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"The future ain't what it used to be."

—Yogi Berra

BRIEFING »

A FLOCK OF BLACK SWANS

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The first eight years of the 21st century already have witnessed two "once-in-a-generation" events within the financial markets: three straight years of negative results in the equity markets (as measured by the S&P 500) from 2000 through 2002, an event not experienced since 1939, 1940 and 1941; and then, in 2008, the greatest credit and liquidity crisis since the great depression. It is safe to say that "black swans" are alive and well in the new world!

Nassim Nicholas Taleb used the term "black swan" in the title of his 2007 book on the impact of highly improbable events.[1] For a long period in Western history, the "black swan" was a metaphor for something that didn't exist—Western Europeans knew only of white swans. But in the 17th century, a black swan was discovered in Australia, an event which changed the meaning of the term to represent something perceived to be impossible actually happening. The use of the term here parallels a statement by the Nobel Prize–winning behavioral economist, Daniel Kahneman: "The impossible sometimes happens; the inevitable sometimes does not." It bespeaks a renewed emphasis on understanding the roles of randomness and chance in the markets and a far healthier respect for risk management in a deleveraged world.

[1] Taleb, Nassim Nicholas. *The Black Swan: The Impact of the Highly Improbable.* Random House, 2007. See also Taleb's earlier work, *Fooled by Randomness.* Thomson/Texere, 2004.

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The world of November 2008 is surely not the world we knew, certainly not in the financial markets. The liquidity crisis has severely cost many venerable firms, including Bear Stearns, taken over by JPMorgan Chase; Lehman Brothers, allowed to go bankrupt; Merrill Lynch, bought by Bank of America; Wachovia Bank, purchased by Wells Fargo; National City Bank, bought by PNC Financial; and Goldman Sachs and Morgan Stanley, changing their capital structures to become commercial banks, primarily to be able to borrow from the Federal Reserve "window" and to receive federal funds allocated under the TARP legislation. In addition, the US equity markets have lost more than a third of their value, most of that loss coming in the single month of October. From a global perspective, US equities have fared better than those of both developed and emerging markets. The world seems headed for a recession wherein the intensity in certain areas could parallel that of the 1970s and even the 1930s. It is almost as if you can hear the flapping of the swans' wings.

BUILDING AN ARK *BEFORE* THE RAIN COMES

Let's review some things that seem obvious in this new world. First, turbulence seems to exist all around us: in nature, geopolitical affairs and financial markets. In fact, the risk levels in all those seem to have increased dramatically of late, in the wake of hurricane Katrina, 9/11 and the bursting of the credit bubble. In addition, the risk, or volatility, seems particularly concentrated. The property/casualty industry understands this, as it assesses premiums for areas which seem especially prone to weather-related disasters. An example: Ninety percent of the claims from tornado damage in Texas, Louisiana and Mississippi came from just 5% of the insured land. Volatility also obviously is concentrated in the financial market. Forty percent of the positive returns of the S&P 500 in the 1980s, for example, occurred during ten days. The attack on the World Trade Center caused a terrifying concentration of volatility: The NYSE closed for five days and then reopened to a 7.5% drop in value.[2] As of Oct. 31, 2008, US equities were 45% off their highs of one year ago, with most of that loss coming during that wild October, which saw dramatic intraday and day-to-day fluctuations.

If risk is greater than we like to think, and more concentrated, what matters is not so much average returns as those extremes of profit and loss, especially where loss can mean financial ruin. All of us want to avoid being hit by fat tails[3] regardless of whether they may affect our financial capital, our physical capital or our human capital. One way to circumvent that is to understand not just our experience with certain things, but our exposure to them as well. Warren

[2] Mandelbrot, Benoit and Hudson, Richard. *The (Mis) Behavior of Markets.* Perseus Distribution, 2006.

