VALUATION

The New Appreciation of Risk

Ongoing volatility, uncertainty, and market fragmentation may require new ways to figure cost of capital

By Michael Goldman, MBA, CPA, CVA, CFE, CFF

My previous article, "Market Turmoil May Require New Ways to Build Up Cost of Capital," was published in the January/February 2009 issue of *The Value Examiner*. I took the position that the "risk-free market rate," determined by looking at U.S. Treasury bonds, was neither risk-free nor a true market rate, but rather a familiar landmark left standing as the economic tsunami washed upon us.

I took that position not as a professional economist or finance PhD, which I am not, but as someone who has worked with and opposite some excellent attorneys, imagining how they could tear me apart on the basic cost of capital build-up model that we all learned in Valuation 101.

I expected the "Market Turmoil" article might not even get past the peer-reviewers for publication. Instead it became the cover story. I expected that when published, the article would be either ignored or heavily criticized. Instead, I received numerous requests from professional and trade associations to reprint it in their training materials. I got really excited from all this, imagined myself as having fired one of the first shots in a revolution that would result in a whole new basis for calculating a company's cost of capital, and sat back to see what would happen next.

Nothing happened.

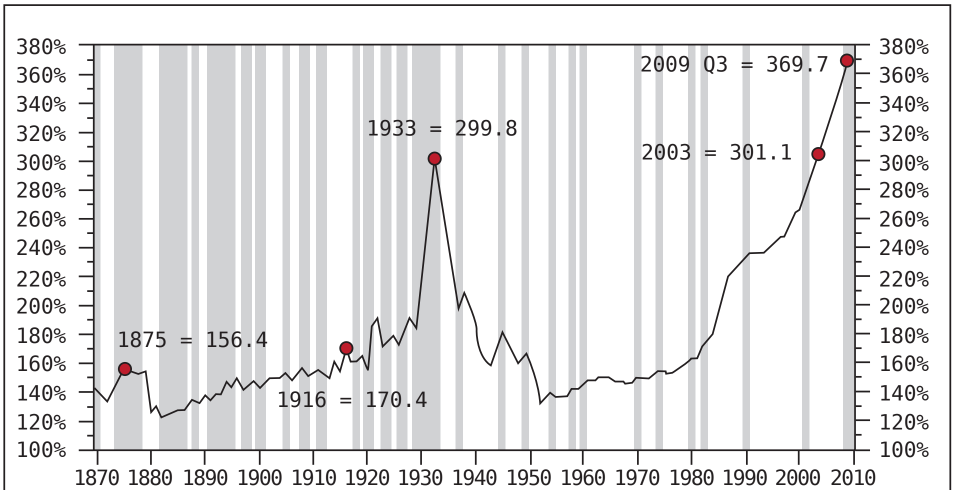
I still believe, now even more than before, that the way we look at the market needs to change.

THE CHAOS CONTINUES

The economic crisis is in its third or fourth year, depending on which events you start the clock from, with no realistic sign of abating. National worry and uncertainty are still high. Unemployment is stubbornly high. Real estate in most markets continues to deflate. Drive around almost anywhere, and you will see commercial vacancies at astounding rates, and beneath every one of them is most likely a non-performing loan at a commercial bank. Many of today's tax rules expire next year, and there is no consensus about what the rates or rules might be. On a single day in early August, almost $1 trillion of value disappeared from the U. S. stock markets. Almost every type of risk you can think of remains greatly heightened, and this makes valuations both less certain and more volatile than they were a few years ago.

Morgan Stanley reported in 2009 that there is "no historical precedent" for an economy that exceeds a 250 percent debt-to-GDP ratio without experiencing some sort of financial crisis or high inflation. Take a look at our cur-

GRAPH 1: TOTAL U.S. DEBT AS A % OF GDP (ANNUAL)



Sources: Bureau of Economic Analysis, Federal Reserve, Census Bureau: Historical Statistics of the United States Colonial Times to 1970. Through Q3 2009.

rent situation. Graph 1 shows total government, consumer, and business debt in the United States as a percentage of gross domestic product.

You may be tempted to point out that we survived the Great Depression, the last horrific spike on our national debt-to-GDP graph. We did, and we will survive this one too, but keep in mind there are significant differences between now and then. In the 1930s, a significant portion of the population could grow their own food. The economy was not as global then—American workers did not compete with workers in emerging economies, and American institutions were not at risk when economies like Japan's, Greece's, Spain's, Italy's, etc., teetered. Most importantly, the 1930s were when the entitlement system of the United States began—decision makers back then did not have to worry about $2.5 trillion of Social Security plus the massive state and local pensions owed to retiring baby boomers, not even fully accounted for in the above debt figures.

