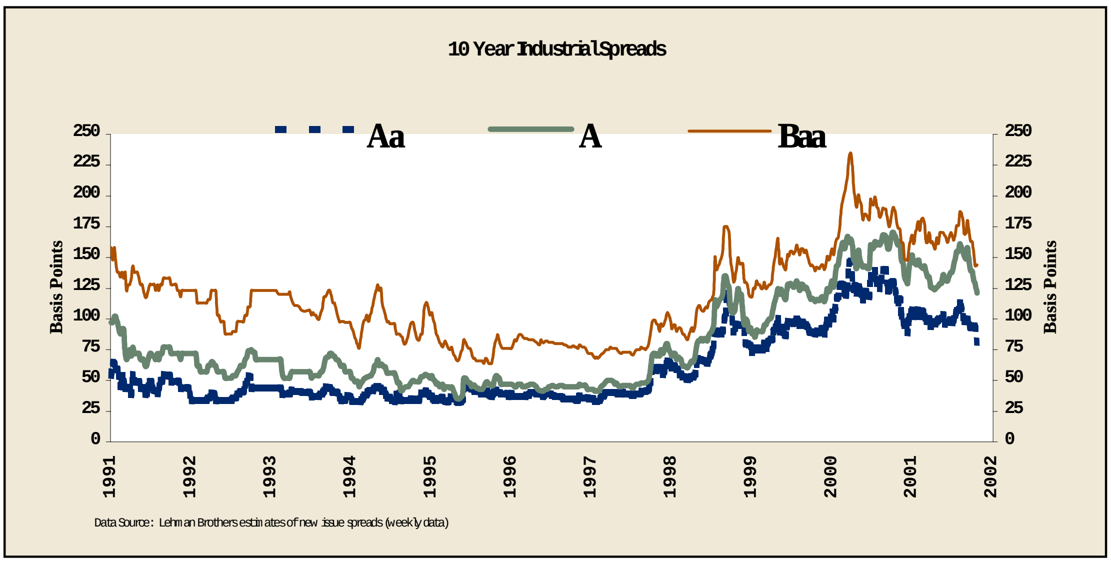
Said differently, the market's P/E based on trailing (i.e., 2001) earnings is very high given present long-term interest rates. Valuations relative to interest rates have seldom been higher during the past 13 years. The S&P 500 index is apt to remain about where it is today unless investor exuberance increases further, long-term interest rates fall, corporate operating earnings begin rising quite smartly in 2002, and/or investors shift attention to 2003 and foresee a very favorable economic and profits rebound. (Focus on the next calendar year usually intensifies following the 2nd quarter reporting season. That's what took the equity markets down during the 3Q01)



The other current valuation issue relates to the bond market. Short-term Treasury rates now match those of early 1960. Even though the Federal Reserve's unprecedented actions this year have had little or no effect on long-term interest rates – 10yr and 30yr bonds, as well as mortgage rates, are now just where they were one year ago, long-term yields have seldom been lower in 40 years. What sustains the status quo is an apparently very benign current inflation picture and an extremely accommodative Fed. Due entirely to this year's steep 21% drop in petroleum-based energy costs, the CPI is up only 0.2% over the past quarter and 1.9% for the year. This compares to an overall rise of 3.4% in 2001.

Bond investors appear to be expecting recent inflation experience to continue for some time, as real short-term interest rates are now below 0%. Interestingly, if we extract last year's sharp rise in energy costs and this year's sharp decline, the Consumer Price Index rose at an annualized rate of 2.6% in 2000 and has risen 2.9% in 2001. Hmm.

The bond market is much more than Treasuries, of course. Asset-backed securities (primarily mortgage-backed) and corporate bonds make up most of the outstanding issues. In these areas, yields have risen this quarter, as a consequence of increased supply (of mortgage paper) and increased credit concerns (corporate bonds). As the following chart from Loomis Sayles reflects, real yields from what is referred to as "spread product" are much higher than from Treasury bonds. If company profitability and cashflow improves, and the equity market is betting heavily that it will, then credit spreads have a long way to fall – adding capital appreciation to coupon returns. One of America's best known fixed income managers - Bill Gross at PIMCO – has just announced the "end" of the 20-year fixed income bull market due to falling interest rates, but the beginning of one for credit-driven bonds.



So, What About Our Current Asset Allocation?