[3] "Fat tails" refers to the ends of a bell curve, used in modern portfolio theory to illustrate risk or variation in return. Measured by units of standard deviation, the bell shape itself illustrates two standard deviations, a range that accounts for 95% of the variation in equities. The tails represent amounts in excess of two standard deviations; and the longer, or "fatter," the tail the greater the variation. Positive variations usually cause celebration. But a negative "fat tail" is cause for significant alarm. It may occur rarely—though, as we have seen, the "seldom-seen" event appears to be occurring with greater frequency; and, in any case, its impact can truly be devastating, as we have been witnessing during the first decade of the 21st century. In this paper, I use the terms "fat tails" and "black swans" almost interchangeably to denote highly improbable events that somehow do occur—and with extraordinarily negative consequences.

Buffett, in his 2001 Letter to Shareholders for Berkshire Hathaway, explained the difference succinctly. Buffett was detailing the egregious effects of the bombings of 9/11 on the property and casualty businesses within Berkshire Hathaway. In doing so, he admitted that he and other senior managers had ignored exposure, resting instead on their experience. Example: If you are writing earthquake insurance in California, it helps to know how many quakes in the past century have registered 6.0 or greater. But, on occasion, relying only on experience can be dangerous. The probability of chemical or biological weapons being introduced into the US may be statistically very low, yet the exposure that could result from that event might destroy an entire industry.

Buffett, in his inimitable fashion, admitted that while he had recognized the probabilities before the September 11 attacks, he had not done anything about them, thus violating what he called the "Noah rule": "Predicting rain doesn't count; building arks does." Actually, that is really great advice, because the future, regardless of probabilities, is inherently uncertain. Therefore, rather than attempting to predict events, we should be spending our valuable time building arks.

The arks we build should be intended to provide safety to elements in the three major areas of our total wealth—our financial capital, our physical capital and our human capital.

A RISK LEVEL YOU CAN LIVE WITH

Regarding our financial capital, we need to recognize the "loss we cannot bear" and translate that into the reality of probability. For example, if we test both our future return assumptions and our future spending assumptions using probability analysis, would we require a 90% probability of success, or a 99% probability? Rather than start from a notion of the lifestyle we wish to maintain and backing into a portfolio allocation, perhaps we ought to start from an acceptable "risk-adjusted" rate of return—whatever level of risk you can live with—and let that lead us to an amount we could reasonably afford to spend. The guiding principle here ought to be *sustainability*, a concept from the environmental movement that applies remarkably well to how we lead our daily lives. It asks us to use our resources now with a careful eye toward what we and our families will require in our future years, including stretching out for multiple generations.

In addition, the risk-adjusted rate of return ought to be an after-tax rate of return as well, since the prospect of tax increases may be one of the only things that's actually going up of late, once again reminding us of the truth of the old saw—"it's not what you earn, it's what you keep." If Congress and the president-elect do not succeed in raising taxes in 2009, the Bush tax cuts will expire in 2010, thereby adjusting rates upward in key areas, most notably long-term capital gains and the tax on qualifying dividends. Tax optimization, asset allocation and efficient investing all take on greater importance as an array of taxes are set to increase. Additionally, given the swelling budget deficit, it is highly probable that the increase will go beyond the levels triggered at expiration. This would certainly be the case for married filers earning over $250,000. For these couples, the highest individual income tax rate brackets would reset at 36% and 39.6%. Further, if President-Elect Obama were to follow through with his campaign proposals, there would be a reintroduction of the phase-out of personal exemptions and the limits on deductions for married filers over $250,000—effectively increasing the top federal bracket to 40%.

YOUR PRICE INDEX, NOT CONSUMER PRICE INDEX

Inflation is another factor that affects real rates of return. Over long periods of time, inflation can significantly erode purchasing power. Inflation appears benign now, in the throes of a recession and with commodity prices falling dramatically. Nevertheless, we must plan for a future in which inflation will return—perhaps with a vengeance, given the amount of capital the federal government will inject into the economy.

