Baner Financial Interersts

Building a Localized Risk Model

A Systemic Approach

(April 2015)

In our recent San Francisco office market analyses that you received from us in January, we concluded two over-riding issues:

First: We are in, and should continue to be, in a upward Momentum Commercial Office Market throughout 2015.

Second: The predominant dollar valuation range of existing "Class A" office property is $642 to $675 per square foot.

However, these current conclusions are but a snap shot in time of San Francisco office building values and investor perceived risk exposures. This January 2015 value range was affirmed from investor's qualification of individually perceived market risk as they quantified their acquisition decisions into an established capitalization rate of 5%. It was all based on historical and current information and thence quantified into this discount rate.

But what about future valuations and those ever capricious risk exposures? It is very true that anecdotal assessment of past and current activity are valuable in giving us this singular perspective and insight into present day value, but it can't, doesn't and won't account for added (or lost) intrinsic value (or actual dollar cost) for the future of your office investment.

This article will serve to address just how you might want to go about qualifying and then quantifying "problematic" future risk, comparing this risk against a competing benchmarks of capitalized rates of return, quantifying it into a balanced future risk assessment and then ultimately defining these qualifications of risk as a "cost" and "present value" in actual dollar terms per square foot. This is accomplished via the risk model we developed and I spoke of previously in the 2014-2015 Market Review.

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In a lead-up to this risk assessment model, and to further illustrate the importance of your valuating and quantifying future risk, I offer my own Mea Culpa: I do not believe that our markets today, yesterday or tomorrow are totally efficient, as many currently believe, nor do I consider all investors totally rational in their actions within these markets. Human Behavior and emotion tends to drive away predictable rationality to the benefit (or expense) of many. Financial equilibrium between buyers and sellers are indeed unique and unusual and is not the norm in most markets. This is why your personal assessment that clearly reflects your firms idiosyncratic sensitivities and privatization of costly future investment risk events are so relevant to equate through your own individual action or through your firm's respective diligence process.

So what really is risk? Risk is, after all, a part of everything we say and do. Risk is also brought upon us by actions of others upon us. Even though behaviorally, we are generally risk adverse by nature, albeit to different degrees, our continuing to recognize "opportunistic and positive risk" is still the bedrock of innovation to which to gives us outsized financial and personal success. Knowing when to hold and when to fold can only be learned through listening, experience and ... diligence.

Unfortunately, there is little consensus as to qualifying and quantifying day to day external risks in real estate. After all, risk exposures are a measure of uncertainty and therefore somewhat subjective. Nonetheless, this paper provides a systemic risk model that serves to both quantify and qualify Macro and Micro perceived intrinsic and extrinsic risks that surround the market specific to our local San Francisco office real estate.

I invite you to make your own assumptions, estimates and quantifications as you see it and visualize how it squares with our assumptions. This approach is a disciplined due diligence process spear worth attaching your negotiating and management ammunition belt. At the very minimum, this qualification and quantification of macro and local risk factors will definitely offer you mercurial confidence in your future decisions.

The following are quantifiable and previously researched assumptions of key indices for the San Francisco Office Market as presented in my firm's January 1, 2015 Market analysis:

Market Assumptions

1. Market size studied: 74,000,000 square feet.
2. Market Fully Serviced office rents: $67/sq.ft. = $4,958 Billion – market wide.
3. Market net operating Income: $45/sq.ft. = $3,330 Billion – market wide.
4. $642 to $675 per square foot.
5. Market area Employees:296,000 persons.
6. Employee Salaries: $60,000 Avg.
7. Interest rate Increase: 50 Basis Points. Cap Rate Increase = 5% Plus .1875% to reach .051875% Total in 2015. (See 7/1/13 Cap Rate Paper for Support)
8. Real Estate competitive benchmark alternative: (High Yield Corporate Bonds) Currently 6.1%.
9. Safe investment rate: 10 Year Treasury – 1.942% (4/2015).