With the 3rd quarter's equity returns having been so poor, and the bond market's having been strong, most investors found themselves sharply underweight equity exposure late in September. At that time, we recommended institutional investors counter uncertainty by raising sufficient liquidity to meet their next year's spending needs, but then invest remaining assets in accordance with the conservative end of their current strategic asset allocation targets. We expected that would require most investors to sell some bonds in order to buy some equity, as well as shortening up the overall maturity profile of their fixed income assets. In October, we recommended moving equity allocations back to neutral target levels, after separating out the liquidity. For most, that would have required modest additions to equity, at the expense of bonds.

Both recommendation sets have worked out okay over the past 3 months, but we were a bit too cautious. It would have been better if we had simply recommended rebalancing back to your neutral target at the end of September, without the liquidity reserve. Those blessed with perfect hindsight would have adopted an even more aggressive equity allocation, but few fiduciaries would have wished to expose their plans to that much risk. Equity markets have climbed a huge wall of worry since the terrorist attacks, on the back of few positive fundamentals.

Which makes for a very uncertain current environment. The Fed Rule model depicted above has a pretty good record in the return prediction game. When the Earnings Yield/Bond Yield ratio is very low, as it is now, the following 12 month's equity returns have a strong tendency to be low (a *median* gain of only 6%), and sometimes quite low (a *mean* return of –1.2%). When the ratio is high, the next 12 month's returns are generally very good (median = 17%). We are uncomfortable betting against it. On the other hand (I hate that phrase, too), investor optimism has often sustained itself for extended periods, even in the face of flat or poor market fundamentals. It is easiest to speculate when the short-term cost of money is low (it has never been lower for current investors), and market liquidity is high (it's pretty high right now).

After distilling all that we've read and observed, here are our current thoughts on asset allocation and "style bias" as we enter the very important 2002 transition year –

1. Spend the liquidity reserve, if you built one up. That's what it's for. As you do so, the remaining asset pool's risk profile will naturally increase;
2. Keep your remaining Equity/Fixed Income allocations at target levels. Until corporate earnings growth is firmly re-established, rather than just widely hoped for, equity markets are likely to swing up and down on emotion. Bond markets are also not immune from sharp swings, as this quarter has amply demonstrated;
3. Favor bond portfolios/funds that are kept generally shorter in maturity/duration and more heavily weighted in credit spread securities (corporates, etc.);
4. Large-cap growth stocks have rallied sharply since 9/11. However, as we emerged from our last three major recessions, the rolling 12-month performance of value stocks surpassed that of growth stocks. Keep your ongoing style allocation to large-growth (vs. value) in the 40-50% range. That is, overweight large value rather than large growth;
5. Small-cap stocks are generally trading at P/E multiples that are "cheap to" large-cap P/E multiples, even though trailing earnings growth has been better and projected earnings growth is higher. This excludes the "no earnings ever" band of New New economy stocks that are going bankrupt with much regularity. Keep your small-cap equity exposure *at or above* your long-term target levels, and decidedly emphasize value-oriented portfolios/funds;
6. The weakest investment link over the past 5 years has been international equity. Institutional investors have become much more comfortable seeing their allocations drift downward (or be eliminated) compared to previous long-term target allocations. This might be the primary asset allocation issue for 2002. We do not recommend abandoning this major asset class, in light of current local market valuation levels and the US$'s elevated position.

Automatic Rebalancing – An (Almost) Free Lunch

For the last 7 years, we've harped on having a policy of automatically and regularly rebalancing one's asset mix back to target levels, instead of making case-by-case decisions based on analysis of current circumstances. In effect, we've recommended setting a long-term strategic asset mix and style mix policy, then sticking to it in the short-term until you're prepared to re-visit and change the entire policy itself. This often entails selling some of your "best" performing portfolio/account, in order to give it to your "worst" manager/fund.

The automatic approach is understandably uncomfortable for many fiduciaries. So, we've done a bit of further back-testing for your consideration. We took an asset/style mix allocation adopted by one of our clients (at our recommendation) 5 years ago, and traced how it would have performed to date under different rebalancing regimes. We found the results quite surprising. These are the highlights:-

1. Asset Classes, initial and target allocations, and each classes' stand-alone index benchmark performance for the 5-year's ended 11/30/01 were as follows –

Asset Class	Initial and Target Allocation	Annualized Return, 11/96 – 11/01	Standard Deviation, 11/96 – 11/01
Small-cap Value EQ	10%	10.61%	15.6%
Large-cap Growth EQ	20	7.88	23.9
Large-cap Value EQ	20	10.33	16.0
International EQ	15	0.93	16.4
Cash (T-bills)	4	5.07	0.2
U.S. Inv Grade Bonds	21	7.36	3.3
Global Bonds, hedged	10	7.99	2.7

2. We initially tested the benefits of managing the initial allocation from three perspectives:-

   a. Set it and Forget it. No active rebalancing was undertaken;

   b. Automatically Rebalance all asset classes back to target **quarterly**;

   c. Automatically Rebalance all asset classes back to target **semiannually**.