More important, inflation reflects lifestyle. The government CPI figures may match an actual inflation rate, more or less, depending on how we live. But how we live is the deciding factor in calculating inflation. Health care costs, for example, have been increasing at a far faster rate than the CPI, making the CPI-E (for elderly) rate approximately double the standard inflation rate (because health care forms a larger part of living costs for older Americans than for any other segment of the population).

For those who have children attending private school or college, who frequent high-end restaurants or who vacation in five-star resorts and shop at luxury stores, such as Hermes and Tiffany, it is probable that their inflation rate would be higher than for a family whose children attend public schools or universities, never eat out, take camping vacations and shop at Wal-Mart. Lifestyle dictates spending levels.

A NEW LOOK AT SAFETY

Finally, as to risk management for financial capital, we need to reconsider the nature of diversification, starting with offering a new definition of what is meant by a "safe" investment. As the core holding of a portfolio, a safe investment historically might have been considered one of a variety of fixed income investments, from Treasuries through investment-grade corporate bonds, and including some less familiar securities, such as auction rate securities. Given the effects of recent events on a number of these securities, each of us must define anew what safety means to us. For many, the new definition will involve a much smaller group of securities that includes Treasuries and government agency securities. After redefining "safe," we will need to consider a broader diversification, including additional asset classes, especially in emerging and even frontier markets, both for equities and fixed income investments and for commodities.

Additionally, this diversification also should involve different risk techniques. Hedging, using options, or collars, for example, would be one type of risk technique. Another might involve using an insurance product, with risk being borne by the insurance company, or a structured product with a guaranteed floor, with risk being borne by the guarantor, which would prevent actual losses. Of course, in the case of the latter two products, our portfolio would assume credit risk associated with the issuing institutions; but such risk would at the least be limited within a far more broadly managed portfolio.

PRESERVING THE VALUE OF PROPERTY IN ANY MARKET

Physical capital entails primarily our home and the property within and around it. The equity in homes has been significantly reduced, beginning in 2007, by the substantial drop in home values. Over the past two years, the average home value across America has dropped about 20% in value, according to the Case-Shiller Home Price Index. There is not much we can do to protect the value of our homes in such declining markets. Housing had become its own "bubble," with the bursting unavoidable.

However, there are other threats to our homes and physical capital which we can do something about. The simplest response is homeowner's insurance, which protects against a set of natural disasters. In effect, it transfers the risk of replacing all or part of our property to an insurance company instead of relying on self-funding. Not only must we examine carefully if there are specific threats due to geography, such as floods, tornadoes and hurricanes, and seek to limit those, but we must also consider the human factor—liability from risks to other people from things on or associated with our property. If our home has a pool, or we have property such as boats, jet skies or horses, for example, someone could be seriously injured by our property whether we were present or not. We need to account for such possibilities with special provisions or riders in our insurance contracts; or we need to face self-funding: We either assume the risk or seek to transfer it.

Finally, risk management for the home must account for any people we employ in our homes and to do work on our properties. When we hire nannies, for example, we become employers and can face the same issues employers do, such as lawsuits for wrongful termination, harassment and other issues. We must factor in our exposure to these types of situations and arrange to control the risks. The same is true whenever we hire contractors to do renovations in and around our homes. We need always to determine if the contractor has all the appropriate insurance for workers and insure our plans have provisions for any omissions.

The key word is *exposure*. Only by determining the nature and extent of our exposure from every angle can we adequately assess what we need to do—the coverage we need to have—in order to limit that exposure. Past hires may provide us with necessary experience, but, while necessary, mere experience is not sufficient, as Warren Buffett reminded us. More important, having assessed risk and exposure, we may find that there is no single answer, such as umbrella liability insurance, to the threats to physical capital. Instead, we may need to develop a "portfolio" approach to asset protection, which would include a number of strategies in addition to insurance, among them: charging order protection entities, such as LLCs; collateralization; and gifting.