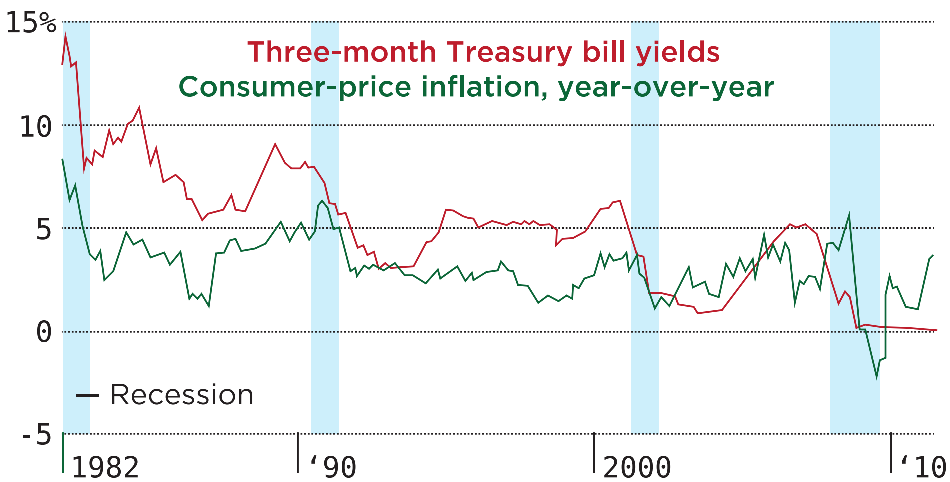
Another shocking sign of the times is that last month (August 1-5), major banks announced that they are going to begin charging corporate customers for depositing cash in their bank accounts. Interest rates are now so low that businesses and investors don't care if money is in cash or interest-paying investments. (See Graph 2.)

In the build-up to the debt crisis, U.S. Treasury bills were being dumped for the perceived greater safety of commercial bank deposits. According to Lipper, a research firm, $66 billion was withdrawn from money market funds in the week ending August 3 and deposited into banks. *The Economist* quoted an anonymous bank executive as saying that he had "never seen risk aversion this intense."

Our profession needs to do more to recognize that things aren't like they used to be.

GRAPH 2: AS LOW AS THEY CAN GO

Short-term interest rates can't go any lower



Source: Federal Reserve Bank of St. Louis

HOW WE PERCEIVE COST OF CAPITAL

Pratt and Grabowski, in their book *Cost of Capital*, define the *risk-free rate* as "a rate of return that is available in the market on an investment that is free of default risk, usually the yield on a U.S. government security, which is a 'nominal' rate (i.e., includes expected inflation)." They define *risk* as "the degree of uncertainty (or lack thereof) of achieving future expectations at the times and in the amounts expected." These authors, considered among the top experts in the field, further state, "Risk is the ultimate concern to investors."[1]

In the valuation profession, the risk-free rate is the cornerstone for deriving a market-based cost of capital, which in turn is the cornerstone of any income method used to value a business. Since I took my Valuation 101 course, the economy has boomed and crashed, the U.S. dollar has soared and fallen, and interest rates have become much more dependent on unelected government bureaucrats and less on financial markets. Yet our dependence on, and thought process about, market rates remains the same.

Pratt and Grabowski authored an article, also in the January/February 2009 issue of the *Examiner*, titled "Cost of Capital in Valuation of Stock by the Income Approach: Updated for an Economy in Crisis." In response to the abnormalities pointed out in both cost of capital articles in that issue of the *Examiner*, they came up with an elegant and practical solution:

> What should the analyst do? We suggest that one ignore the December 31, 2008, "spot" yield on 20-year T-bonds and use a longer-term average T-bond yield.

1 Shannon P. Pratt and Roger J. Grabowski, *Cost of Capital*, Third Edition, Wiley, 2008, pp. 39-41.

Unfortunately, here we are more than two-and-a-half years later, and we are still in crisis. An e-mail blast I received on August 2 from *BVWire* that promised another article from Grabowski in the September issue of *Business Valuation Update* provided the following preview:

> During these episodes of flight to quality [securities and assets], one needs to reevaluate simply using the quoted risk-free rate as the basic building block in estimating the cost of equity capital....Once analysts suspect that the market interest rates are abnormally low, they could use a build-up approach to estimate a normalized risk-free rate looking at the real rate of interest and inflation estimates.