Risk Qualifier and Quantifier

- A Probabilistic Model-

Risk Event	Description of Qualifier Event	Gross MKT % Potential Vacancy Created	Probability of Event (%)	Potential Income Risk Exposure (Gross Income)	Weighted Probability of $Risk Loss (Gross Income)
Lack of Demand	National Market Deflation/Recession	3.5%	12%	$173,530,000	$20,823,000
Fed Rate Increase	Med. Term Treasury Rates-5%	(See Addendum)	35%	$120,052,000	$42,018,000
Office Inventory re-supply	Prop M Compromise	2%	25%	$99,160,000	$24,790,000
Office Sector Sustainability	Tech Sector Correction	2.5%	30%	$123,950,000	$37,185,000
Economic Obsolescence	Tenants Movement to Sub-burbs	1.3%	15%	$64,454,000	$9,668,000
City Tax	Lease Revenue Tax	2%	10%	$99,160,00	$9,916,000

Weighted Cost of Additional Risk Exposure $144,400,000

Divided by: Total Market Gross Income ($67) 4,958,000,000

Localized Risk (All In) 3.537%

Plus Treasury Safe Rate 1.942%

Adjusted Market Capitalization Rate 5.48%

(rounded) **5.5%**

(Risk "exposure" per square foot $1.95)

(Risk "Value" Exposure/Sq.Ft. = $23.90)

Note: See addendum #1 attached for explanation of risk description and their probabilities.

As you can see, there is a 48 basis point (approximately .5%) disconnect between current market risk yield (5%) and risk adjusted yield (5.5%). That equates to a 10% cap rate valuation increased differential! Regardless of your own subjective interpretation of systemic risk, quantification you have to take notice and manage your to negotiation on your next deal with these this potential exposure limits in mind. After all, alerting you to the degree of and $ cost of future perceived risk is the entire point of this exercise.

This model reaffirms and demonstrates that, on balance, the previously indicated market capitalization rate of 5% as of today is somewhat aggressive as matched against our future risk assessment of 5.5% indicated above. An attentive monthly review of this differential and other upcoming risk exposures should be the rule and not the exception to run an ongoing and responsible risk management program. These risks should be reassessed in parallel with traditional market derived capitalization rates to see how they square. This will offer you a previewed inside look as to how much these exposures may potentially cost you, as versed to what the general semi-informed real estate commercial office market is thinking now, and how you may want to play it.

There you have it – A Risk Model You Can Work With!

William B. Baner
Managing Member
Baner Financial Interests
San Francisco

Addendum #1

Explication of Model Factors

1. Lack of Demand:

My concern here is based upon a broad nationalized basis about public expectations of a future deflationary or flat economy which in turn could crush U.S. consumer demand, factory production and employer office expansions. Although the impact would be considerable and cause our local potential vacancy to rise by over 2.6 Million square feet above what it is now, the probability of this office demand vaporization and it's ensuing vacancy occurring to this degree in 2015 is a minimal 12% in my view.

2. Federal Reserve Interest Rate Increase:

Irrespective of public (and my individual) concurring perception of a flat or declining interest rate environment going forward, the Federal Reserve is still going to raise short and medium term rates although modestly and cautiously over an extended period (a la Alan Greenspan).

I anticipate the probability event of this to be 1 in 3 with a maximum increase over 12-15 months of about one half of one percent for medium term 5 year treasuries. (Keep in mind that 5 year Treasury Swaps are what our commercial Mortgage Backed Securities (CMBS) yield spreads are mostly indexed upon today).

3. Office Re-Supply

We suspect a compromised new supply cap to be lifted in small part, "To offset the current Prop. "M" & "N" 1985 & 1986 development restrictions. The proposed compromises themselves, why and where they will occur are outlined in some detail in our 2014 – 2015 market analysis you recently received from us.

I anticipate a new development cap relief of about 1,480,000 additional square feet when the dust settles and about a 1 in 4 chance of it happening in 2015. This will add to our current new supply inventory although not all at once.

4. Tech Sector Sustainability

This subject matter was also reviewed in some detail in our 2014 – 2015 study (See pages 5 & 6 of that paper). Our view is there could be a potential 1,850,000 square foot vacancy impact to the market. This would include a momentum driven, multiplier unemployment effect that the tech sector would bring with it as well. Our Probability factor = 30% that the tech sector will implode which says that there is a 70% chance it won't in 2015. Ken Rosen, economist at UC Berkeley thinks 50% of small tech companies will succumb if this market cannonball occurs.

5. Economic Obsolescence

In every up "momentum" market cycle, there are always going to be employers who just can't, or won't, pay the required locally suggested fair market rent and will gravitate to other cities. This applies to new market entrants as well as roll-over tenants.

I expect this impact to be minimal and its probability effect diluted: (15% or a 1 in 7 chance). Nonetheless, this event will occur however will not function as a significant impact factor on our markets locally.

6. City Revenue Tax

A lease surcharge in the form of a revenue or use Tax has been drifting about city hall for years. With rising rents, city officials are becoming anxious to do so and may see this as an opportunity to put their nose in the financial tent of commercial real estate. This would be their Trojan Horse to go along with their now implemented and existing escrow dollar assessment to attached sellers on property sales.

