



Reality Check

Things are seldom what they seem
Skim milk masquerades as cream

*"H.M.S. Pinafore"
Gilbert & Sullivan*

Reality is a delicate fabric. "You can't handle the truth" was a famous Jack Nicholson courtroom one-liner, suggesting that even in the face of hard facts, people resort to self-deception in order to protect treasured illusions. How else to explain a recent poll by CNN that 54% of the respondents believed that OJ did not murder his wife and Ron Goldman? How else to explain that 77 of 100 U.S. Senators authorized Bush to invade Iraq under the pretense of Saddam's potential use of weapons of mass destruction against the American public? I can only conclude that if reality is so delicate, subject to distortion even by a clear majority, then the lesson is that you should handle it carefully or at the least be prepared for the taste of skim milk instead of cream as we are warned in the caption above.

This question of the true percentage of butterfat is a critical one in today's financial marketplace. Risk assets ranging from private equity all the way down to two-year Treasury Notes have been repriced in recent months/years under the assumption that future economic and financial asset price volatility will be fractions of historical levels. Globalization, the "great moderation," central bank transparency,

and financial innovation leading to the hedging and therefore the smoothing of risk are all cited as explanations for why current and future risk spreads should remain compressed. It is not hard to accept these apparent realities; in fact, I'm somewhat of a believer myself. If Bernanke's "transparency" allows bond investors to more accurately time future Fed behavior, then why shouldn't the risk premium for two-year Treasuries be less than it was in the 70s and 80s when investors had to guess at the significance of Fed open market maneuverings? If globalization and the sharing of growth benefits with former "emerging market" nations such as Brazil lead to the apparent self-sustaining growth of their dollar reserves, then why shouldn't their bond spreads over Treasuries be in the 100-200 basis point range instead of 1,000-2,000? I accept these new realities even within the context of a cautionary note that stability breeds instability and/or that a cyclical slowdown can quickly turn perceived cream into skim milk as it always has. Our conceptual milkmaid can churn her barrel as fast as she can, but it's hard to manufacture butter when an economy slows below the point that historically sustains profit and job growth and therefore minimizes risk.

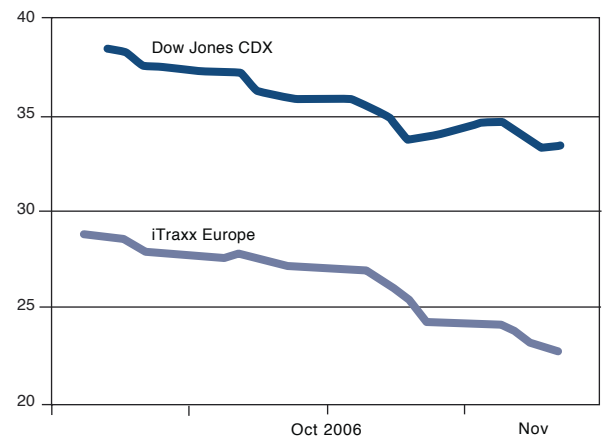
But I write today not to expound on the cyclical economic outlook nor to unnecessarily repeat observations of prior *Investment Outlooks* conceding that risk spreads are compressed and potential alpha generation likely “anemic.” Most of us would agree with that reality – subject as with OJ to inevitable illusions to the contrary. What I would like to speak to now is the current pricing (overpricing) of certain risk assets even under the idyllic conditions of continued Fed transparency and globalization and all of the other components which may have seemingly produced cream out of skim milk. My initial point is that asset pricing itself is a delicate fabric, as I of *Dow 5000* fame would be the first to admit. Volatility and growth rate assumptions dominate risk asset prices as do presumption of future real interest rates, liquidity, etc. The list of variables, if not endless, is certainly long and therefore more and more subjective the further one ventures out on the pricing limb. I, and I’m sure you as well, am always amazed at the pundits who claim that certain just released information is already “priced in” to the markets. How do they know and who did they ask? Even if they did, would a 54% OJ majority opinion be proof that it was so? I suspect not and that is why investment management is partially art, partially science, and at least a small part BS. But there are certain points in more definable, less “BS-able” asset markets that approach certainty if only because they are more mathematically based. When the Fed cut interest rates to 1% in June of 2003, I could guarantee you that they could only cut them 100 basis points more. When 10-year yields on Japanese JGBs hit .35% at the same time, I could almost guarantee you that their incredible bull market run was

coming to an end. NASDAQ 5,000? Easy in retrospect, but harder at the time, if only because the mathematics of value were being biased by the phantasms of hope. The floor was 5,000 points below, but the ceiling somewhere in the wild blue yonder.

Because the bond market is more mathematically oriented than riskier asset markets, it stands to reason that a quest for certainty and reality in financial markets would begin there. Fed Funds at 1%, JGBs at .35%, and ?. Where is the present day counterpart where one could claim that prices could go no higher or risk spreads compress no further? We are beginning to find such evidence in the investment grade corporate bond market, the narrowing spreads of which are displayed in Chart 1.

