**Forecasting Market Rents (In 2 pages) and Prices for Internal Use Only** Draft: January 8, 2010

Below I describe a process that is not a purely “top down” or “bottom up” approach but rather an integrative approach using fundamentals, technical’s and factors which distort or interfere with the market. This should be consistent with how we do market analysis as well as forecasting. It is not a discussion on sequential stage models that may be used as econometric systems but we should continually work on robustness and simplicity where possible. I also do not discuss software, i.e. RATS, PCGets, STRATA as this is less relevant to process.

***If we track the prior forecasts of rents and prices from the commercial real estate world, most everyone is wrong and the key to winning is to be less wrong than others and to make sense***. But the most valuable insight we can provide to business is to tell them where the market is heading as opposed to where we have been. In my thirty years of experience forecasting the housing market we kept getting better but we did this by incorporating the best of two worlds, the theoretical and the technical, and then we added a third dimension and when we were able to put all this together we finally started getting it right. How far can we forecast in the housing market? We can forecast several years out but no more than 3 years with any reliability. Here is what we know works:

Use a three pronged approach to forecasting. **Start with the long term fundamentals** and demand and supply and chart out the long term trends. We know for example that average ages are increasing and thus so will the health care industry and medical office and it is a no brainer to say this will be increasing over time. Fundamentals include anything that drives demand like demographics (age, household size, etc) and employment (which industries, where located, in which industries in the US globally competitive and are those in your back yard? Who are the start ups?) or that drives supply. Supply is primarily driven by a difference between market values and the cost to produce the same building (with normal profit, current interest rates and terms and risks to develop). The wildcard here is often land costs which may be sticky on the downside or affected by government incentives (TIFs, bonus densities) or impact fees that can at time result in negative land values.

One way to monitor supply is to bring in an index which measures the difficulty of adding new supply. This difficulty is a function of only two categories, one natural and one human induced. Natural constraints include water, mountains or existing build out. Human constraints include all land use regulations and hurdles that must be jumped through prior to gaining entitlement. In general areas that are difficult to add new supply stay that way for many years and those that are easy stay easy. Measuring both supply elasticity’s (human or natural) can be hard but it has been done (See L. Rosen or S. Malpezzi or Albert Saiz) and we can do it with some research. So first we get a handle on demand, current construction costs and likely supply response and use this estimating for long term trends. Areas with greater supply inelasticity tend to have faster growth in rents and values we know are a function of rents, now and expected. All this first step does is give us a long term trend expectation. But we know in the short run the market can be over supplied or under supplied and that in a world without collusion we should expect fluctuations (cycles) around long term trends.

To get a handle on where we will go next quarter or next year as we move back towards that longer term trend, we need to look at technical factors. Technical factors are anything that is a reflection of both demand and supply, the interaction of the two. Examples of technical factors are vacancy rates, the change in vacancy rates, absorption the past quarter and year and the trend in absorption (net and gross), or simply rental rate trends. We can graph long term vacancy rates against rental growth changes and for each property type there is a normal equilibrium above which or below which we see rental pressures.

One of the best leading indicators of the market are sublease rates and it does not seem that PPR uses these nor could they have used them if the data was not available to them before this. Sublease rates going up or down lead vacancy rates which we know leads changes in rent. Another leading indicator is the square feet per employee figure. When this is going up for existing building stock then we know that firms are downsizing and when leases expire they will often renew with less space. Other firms with increasing and high employee counts will need more space. We must be careful to know what is long-term-normal for each type of industry sector, so as not to confuse a call center with a growing firm as it may or may not be, but the average sq ft per employee is a good leading indicator. This is the goal of technical indicators; to find leading indicators and do a better job monitoring them then our competitors. Technical indicators should help us take the long term trends and estimate where we are headed next quarter and next year and if we are lucky a few years out. We will generally want to run some statistical package that helps us capture both fundamental data and technical data which can include prior rent levels as well, such as STATA, RATS, PCGETS or others. My preference is for a simple model that quickly optimizes error without a lot of iteration on the functional form and while models that are complex like neural networks may work we cannot explain or interpret them.

Last, the third element in forecasting is to consider behavioral factors and uncertainties that are less predictable based on market interference (government incentives, regulation or penalties) or unusual acts of nature or simply rare events. This includes what might be described as market appetites as might be observed by capital costs and flows (LTVs, debt terms, cost of capital, required equity returns, sources of funding) or the governments influence on the cost of capital, capital flows, bail outs, bank required capital, relative expected returns in the market place from one asset class to another (real estate vs. dot com or bio-med for example). These we find up on by watching all financial markets, reading and monitoring legislative efforts at the Federal, State, and Local Levels of interest and scanning local papers for deals, i.e. CoStar gets tax credit offer to move to DC, but it would be even better to have met with the local leasing rep and know he was working on finding suitable locations before the press release. Another example of these exogenous factors would be a local ruling that will limit certain types of development in the future. This will drive up rents by minimizing supply and we cannot as analyst ever miss such things.

Among the key points here are that good market analysts must be good forecasters and we can help by doing a good job on all the considerations described above. Some of this work can be centralized (such as employment and capital flow research or technical charts) but the local factors and nuances of the local market require field research.