It most likely will happen in good time although I don't feel 2015 is the year for this occurrence although there is some risk of it happening and it must be acknowledged as a financial risk today.

UPSIDE | By Morgan Housel 12/22/14

Investors Behaving Badly

It's funny what a bull market can do to our brains.

James Osborne, president of Bason Asset Management in Lakewood, Colo., recently met with a new client who benefited handsomely from the nearly six-year upward run by stocks.

The client balked at cutting his stake in one stock after it had grown to more than half his portfolio, even after Mr. Osborne explained the risk of not diversifying.

Asked if he would put half his money into the same stock if he was building a portfolio from scratch, the client said of course not.

"He saw these gains as 'house money,'" Mr. Osborne says.

Money earned passively in the market, rather than from toiling at work, can feel easier to gamble with. It is a dangerous bias psychologists call the "house-money effect."

The client ultimately diversified, "but the behavioral bias of the house-money effect was very powerful," Mr. Osborne says. "This is what happens after bull markets."

Everyone wants to assume they can think rationally. But with bear markets now a fading memory—and with volatility roaring back this past week—*now* is an important time to understand the common behavioral biases that cause investors to make regrettable decisions during bull markets.

Here are five others.

◆ **The backfire effect.** This is a powerful bias that causes us to double down on our beliefs when exposed to opposing viewpoints.

"We think this response occurs because people respond defensively to being told that their side is wrong about a controversial factual issue," says Brendan Nyhan, an assistant professor of government at Dartmouth College, who has studied the backfire effect in politics.

"In the process of defending that view, they can end up convincing themselves to believe it even more than they otherwise would have if they had not been challenged," he says.

The same flaw can run wild in investing debates.

If you are convinced that we are in a lasting bull market, how do you feel when you hear someone say that stock valuations are historically high, or that we are overdue for a correction?

If you find yourself so critical of opposing views that you become even more convinced the bull market will last, watch out. Once your priorities shift from determining the truth to blindly defending your original views, you have lost the ability to think rationally.

◆ **Confirmation bias.** This flaw causes us to seek out only information that confirms what we already believe.

Access to financial opinions has exploded in recent years, thanks to the rise of Twitter and blogs. That is generally a great thing. More smart investors are speaking their minds than ever before.

But it can be dangerous, because no matter what you believe—and no matter how wrong those beliefs may be—you can likely find dozens of investors who agree with you. Having other people confirm your views may cause you to become more convinced that those views are correct.

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Investors Behaving Badly

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Charles Darwin had a knack for obsessing over information that disproved his own theories. Investors should try to do the same.

◆ **Anchoring bias.** This phenomenon causes us to cling to an irrelevant piece of information when estimating how much something is worth.

UPSIDE

Your opinion on how much a stock is worth may be anchored to how much you paid for it. If you paid $100 for a share of Apple stock, you are probably more likely to think shares are worth more than $100 than another investor who paid $80 for the stock.

But the market doesn't know how much either you of you paid for the shares. And it doesn't care what either of you think is a fair price. Markets will do as they please, regardless of what price you are fixated on.

◆ **Recency bias.** This one is simple: It is another term for the tendency to use the recent past as a guide to the future.

People like patterns. If stocks have just went up, the natural tendency is to assume they will keeping going up—at least until they go down, and then we assume they will keep going down.

The S&P 500 fell 37% in 2008, and investors pulled more than $300 billion out of stock mutual funds from January 2009 to December 2012, according to the Investment Company Institute, a mutual-fund trade group.

Stocks have since had a blistering few years, and investors put $205 billion back into stock mutual funds from Jan. 1, 2013, to Dec. 3, 2014.

Markets move in cycles, but people forecast in straight lines. That is recency bias, and it is particularly dangerous after a long bull market.

◆ **Blind-spot bias.** This—the most dangerous investing bias—is a flaw that causes us to think the biases described above affect other people, but not ourselves.

In his book "Thinking, Fast and Slow," psychologist Daniel Kahneman wrote that "it is easier to recognize other people's mistakes than your own."

That's something to think about as you analyze your own investing behavior.

Morgan Housel is a columnist at the Motley Fool.

Investor: Silicon Valley Partying Like It's 1999

By Yoree Koh
And Rolfe Winkler

Silicon Valley is a risk-driven place. But over the past year, it may have taken on more than it can handle, according to one prominent venture capitalist.