I have tremendous respect for Grabowski, and I am sure it is unwise of me to try to anticipate what he is going to say in his upcoming article (which will probably have been released by the time this article is published). I cannot help but think, however, that we in the valuation profession have only marginally acknowledged what is going on out there. Instead of clinging to the concept of a risk-free rate, should we acknowledge that there is no such thing as "risk-free," that the countless tables of historical numbers we use may not bear any relevance to what is happening in the market today, and that professional prognosticators and investors make equally compelling arguments as to whether we are more likely to have deflation (where most assets lose value in relation to currency) or hyper-inflation (where currency rapidly loses value in relation to all tangible assets)?

Cost of capital is a forward-looking concept. Looking forward, however, just continues to be more difficult. I still believe what I stated in my January/February 2009 article, that economically we are headed to some place that hardly any of us alive have ever been before. A recent article in *The Economist* titled "Running out of Options" (July 30, 2011, page 66) discusses how governments cannot cut their deficits too quickly because that will make it virtually impossible for their economies to recover; but unless there is rapid recovery, the debt levels will continue piling on into larger amounts than can ever be expected to be paid back. The analysis further states that real interest rates are negative in many countries, but cannot be increased because of the already high debt levels.

WE NEED NEW SOURCES

Prior to the financial crash, market rates were heavily influenced by the big investment bankers like Merrill Lynch, Bear Stearns, Lehman Brothers, Goldman Sachs, etc. Most of these have either died or limped into the protective arms of commercial banks. Commercial banks also used to be significant market participants. Before the crash, the London Interbank Offered Rate (LIBOR) was one of the most followed numbers on the planet. Today LIBOR is pretty much irrelevant for at least three significant reasons:

- Banks no longer trust each other enough to loan each other money on an unsecured basis.
- Banks greatly reduced borrowing from each other because they get most of the funds they need from their governments, which are doing everything possible to keep those banks propped up and appearing solvent.
- Banks don't need to borrow as much money from each other because they are not making as many loans.

If investment bankers and commercial banks are less significant as players in the market, who is setting market rates? Government is. The United States, Europe, and Japan are all doing quantitative easing, of which the Wikipedia definition starts out, "an unconventional monetary policy used by central banks." Basically, the central bank (government) creates "money" and uses its newly created electronic "money" to buy financial assets from banks. The purpose of swapping newly created electronic money for real financial assets is first to make the banks appear more solvent (that gives you a great indication of how much those financial assets were really worth, doesn't it?), and second to buy back the government's own bonds, thereby lowering interest rates and creating the appearance of demand.

I know, technically central banks are independent of their governments and are not politically motivated. We all learned this in our economics or civics classes. If you believe that, you can stop reading now. For those still with me, let's continue to follow the money. Besides quantitative easing, the other main purchasers of government debt are other governments or the propped-up financial institutions that are told by their governments what to invest in.

Think about that. Many of the governments in the world are technically insolvent, and yet they continue to buy up each other's debts. This is what is now being called "the market." Do you believe they are all investing in each other in arm's-length transactions, shrewdly trading in and out to maximize the investment value for their citizens? Or do you at least concede the possibility that all these governments have commandeered "the market" as a tool to prop up themselves and each other?

The motivations of governments propping each other up are not the issue here. Whether or not this is for the common good of the world or a nefarious plot by power-hungry old men to maintain their dying grasp of control while demographics, economics, and other bites of reality all slide away from them, would be a great debate somewhere else. My key point is that there is a possibility that the economy (both U.S. and global) has gotten so bad that at this point "the market" may be much more political than financial. We've gone from Adam Smith's invisible hand to a market totally greased up with the fingerprints of the world's central bankers.

"The market," in fact, may now be many smaller markets. There is the market in which governments operate. Then there is the market in which large commercial banks continue to work with the large multi-national businesses and largest domestic customers. Then there are the less-regulated markets where many billions of dollars are being invested by venture funds, hedge funds, wealthy families, and others looking to earn more than the miniscule rates offered on more traditional investments.

"Market" is not the only problematic concept in "risk-free market rate." Let's move on to the "risk-free" portion of the term. Who here has been paying attention to the recent "debt ceiling negotiations" going on in the United States? For those of you who've missed it, here are the low-lights: The U.S. government is $14 trillion in debt, not counting certain obligations such as Social Security. Only 60 percent of current expenditures are supported by revenues, and the other 40 percent must be borrowed. Despite this horrendous cash position, the country is not even close to a political consensus on what the root problem is: Is it too much spending or not enough revenue?