While a rather obvious 25 or 35 basis points to 0 analogy could quickly be advanced here, a finer, more precise analysis emanates from the quantitative dissection of a new derivative credit product retailed to institutional buyers

Credit Cream?
Credit Indices, Annual Premium for Five-Year Protection (Basis Points)



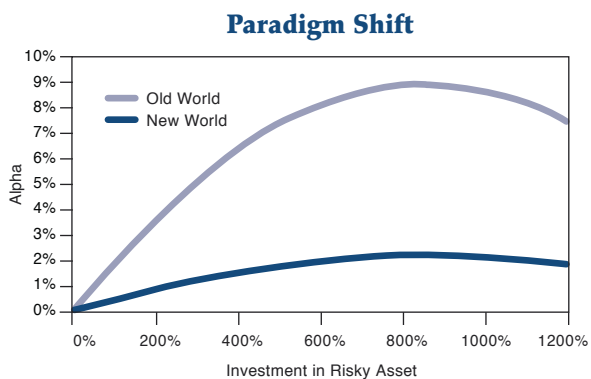
Source: Markit Portal, JP Morgan
Financial Times, Nov 8, 2006

Chart 1

under the sticker known as a CPDO or “constant proportion debt obligation.” Without too much explanation, these multibillion-dollar instruments lever investment grade indices up to 15 times the amount invested and offer or have offered a spread of 200 basis points over LIBOR with a AAA rating. Hard to pass up I suppose, recognizing that AAA securities are by definition blue chip with rare, only infinitesimally small annual default rates. But this AAA rating is subject to numerous (more numerous than usual) subjective assumptions on the part of the rating services and in turn vulnerable to quicker downgrades than your normal AAA GE credit rating (there GE, I’ve paid you back.) My purpose in bringing up the CPDO, however is not to denigrate the rating sources or to praise GE, but to state that under PIMCO quantitative modeling, current investment grade CDX spreads, shown in Chart 1, can only narrow by 3 or 4 more basis points before these CPDO instruments can no longer earn a AAA rating or offer such an attractive 200 basis point spread. More importantly, increasing

multiples of leverage beyond 15x near current yields spreads cannot maintain either a AAA rating and/or the 200 basis points in yield spread that have made this derivative so attractive and in turn helped to reinforce a declining trend in all credit spreads over the past few months. The increasing use of leverage, in other words, at least as applied to this particular area, appears to have run out of its magical ability to increase returns. Investment grade corporate spreads therefore are not likely to narrow further. The perceived fat content in this supposed AAA “cream,” is as high as it’s going to get, and skim milk may eventually be the reality.

This is a critical analysis because if extended to other asset markets, it begins to imply that the leverage potency of recent years is reaching a peak, even if economic and financial market volatility remains idyllic. One gains confidence in this conclusion by applying what is known as a Kelly risk analysis popularized in a recent book titled, Fortune’s Formula by William Poundstone. The heart of the Kelly risk framework, used long ago by the way, by my old math professor friend Ed Thorpe of blackjack counting renown, is to define how much of your wealth you should expose to repeated trials of a bet for which there are favorable odds of winning. Given an historical alpha-generating trade for instance, such as a corporate bond spread above a certain presumptive level, how much leverage can be applied before the chances of losing all your money dominate the outcome? PIMCO quantitative whiz Steve Schulist presented the following summary analysis to the PIMCO Investment Committee recently as shown in Chart 2.



Note: The plot above shows excess return above the risk-free rate by taking increasing exposure (leverage when investment is greater than 100%) to a risky asset. In the “Old World” scenario, the risky asset offers 200 bp of risk premium (expected return above the risk-free rate) and has volatility (standard deviation of expected return) of 500 bp. In the “New World” scenario, the risky asset offers 50 bp of risk premium and has volatility of 250 bp.

Source: PIMCO, Steve Schulist

Chart 2

Its conclusions, under the new world assumption of today's low volatility and narrow asset risk spreads, reinforce in general what I have offered to be the case with the CPDO in specific. **There is a maximum leverage point, 7-8x in this example and eerily reflective of today's hedge fund proclivities, beyond which returns can be maintained only with increasing and significant expectations of financial loss.** We estimate that the maximum alpha an average hedge fund can generate in today's marketplace **utilizing a broad array of financial assets which average a 50 basis point risk premium**, displayed in Chart 2, is 200 basis points. Any attempt to go further by levering up an already 8x levered portfolio increasingly risks significant and in some cases, total loss of principal.

And so? No gloom and doom message here. I've already endorsed the rudiments of our new age financial marketplace subject to one off and normal cyclical

corrections. But we are approaching limits. And just as distortions of mass and time enter physicist's equations as objects approach the speed of light, so too can cream mutate if its price or spread morphs from old world to new world to unworldly levels. I can't guarantee this reality – OJ lurks, it seems even in the financial markets. But I have a strong sense that the ability to lever any or all asset returns via increasing leverage is reaching a climax and therefore, that CPDO, corporate credit spreads, and more importantly, sophomoric assumptions of future assets returns in all markets may require some future compromise, as the current masquerade of high asset returns gradually morphs from cream to skim milk.

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The Dow Jones CDX is a series of indices that track North American and emerging market credit derivative indexes. The purpose of the combined indexes is to track the performance of the various segments of credit derivatives so that the overall return can be benchmarked against products that invest in similar products. The iTraxx Europe credit default swap (CDS) index. Consisting of 125 reference entities, the iTraxx Europe CDS index allows investors to gain exposure to various tranches of a diversified portfolio of the most liquid investment grade European corporate reference entities.

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