   A 4th popular alternative is to rebalance to target whenever hi/lo trigger points are reached by each asset class. This will be part of our follow-up study, which will be published next quarter.

3. For each approach, we looked at the results from all angles *(the data are in the tables following this Briefing Note).* We found that -

   a. Given the initial and target allocations, best returns were achieved by rebalancing quarterly, followed by semiannual rebalancing. Set It and Forget It was a poor third. You cost yourself 0.50% per annum in cumulative return. This is consistent with our previous studies, but more pronounced;

   b. The lowest volatility of returns was achieved by semiannual rebalancing, with quarterly a close second. Set It and Forget It was a poor third, and returns were

1% more volatile than with automatic rebalancing. This is consistent with our previous studies, but much more pronounced;

c. Your actual average allocations to each asset class would have stayed closest to target with quarterly rebalancing (no surprise), and semiannual showed only modest drift in average allocation. Actual average allocations with Set It and Forget It were very different from the targets. Total Equity averaged 69%, not the 65% desired. Domestic Equity averaged 56%, not 50%, with U.S. Large-cap Growth at 24% versus its 20% target. Only allocation to the top-performing asset class, Small-cap value, would have averaged right on top of its target;

d. Set It and Forget It resulted in below-target average allocations to the lower return individual asset classes – International Equity, Bonds, and Cash. This is exactly the effect desired by those pursuing the strategy, **but it did you no good overall**;

e. Each policy, including the periodic rebalancing strategies, allowed allocations to drift from their targets. Maximum and minimum month-end balances were about the same with quarterly and semiannual rebalancing;

f. You'll notice we haven't yet factored in the costs of active rebalancing at this stage of our study (we will in our follow-up early next year). But, annual turnover strictly related to semiannual rebalancing is less than 10%. Even if rebalancing execution is no better than poor, most of the 0.50% return advantage will be retained. And, you'll retain all the volatility reduction;

g. Those who don't like giving up any level of decision-making flexibility may wish to consider the following – every rebalancing policy *in practice* amounts to a series of tactical buy/sell decisions (or lack thereof, which is the same thing) made **in consideration of** current asset allocation targets. This does not replace in any fashion the need to make decisions that keep the strategic asset allocation plan on track, and it's the strategic plan that produces the bulk of long-term returns. "Delegating" day-to-day control of rebalancing to an automatic policy leaves each fiduciary with more time for the powerful issues.

Table 1. REBALANCING COMPARISON, Risk & Return Analysis

	Set it and Forget it	Rebalance Quarterly	Rebalance Semiannually
Average Monthly Return	0.66%	0.69%	0.68%
Total Return, per annum	7.56	8.06	7.89
Standard Deviation	11.34	10.37	10.28
Months with Losses	25	25	25

Table 2. REBALANCING COMPARISON, Allocation Data

	Target Allocation	Set it and Forget it	Rebalance Quarterly	Rebalance Semiannually
Average Total Equity %	65%	69.2%	65.1%	65.0%
Small-cap as % of Domestic EQ	20	17.7	21.5	20.1
Domestic EQ as % of Total Plan	50	55.9	50.2	50.2
Total EQ as % of Total Plan	65	69.2	65.1	65.0
Max. Total EQ as % of Total Plan	65	73.9	67.2	67.6
Min. Total EQ as % of Total Plan	65	63.6	62.5	59.9
Small-cap Value % Max/Min	10%	11.8 – 8.0%	11.4 – 8.4%	11.9 – 8.4%
Large-cap Growth %, Max/min	20%	31.1 – 18.7	22.2 – 15.7	22.3 – 15.9
Large-cap Value %, Max/min	20%	23.9 – 19.2	22.0 – 17.7	21.4 – 17.7
International EQ %, Max/min	15%	15.0 – 10.9	15.9 – 14.0	16.7 – 13.2
Cash (T-bills) %, Max/min	4%	4.1 – 2.9	4.4 – 3.6	4.5 – 3.7
Inv. Grade Bonds %, Max/min	21%	21.9 – 15.4	23.5 – 19.1	24.2 – 19.4
Global Bonds %, Max/min	10%	10.7 – 7.8	11.3 – 9.1	11.4 – 9.3