A July 30, 2011, editorial in Canada's *Globe and Mail* says of the USA:

> Such a country's currency would have been fed upon, its stock market would have tanked, its credit rating wrecked, its future prospects dimmed. But the USA, as the world's biggest economy and repository of the world's reserve currency, has been spared what would have befallen other countries.

Not only is the interest rate manipulated for policy goals, it is not even risk-free. Why, then, do we continue to use U.S. government debt as a proxy for the risk-free market rate? More interestingly, what should we use instead to determine the risk-free market rate?

Unfortunately, we may be living in a world where "risk-free" just doesn't exist, anywhere. Certainly not in the dysfunctional U.S. government. Perhaps I've been asking the wrong question. Rather than what to use for a new risk-free market rate, should we be discussing whether we should still be starting with this mythical concept at all? From here, the questions get even tougher.

TIME FOR A CHANGE

After we start our build-ups with a risk-free market rate that is not free of risk and is currently more politically driven than market-driven, we use either Morningstar's or Duff and Phelps' historical premium information to develop our forward-looking cost of capital. For the reasons stated in my 2009 article and my observations of the world since then, I continue to believe that we are in a period unlike any other in history, and continue to question the validity of that historical comparison. The income approach using the build-up method is cleaner and easier to explain to a judge and jury than any other valuation method; but as the financial and economic crisis continues to evolve, I feel like we are building on an increasingly unsupportable foundation.

Perhaps we ought to bypass the individual components and start directly with a total cost of capital figure that we observe in the marketplace, and then adjust to more specifically fit our subject company being valued—a break-down model, if you will. This could be done similarly to the way we use the market approach, or the way real estate is appraised: Start with identified transactions and then compare and contrast them to the subject being valued. In their article "Private Cost of Capital Model," in the March/April 2010 issue of *The Value Examiner*, Rob Slee and John Paglia discuss one possible source of transactional cost of capital rate information.

I've noticed in my practice with distressed clients that money is definitely available for viable companies of almost any size. An $80 million client, for example, which commercial banks refuse to talk to (except for the one that has already loaned them money and now wants it all back) is being seriously courted by a number of different investment funds. These funds have already decided what their target rate of return is and what type of risk profile they want to fund. It is not just the investee going to market looking for capital; funds with capital are also going to market looking for investment targets that fit their profiles.

These "non-traditional" transactions are structured differently than bank debt. Interest costs are much higher, there is typically an equity component involved, and there may be control provisions as well. No two deals are identical, but a research firm gathering data from venture funds, hedge funds, nontraditional lenders, and other investment vehicles could probably put together databases similar to those used for market transactions of privately held companies or the valuations of limited partnerships that focus on the rates of return expected by these investors for the given level of risk they are willing to assume. Rather than building up the cost of capital and worrying about each of its components, perhaps we should evaluate the risk level of our subject companies first, and then observe what total returns relevant investors are targeting today for that level of risk.

Whether we do this or something else, we need to be more responsive to what is and isn't happening in today's rapidly changing markets and political environment.

An article that examines what is happening in today's market is almost impossible to write, because events continue to unfold at warp speed. When I started writing this one, it appeared that there would be no political deal on the debt ceiling. By the time I am submitting this, a deal was reached, the August 2 debt-Armageddon crisis was averted, and then Standard and Poor's downgraded the United States of America. Yes, the issuer of the reserve currency of the world has been publicly called into question. *"The outlook on the long-term rating [of the United States] is negative."*

I don't know for sure whether the top-down approach I suggested to finding a market cost of capital will work better than the bottoms-up approach we take today. Here is something, though, that I have observed more and more recently. I attended two parties this weekend, one with mostly lawyers and the other a community block party with a great cross-section of middle America—union members, secretaries, unemployeds, clericals, students, and elderly. The former group seemed representative of the judges who may sit on the cases we testify in, the latter of the potential jury pool. In both groups, the hot topic of conversation was the debt deal and the country's credit downgrade. It struck me that I've never heard this many people discussing economics and finance before. I've never seen such a high awareness and actual understanding of current events before. The typical Chicago person-in-the-street seems to have forgotten the Cubs vs. White Sox rhetoric and Bears' prospects, and is now debating international finances over their summer-time beers. That's a better picture than any graph I could print to show how significantly the world has changed.

