Article from:

Risks and Rewards Newsletter

March 1998 – Issue No. 30

RISKS and REWARDS

The Newsletter of the Investment Section of the Society of Actuaries

NUMBER 30 MARCH 1998

It's Different This Time

by Nino Boezio

In the last few years we've heard that the old rules and paradigms of investment strategy and caution may no longer be applicable in today's financial environment, because things were "different this time." Some of the arguments included:

- Inflation is now subdued through global competition, which has kept labor market demands and product/commodity prices low.
- New production techniques such as just-in-time-inventory management have reduced the overall required amount and thus cost of capital.
- The globalization of the world economies has produced an environment in which poor economies can be supported by strong economies through floating exchange rates, thus improving overall trade. Globalization has also resulted in intense competition, resulting in lower product prices and lower inflation.
- World peace has promoted economic stability, facilitated by the fact that there is only one military superpower left (the U.S.).
- Capitalism is the undisputed best economic guiding force in financial affairs.

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The Objective (Function) of Asset/Liability Management

by David N. Becker

Two paradigms have been identified for use in asset/liability management. These two paradigms differ in the choice of objective function and the framework for analysis; that is, one is a simulation of the firm as an external observer (for example, shareholder) would view it and the other is a "still life" at a given moment from an internal viewpoint. These two perspectives, clearly, are very different. It is useful and important for the user to understand exactly what each measures in order to apply it meaningfully. The two paradigms are referenced as "OAVDE analysis" and "market-value analysis" or "fair-value analysis."

OAVDE Analysis

Let the company be a U.S. stock life insurance company. If the discussion is referencing a block of business, let the block be part of a U.S. stock life insurance company.

Be careful to distinguish between the viewpoint of the company, that is, internal view of the company, and the viewpoint of the shareholder of the company, which is external. The shareholder view is the only one that matters for this discussion.

"Cash" to the shareholder means free cash flows, that is, amounts of money that are available to be paid as shareholder dividends or used to fund new business. Cash that is received by the company (internally) but isn't *free* as described above (for any reason whatsoever) isn't "cash" from the shareholders' point of view. While free cash flows are "pretax" to the shareholder, the free cash flows are after income taxes and capital gains taxes have been paid at the company level.

From finance theory the intrinsic value (or fair value) of a security is the risk-adjusted present value of the security's free cash flows (Copeland and Weston).

Recall from finance theory (Copeland and Weston) that a dollar of shareholder dividend is equivalent to that dollar withheld and reinvested in new business if the new business earns the cost of capital of the company. So there is no loss of generality in assuming all free cash flows are paid as shareholder dividends. Price appreciation of a security derives from anticipation of higher future dividends from internal reinvestment of free cash flows

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Strategy for Investing Surplus

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with the valuation actuary to determine the 95% worst scenario for each product portfolio for each risk factor. Often, this will mean looking at the scenario at the 5% tail of the distribution of scenarios. For instance, if rising interest rates cause losses, often a greater increase causes greater losses. Therefore, it may be possible to look at the rising interest rate scenario at the 5% tail of the distribution of interest rate scenarios and then calculate the loss for that scenario. Portfolio managers can also provide statistics of that type.

When the calculations are complete, they can be put into a chart similar to Table 1 on page 4. The table could be graphed (Figure 1) to better illustrate the relative magnitudes.

After looking at this figure, this company could want to emphasize either mortgages or stocks with its surplus investments if it wants to complement its product risks.

There is a third way of dealing with this question that a few companies are using. In the style of banks, they are modeling their assets and liabilities completely separately and then looking at the risk-return profile of the resulting combination. For this process, there is no specific distinction made between assets backing liabilities and surplus. The strategy for investing surplus is therefore implicitly determined in a way that conforms with our three principles.

Finally, a comment on line-of-business reporting. The product required surplus and earnings thereon are included in determining earnings and equity of each line of business so that the ROE calculation for each product line is determined correctly to reflect current-year activity and the full impact of the product line on the entire enterprise. Product line managers and actuaries may want to determine their own strategy for investing surplus. The product pricing may be based on a certain expected investment strategy and results from the investment of required surplus. In this case, the company may have to decide between optimizing the risk return profile of the entire company and the product line financial results.

END NOTE

1. HTM means "hold to maturity." It's an AICPA term for classifying bonds for marking them to market. HTM bonds do not have to be marked to market because the holder does not intend to take them to market.

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- Demographic changes have promoted an excess of savings over spending.
- The expectations that any serious economic events, such as occurred in Mexico a few years ago and Asia lately, can be supported through bail-out packages through such organizations as the International Monetary Fund (IMF).

Unfortunately, human behavior has not changed. Greed can drive prices to excesses, and fear can drive prices to extreme lows. We have seen both sides of the spectrum in the past 12 months in the Asian economies and markets. And until recently, complacency artificially drove up asset prices all over the world, reducing expected returns and the so-called "risk premium." This lack of risk recognition was often referred to as liquidity, conjuring up the notion that investment activity was now safer—not that risk was just being unwisely assumed or underpriced (but there may have been simply no other place to park investment funds).