"I think that Silicon Valley as a whole, or that the venture-capital community or startup community, is taking on an excessive amount of risk

'No one's fearful, everyone's greedy, and it will eventually end.'

right now—unprecedented since '99," said Bill Gurley, a partner at Benchmark, referring to the last tech bubble.

Mr. Gurley, who often voices his opinions on his blog, Above the Crowd, sat down with The Wall Street Journal as part of a Journal event series called "Tech Under the Hood." The investor in Uber, Zillow, OpenTable and other Web startups spoke on a wide range of topics. What follows is an edited excerpt of a conversation about potential cracks in the tech-startup investing scene.

WSJ: I want to read you something from your blog. You quoted Warren Buffet's famous quote, "Be fearful when others are greedy and greedy when others are fearful." And then you wrote: "Although we may have not reached the level of observing obvious greediness, there is most certainly an absence of fear. Those that managed companies in 2008, or 13 years ago in 2001, know exactly how fear feels. And this is not it." What did you mean by that?

Mr. Gurley: Every day that goes past I have this feeling a little bit more. No one's fearful, everyone's greedy, and it will eventually end. And there are reasons why this business is cyclical over time.

There's a phrase I love: "discounted risk." Do people discount risk? Right now you've got private companies raising

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Venture Capitalists Are Partying Like It's 1999

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$200, $400, $500 million. If you're in a competitive ecosystem and you raise that amount of money, the only way you use it—because these companies are human-based, they're not like building stores—is to take your burn up.

And I guarantee you two things: One, the average burn rate at the average venture-backed company in Silicon Valley is at an all-time high since '99 and maybe in many industries higher than in '99. And two, more humans in Silicon Valley are working for money-losing companies than have been in 15 years, and that's a form of discounted risk.

In '01 or '09, you just wouldn't go take a job at a company that's burning $4 million a month. Today everyone does it without thinking.

WSJ: Because the equity looks so valuable?

Mr. Gurley: Yeah, it's a whole bunch of things. But you just slowly forget, and half of the entrepreneurs today, or maybe more—60% or 70%—weren't around in '99, so they have no muscle memory whatsoever.

So risk just keeps going higher, higher and higher. The problem is that because you get there slowly the correcting is really hard and catastrophic. Right now, the cost of capital is super low here. If the environment were to change dramatically, the types of gymnastics that it would require companies to readjust their spend is massive. So I worry about it constantly.

WSJ: You used the word silly—a lot of silly stuff going on since '99. Give us an example.

Mr. Gurley: For the first time since '99, in the past 12 months, I've been in board meetings where the company says, "Our only option is a 10-year lease," at record pricing on a per square foot basis here in San Francisco, which is two or three times what the rent was three years ago. And so this is why it's all cyclical—because the landlords get greedy. They wouldn't do a 10-year lease if they thought that the rates were low. So they're implicitly telling you they want to lock this in for 10 years, which is its own form of greed because what happened in '99 is half the companies went bankrupt and they couldn't pay the lease over the 10-year period.

In the software-as-a-service world, where the risk is potentially among the highest, Wall Street has said it's OK to lose tons of money as a public company. So what happens in the board rooms of all the private companies is they say, "Did you see that? Did you see they went out and they're losing tons of money and they're worth a billion. We should spend more money." And there are people knocking on their door saying, "Do you want more money, do you want more money?"

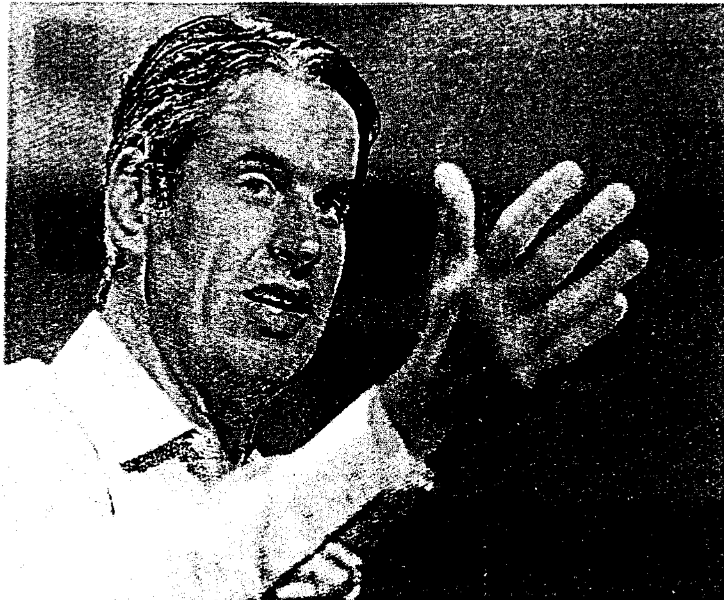
So it takes the burn rate up.