PROTECTING YOURSELF AND YOUR EARNING POWER

The final area of concern for an integrated risk management approach involves our *human capital*—literally our earnings potential and productivity. Some threats to *human capital* come from without the family, and other threats are endogenous. The external threats call forth similar responses to those involving our physical capital, since they primarily concern people claiming damages for injuries that they charge us with inflicting upon them. Some of these may result from the exercise of our professional responsibilities. Medical professionals and business owners, for example, are subject to the greatest number of lawsuits. Charity volunteers also may be subject to claims for damages, since volunteering for a nonprofit does not protect one against charges of negligence. Here too, the responses parallel those concerning threats to physical capital and typically constitute a range, or portfolio, of actions by which to reduce the threats. Understanding first those assets that state law considers exempt from creditors—which vary greatly from state to state—one would typically look to employ sufficient umbrella liability insurance and then hold certain assets, e.g., second or vacation, homes in LLCs, engage in gifting with irrevocable trusts and perhaps even consider using an asset protection trust. While only several states permit such trusts, which forbid beneficiaries from making distributions to pay creditors and at the same time allow settlors to be beneficiaries of the trusts they set up, and while they have not been tested in courts of law, they might provide an additional layer of frustration and difficulty to creditors. (Note: States include Delaware, South Dakota and Alaska, *inter alia.*)

MITIGATING INTERNECINE STRUGGLES THAT DESTROY WEALTH

Perhaps the most serious threats to family, though, are endogenous threats, those that arise from within. Certainly divorce can entail significant emotional as well as financial damage. While the former may not benefit from prenuptial or postnuptial planning, certainly the financial damage might be constrained. The sheer numbers make divorce a potent risk, given that almost half of all marriages fail; and, of those 75% who choose to remarry, about two thirds divorce again, most within five years. Clearly, these statistics make divorce more of a probable than an improbable event. But, given the magnitude of the financial effects, it is a concentrated risk for which most do not adequately prepare.

Family discord, arising among siblings or between siblings and parents, can also prove devastating, especially in those families who run businesses. Famous disputes, with serious financial repercussions, involved the Bingham family of Louisville publishing fame, the Pritzkers of Chicago, and, recently, Sumner Redstone, who has quarreled with first his son and then his daughter. There are no facile answers for family discord, which even can strike families of great rectitude and comity. Perhaps it is due to the presence of great sums of money, which may fan flames of enmity originally begun over other, more personal, issues; but often lack of communication can be a significant contributing factor. Regular family meetings, whether formal or informal, can provide a structure for that communication; and family mission statements may offer a kind of lodestone for dealing with thorny issues. The risk, that is, may in part be managed.

Intergenerational wealth transfer can also occasion conflict within families. Indeed, for most estate planning attorneys, the fastest growing part of their practice involves probate litigation. It is often a case of the problem of good intentions. Families select other family members, often an adult child, to be executor or trustee, not realizing the potential for discord that such choices can make. Resentments may flair when siblings make decisions about asset distribution or about whether a trust will make a distribution to another sibling. Often, opting to have an independent or corporate trustee make such decisions can alleviate much of the bitterness, with the corporate trustee acting as a sole trustee or as co-trustee with specific responsibility for making distributions. In addition, communicating the reasons for adopting certain plans and strategies and tying such reasons to personal and family values can have an ameliorating effect.

TOWARD A STANDARD OF TRUE STEWARDSHIP

Improbable events with huge effects, also known as "fat tails," can impact our financial capital, our physical capital and our human capital. Proper risk management considers the potential of each event, each risk, not in

isolation but cumulatively, in concert with other risks we may face. Our exposure can be measured in part by a kind of scenario testing, through which we seek to grapple with the overall effects of combinations of events. If, for example, we considered the possibility that we might lose our job at the same time that the equity markets were down 50% and our liabilities, both recurring and discrete, remained the same, would we be able to sustain ourselves? That is, could we continue to live in the same way in the same home for at least a period of time?