> ***"Too-big-to-fail and too-politically-connected-to-fail have grossly distorted market actions. For the past few years, the world has done a really bad job of behaving as our finance theories say it should."***

It reinforced for me something that we all need to keep in mind when we prepare our valuations. The judges and the jurors know what's going on. We cannot walk into court with slick PowerPoints showing the risk-free rate and historical equity data going back to the 1920s or 1960s, and expect that these formerly basic concepts are going to be self-evident. They know there is no such thing as "risk-free" in today's world. They may disagree as to whether it is the government or "the rich" who are manipulating the markets, but when you say "market" to someone who lost a quarter of a year's pay worth of value from their 401k in one day, that is not a term that makes them trust you. They appreciate that this time it really is different, and that historical data are not as relevant as they used to be. These days I would so much rather be rebutting a valuation report than defending one.

FIRST DEFINE LEVEL OF RISK

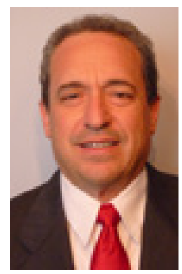
We need to accept this as a profession. At least change the terms so we don't look out of touch. More importantly, change the concepts. Accept that there may not be "the market" out there anymore; instead there may be a multitude of mini-markets depending on facts and circumstances. The one-size-fits-all approach to finding "the" market rate may not work anymore. Instead of adjusting the general market rate for our subject client's risk level, perhaps instead we need to first define the subject's level of risk and then track the specific investor groups that invest in that risk level. Whatever we do, we need to make sure that in front of the judge and jury our reports make sense, even when it seems that the world as we knew it no longer does. Now, more than ever before, you can't just grab your statistics off the back page of Ibbotson and substitute that for a very thoughtful analysis.

I understand that what I am saying goes against much of the theory we currently rely on. The concept of a risk-free asset is the foundation of modern portfolio theory. Focusing on certain investor groups or micro-markets would make our valuations somewhat investor-specific instead of relying on our hypothetical arm's-length buyer. On the other hand, we cannot ignore what is happening in the markets today. The crash of 2008 is widely believed to have been the result of a systematic mis-pricing of risk by large institutions, all presumably following modern portfolio theory. The market reality today is that companies are being funded by opportunistic investors who are looking for specific tranches of risk, and different risk levels get very different pricing structures. Too-big-to-fail and too-politically-connected-to-fail have grossly distorted market actions. For the past few years, the world has done a really bad job of behaving as our finance theories say it should.

It is not possible for our financial institutions, our political institutions, our economy, and our capital markets to get this shaken up without a substantial impact on valuation theories or methods. Even if you don't agree with that, it doesn't hurt to reevaluate and reconfirm that what we are doing still makes sense in the midst of all this chaos.

Pratt and Grabowski did, in the fourth edition of *Cost of Capital*, present various models and alternative work-arounds for consideration when enhanced risk factors make what we are currently doing no longer sensible. These days it is the entire economy that is distressed, not just our subject companies. Even if we are valuing a healthy company, it nevertheless is in a sick environment, and the heightened focus on risk and intense questioning of the applicability of historical data is warranted. The values you derive need to reflect your views and expectations of where the subject company is headed and what it is likely to be worth when it gets there.

Some of the feedback I received after my Jan/Feb 2009 "Market Turmoil" article remarked how pessimistic I seemed. At heart I think I'm an optimist. I believe that as our crisis unfolds, political breakdowns will force us into evolving a more efficient and effective form of government. I am certain that capital will continue to flow where it will generate the greatest returns, even if it flows through many different micro-markets as opposed to one monolithic market. I expect that young people who cannot find traditional employment today will lead America back to our entrepreneurial roots, and this will be the energy and innovation that drives our new economic cycle. Perhaps less important than all of these, but very relevant to *Examiner* readers, I also expect tweaks or outright changes to our valuation methods as we accept that risk needs to be even more prominent in our thought process. VE



Michael Goldman, *MBA, CPA, CVA, CFE, CFF, is principal of Michael Goldman and Associates, LLC, in Deerfield, IL, which focuses on matters relating to fraud, valuation, and insolvency. He has been qualified in state and federal court as an expert witness, and has served as a consulting expert in cases involving allegations of fraud, solvency, fairness, commercial damages, marital dissolutions, valuation issues, professional malpractice, and bankruptcy. Goldman teaches entrepreneurship at the Lake Forest Graduate School of Management, and has custom-designed courses in fraud, internal control, and accounting management in the school's corporate education division. He is a member of* The Value Examiner *Editorial Board. Website: www.michaelgoldman.com.*