Why Things May Be Different This Time

Anyone who follows investment markets eventually realizes that the markets can never be fully understood. I often like to picture the stock market as a dragon looking for a way to kill its potential slayer. Markets find ways to deceive and trick even the most cunning and savvy professional. Now that central banks worldwide believe that they have gotten monetary policy under control and have beaten inflation, they begin to sense that they may have been fighting the last war. Deflation, which has never been directly fought and successfully beaten, may be a real possibility. It has crippled Japan in the 1990s; it is now killing the rest of Asia; and it battered the whole world in the 1920s. Some claim that only World War II saved the world from the ongoing depression.

Ironically, too much money to invest can lead to problems. As occurred in Japan in the late 1980s and the Far East in the early 1990s, if too much money is available to invest in projects, plants and factories (infrastructure), we could reach a point at which the vigorous economic activity generates more product supply than product demand. Even if prices fall in order to stimulate demand (potentially causing deflation), the fall in prices may reach a point where it is no longer possible to pay back loans or provide a reasonable return on investment for shareholders and financiers. This will cause investment to dry up as return prospects diminish. Unfortunately, however, the strong yen policy supported by the U.S. and Japan over the past few years (a policy at least partly aimed at limiting the amount of Japanese trade surpluses incurred at the cost of the U.S.) has helped to exacerbate the problem.

As Japan has seen, lowering interest rates in the old Keynesian style to stimulate the economy does not solve the problem, as overcapacity can remain for a very long time (long-term nominal bond yields in Japan have been in the 1–2% range for quite some time). If Asia is able to export its goods and services to North America (and at cheap prices, helping to keep the U.S. rate of inflation and wage escalation rate low),

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we may in turn find, as some are warning, that overcapacity may one day haunt North America as well. If this overcapacity ever arises, and the response is to lower product prices, then we may witness the new era of stock investment coming to an abrupt and perhaps nasty end, as gains in corporate earnings will change to losses. As past stock markets have declined partly due to the specter of higher interest rates, we may find, as was the fear this fall, that the next stock market decline will be under the backdrop of declining interest rates, and the realization that too much production and technology has more than adequately met consumer demand, hence beating the ability of corporations to generate increases in earnings.

The world is currently watching North America and particularly the U.S. quite closely. It may actually be good news if inflation in the U.S. comes back. It will perhaps signal that Asian deflation has not been exported to the Western economies. It will also enable central banks and governments to follow the old paradigms of monetary and fiscal policy. However, there is still a danger—if the recently strong demand of the U.S. and U.K. is eventually checked by central bank intervention (or lack of easing thereof) to keep economic growth controlled, this may inadvertently cause supply to overtake demand, allowing these economies to be more vulnerable to deflationary pressures. European recovery may be the deciding factor.

If inflation does not increase, however, and we find that imports, cheap goods, price pressure, and overcapacity are becoming a worldwide problem, then brace yourself for corporate earnings declines, major stock market declines, and a dramatic downturn in economic activity worldwide. Democracy may also become a serious letdown for those former communist countries that have now embraced it. The former stability of communism may be preferred over any unpredictable chaos of capitalism.

The Threat to Pension Plans

If worldwide deflation becomes a reality, then pension plans will be seriously threatened on the investment side. Money purchase pension plans have had major appeal partly because of the belief that investment returns will be high enough to provide a large asset accumulation and hence can purchase a good pension benefit at retirement. But if equity returns stay depressed, as they have been in Japan for almost a decade, and fixed-income returns fall very low as interest rates are cut worldwide in order to stimulate economic growth (and this growth does not materialize), then the required investment returns and the resulting accumulated assets required to purchase a satisfactory retirement pension for most individuals will not be there. The long-term investment horizon argument used to justify investing in stocks may prove to be a much longer period than most people initially realized. A 15- to 25-year investment view may be too short for most individuals to accumulate the assets required to achieve an attractive retirement pension, and this will be of major importance to the baby boomers who may have started their investment program rather late.

Defined-benefit pension plans may then have renewed appeal because the pension benefit can be tied in some way to final salary, not investment returns. However, the employer will still have the same problem of achieving sufficient investment returns to pay for the pension benefit; hence providing a pension for employees will still be an expensive proposition. The portability argument used against defined-benefit pension plans may no longer have teeth in a deflationary environment, as the accompanying slow economic growth will result in a significantly less mobile workforce.

The Dilemma

The next six to 18 months should be quite interesting to watch. Deflationary forces will not be clearly visible in North America until the second half of 1998. How the world's stock markets react and how central banks respond through interest rates will be worthy of note. The wrestling match between demand and supply during the next several quarters will certainly require many to take a front seat and watch the "fun" if more uncertainty and fear lead to further market gyrations. I suspect that demand will win out, but then again, do I need to acquire more than two cars and two TV sets in order to keep this economy going? And can the average Thai, Chinese, or South Korean afford their first one of each? There is still a great dichotomy of wealth, wants, and needs among the countries of this world. Those that can generate the demand to absorb excess supply can least afford it, and those that can afford it may not have any incentive to do so. Only time will tell the final result.

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KWEL-Project Web Site Announced

Kortanek and Medvedev are pleased to announce a web site for the KWEL Project in the College of Business at the University of Iowa, Iowa City. The project focuses on the term structure of interest rates, the spot rate, and replications of thinly traded options.

The web address is: http://www.biz.uiowa.edu/kwel/kwel/