WSJ: As a result, is Benchmark pulling back?

Mr. Gurley: There are two types of answers to that question. How do we go about investing on a day-to-day basis in terms of new things? And I happen to believe that innovation happens more continuously, even though there are financial cycles, so you can't afford not to be out on the field. But I do think you want to look out for what is the long-term viability of something. I'd much prefer to do a Series A [funding deal] now than I would later-stage because of this type of risk. So that's one type of answer.

The other type of answer is what you advise your companies to do. That's really difficult because if you have a competitor that's going to double or triple down on sales and you just decide, "Oh, well I'm not going to execute bad business decisions, I'm just going to sit back," you lose market share. Choosing not to play the game on the field doesn't work, so you're left with trying to advise someone to be pragmatically aggressive with some type of conservative backdrop or alternative strategy in case the world shifts. But it's hard.

WSJ: And you see people apps like Yo or Snapchat. These things get hefty valuations but in reality what we're talking about right now is eyeballs. And once upon a time I remember people were really intrigued by eyeballs, and that didn't work out.



Bloomberg News

Venture capitalist Bill Gurley, shown in 2010, says cash-burn rates at tech startups are alarmingly high.

Mr. Gurley: I don't have that criticism as much simply because we've seen so many proven cases now of taking huge market share and then monetizing. That was said against **Facebook**, and that was said against **Twitter**. I think the jury is out on our sale of Instagram and whether we sold it too soon.

But I think it's different to employ a bunch of people when you don't have the wherewithal to fund yourself through and what type of risk are you taking (in that situation). I've come to believe that bad business behavior is coincidental with the best of times in our field.

WSJ: What do you mean by that?

Mr. Gurley: So, the crazier things get, the worse people execute.

I took my family down to the Galapagos this summer and read this book on the way down there called "The Beak of the Finch" which is about this couple that has lived on Daphne Island for four years studying the finch. And, amazingly, when floods bring tons of food to this island, the finch population goes up like three or four times. Inevitably, when the rains are normal the next season there is massive death. So, excessive amounts of food lead to a lower average fitness.

Excessive amounts of capital lead to a lower average fitness because fitness, from a business standpoint, has to be cash-flow profitability or the ability to generate cash flow. That's the essence of equity value.

WSJ: So who loses? Who is way ahead of themselves?

Mr. Gurley: That's obviously loaded. I do think there is a high likelihood that we'll see some high-profile failures in the next year or two. I actually think that could be healthy for the ecosystem. You remembe[r] in March when the IPO windo[w] closed for like three weeks a[nd] everyone thought that the world was coming to an end? You really have to work hard to remember it because it reversed itself so quickly. I thin[k] having events like that can lead to sanity.

And another element is th[at] most people don't think about liquidation preference. This is pretty technical, but li[q] preference piles up on a startup. It's not common stoc[k] it's preferred, and it has a debt-like element on the abili[ty] to get your money back. So if your liq-preference stack gets so big it makes it is hard to raise the next incremental round of financing, unless you have some kind of financial behavior that says it definitely should be worth more.

WSJ: So what does that mean exactly? Last in, first out?

Mr. Gurley: Sometimes that happens when terms shift. But at the very least, your return horizon might be impacted by, you know, now we've got private companies raising between $200 million and $1 billion. If the company ends up being worth not that much, then you don't even get your money back. And your return payout at different points on the horizon may be negatively impacted by the fact that so many people could take their money back instead.

One of the first things that happens when that starts to become a problem is that you start to see derivative terms, which gets to what you were talking about—first money out. And those things are guaranteed returns against an IPO or some type of debt. You have creeping PIK dividends (dividends paid in preferred stock), that kind of thing. And that then starts to change your return profile for everyone underneath it.

1) NOI = $45.

Cap = .05

2) New Cap = + .0185

.051855

3) $\frac{.0500}{.051855}$ = ~~.9803~~% .9643%

4 1 − ~~.9903~~ = ~~.003686%~~

.9643 = 3.568%

5) $45 x 3.568% = $1.60/sq ft ($\frac{1.60}{.05185}$ = $30.m Value)

6) $1.604 x 74m = $118,813,000

7) $118,813,000 x 55% Probability = $65,347,000 Weighted Cost to MKT.

1/2 % int increase (yield increase)

1% = 375.

1/2 % = 1875.

.051875