Stocks, Bonds, and the Macroeconomy: 2004 and Beyond

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Macroeconomic Fundamentals

The recovery from the 2001 recession, like that from the 1990-1991 recession, has been much less brisk (dare I say less exuberant?) than that of most other recessions on record. Employment and hours, in particular, have been disappointing. Hence the recent extraordinarily strong third-quarter preliminary GDP growth is most welcome and long overdue. (Recall that the recession officially ended some 24 months ago.)

The slow recovery has resulted from supply and demand movements, and both present mixed pictures. On the supply side, the outlook for energy prices, particularly natural gas, remains a concern. Balanced against that, however, are stunning recent and ongoing productivity gains, which bode well for long-term growth (although they may be responsible for the slow short-term recovery of employment).

Demand has been strengthening. The American consumer remains cautious on average, but the wealthy appear to be getting more optimistic. Investment has been buoyed by housing, which remains strong, and in the third quarter business investment finally came roaring back. Indeed, business survey data indicate notably increased optimism, particularly among small businesses. Government spending has been stronger than it otherwise would have been, due to the Iraq war and occupation. Net exports are recovering somewhat due to the dollar’s weakness against the Euro, although our deficit with China remains large.

On balance, both supply and demand look reasonably strong. Given the third-quarter and hopefully ongoing bounce-back of animal spirits and surge in output, I now look for 2004 U.S. real output growth of 3.3 percent, with a range of roughly 3.0 - 3.6 percent. This is quite good from the perspective of historical growth, which is roughly two percent when averaged across expansions and contractions.
The Stock Market

How does all this relate to the stock market? The stock market often leads the macroeconomy, due to the forward-looking behavior of market participants. This year’s events support the claim: first the stock market rallied, and now the recovery is gaining strength. But what of the future? Are any obvious factors operating at present to cause sizeable upward re-valuations of earnings flows, hence justifying a continuing bull market with returns of (say) fifteen or twenty percent per year, as in 2003? Probably not. Instead, the above outlook for the underlying economy, one of moderate growth, suggests concomitant positive but moderate equity returns as we move forward.

Direct examination of the stock market yields the same observation of mixed prospects averaging to positive but more modest expected returns. On the up side, new technologies with bright commercial futures (e.g., nanotechnology) continue to develop, and the newly lowered dividend and capital gains taxes, if they last, can only help matters. On the down side, however, valuations remain very high by historical standards. The price/earnings ratio for the Dow-Jones Industrials, for example, peaked around 25 and has subsequently dropped only modestly; it is now around 22. Moreover, developments such as the potential move toward expensing options exert downward pressure on the market.

More Fundamentals: Fiscal Policy, Monetary Policy, and Inflation

Government spending must be paid for, either by tax revenue, by borrowed funds, or by newly printed money. Hence the government is bound by a budget constraint: any change in government spending must be matched by a corresponding change in tax revenue, outstanding debt, or money supply (or some combination of the three). Government spending has risen significantly relative to where it would otherwise have been, due to the Iraq war and postwar occupation. Simultaneously, tax revenue has fallen relative to where it would otherwise have been, due to the Bush tax cut and slow recovery from the 2001 recession, resulting in a deficit that is presently near its all-time maximum. Unless taxes rise, the government budget constraint mandates that the deficit be financed by increased Treasury borrowing, which may increase real interest rates, and/or increased money growth, which may produce increased inflation. These developments have important implications for the bond market.

Before proceeding to consider the bond market, however, let us focus a bit more deeply on the closely-related issue of inflation prospects. In the past year, we have heard repeated rumblings about possible deflation from the U.S. Federal Reserve and elsewhere. Indeed, as recently as the October 28 FOMC meeting, the Federal Reserve Board continued its commitment to low rates for a “considerable period,” based upon its ongoing “predominant” concern of deflation. We have seen above, however, that demand and supply are strengthening reasonably, which, all else equal, is neither inflationary nor deflationary. Importantly, however, we have also noted that the increased government spending and decreased taxes require debt and/or money increases, and monetization of the debt could also contribute to inflation. Hence the policy mix points more to inflation risk than to deflation risk in the medium and longer term, and indeed, the
spread on indexed vs. non-indexed Treasury bonds has recently been increasing. I would not be at all surprised if inflation over the next fifteen years averaged four percent or more – noticeably higher than the recent and near-term very low inflation – and certainly no one could argue that such a view is outlandish.

The Bond Market

Now let’s consider the bond market implications. Yields on ten-year U.S. Treasury bonds were well under four percent in summer 2003, and they are just over four percent now. Such low yields are hard to justify unless one believes that inflation over the next decade will be very low. Let’s suppose that investors are risk neutral and require a 1.5 percent real return. Then, if they are to hold a bond yielding four percent, they must believe that average inflation over the next ten years will be at most 2.5 percent. That view strikes me as rather extreme. Consider instead an alternative calculation, which I find more reasonable. Let’s use a real return of two percent (real rates may be bid up via increased Treasury borrowing to finance the deficit) and an average annual expected inflation over the next ten years of four percent (as argued above), and let’s also be realistic and assume that investors are risk averse and require a one percent inflation risk premium (which seems quite modest). The two percent real return, plus four percent expected inflation premium, plus one percent inflation risk premium, makes for a seven percent ten-year nominal bond yield. From this viewpoint, yields look much too low at present. That is, bonds look overvalued.

Recent work by Diebold and Li (2003) uses econometric models with latent factors that summarize the shape of the yield curve (level, slope, and curvature), and work by Diebold, Rudebusch and Aruoba (2003) links those latent factors to observable macroeconomic variables (real activity, inflation, and the stance of monetary policy). The level, slope and curvature factors can be forecast, moreover, using standard econometric methods, and then assembled into a forecast of the entire yield curve. In Figure 1, I show the current yield curve along with forecasts from the Diebold-Li model for one, two, and three years ahead. The forecasts display increasing levels of yields at all maturities, together with decreasing slope as the recovery ages, with the
benchmark ten-year bond yield approaching six percent. Interestingly, it turns out that much of
the upward drift in the forecasted yield curve comes from a decreasing slope (which makes sense
as the recovery ages) rather than an increasing level. Incorporating an additional increase in the
underlying level factor of just one percent over the next three years, to reflect the market’s
awakening awareness of the potential for higher medium-run real interest rates and higher
inflation produced by the current fiscal situation, would bring the quantitative econometric model
forecast in line with my earlier qualitative forecast of seven percent for the ten-year bond.

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