Sustainability, long a key concept in the environmental movement, has great relevance to current circumstances. Essentially, it asks us to use our resources in such a way that we consider our needs and our family's needs now and in the future and, indeed, stretching over multiple generations. It is about the real stewardship of resources. Such stewardship revolves around two sides of a proverbial coin: spending, which has been called the "probability of ruin," and productivity.

Thinking of our financial assets, if we set our spending levels first and then seek to find investments to support that spending, we hazard getting into a spiraling cycle of greater and greater risk. This is what happened to many in the past several years, who chased yield into ever more precarious instruments. Instead, we ought to begin with the risks we can bear and back into what we can afford to spend. In the process, we need to know what the "new" *safe* is and just how diversified we should be. We cannot ignore taxes or inflation, since they act to dampen sustainability. Our lives should follow our wallets without mortgaging the future.

Our physical and human capital also face threats that ought not to be considered singly and in isolation. If we cannot transfer the risks we face to others, we are left to fund them ourselves. Those potential liabilities need to be accounted for in the scenarios we construct, especially, e.g., in areas of mortality and morbidity, such as premature death, disability and long-term care. Furthermore, human capital, since it involves productivity, also is tied to our financial capital. Given that, perhaps the two areas ought to be considered together rather than separately. In his recent book, *Are You a Stock or a Bond?*,[4] Prof. Moshe Milevsky suggests that the kind of occupational income one receives ought to be considered when constructing investment portfolios. He used himself as an example, describing the income of a tenured professor as more equivalent to a bond. Therefore, as he computes the present value of his future income, its bond-like character might result in having a greater equity exposure than would normally be the case. For certain corporate executives, however, whose compensation may vary greatly with market conditions, the equity-like character of their income might result in an allocation more heavily weighted to bonds.

[4] Milevsky, Moshe Arye. *Are You a Stock or a Bond?* Financial Times/Prentice Hall Books, 2008.

Whether one buys Milvesky's argument in total, it rests on a sound point: We ought to consider the nature and sources of our income from work—our human capital—when dealing with our financial capital. If we handle them separately, we may severely underestimate our risks. Think of those executives—remember Enron?—who invested in company stock in their 401(k) accounts and then watched both their careers and their retirement funds evaporate with the declining fortunes of their company.

Finally, no person or family can survive long without being productive. Even families of great wealth, such as the Vanderbilt family, have watched that wealth dissipate

to nothing over several generations when consumption far outweighed productivity. The concern is not just for financial capital, but for human capital at its essence. Many wealthy families remain very concerned about the "risk" of great wealth on children and grandchildren. They seek ways to counter the potential of that wealth to squander creativity and effort. At heart, it is an Aristotelian effort; for Aristotle, who believed that the end of life is happiness, defined happiness as a kind of flourishing, of doing well what one does well. That kind of happiness is all about productivity. Where does it come from? How do we transmit it?

EXPECTING THE UNEXPECTED

The poet Robert Frost once observed that: "Every affluent father wishes he knew how to give to his sons the hardships that made him rich." At heart, I believe, Frost is wrong—no parent wishes hardships for their children. But if not hardships, how do they get to that productivity, or flourishing, but by lessons, communicating life's lessons from an early age, and ensuring that family members see the values that lie embedded in those lessons?

What has all this to do with "fat tails" and improbable events? Just this. One is either a victim of the improbable or one plans for the uncertainty that is our future. The plan needs to incorporate the potential for "fat tails," as well as the probability of negative events; it needs to assess both experience and exposure and determine how such exposure will be handled in an integrated fashion. Finally, it needs always to be reconsidered and redrafted—because, as the old military adage states, no plan survives contact with the enemy. And in the words of the comic strip character Pogo, the enemy is us. That makes it all the harder to accept the presence of black swans and make allowances for them. Integrated risk management offers the prospect for both respecting and limiting the consequences of their presence in all areas of our lives.

Improbable events with huge effects, those previously described "fat tails," can impact our financial capital, our physical capital and our human capital.

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