



A partnership between the UCLA Ziman Center for Real Estate and the UCLA Anderson Forecast

May 2014

Monthly condensed analyses of crucial real estate and economic issues offered by the UCLA Anderson Forecast and UCLA Ziman Center for Real Estate. Here, Xudong An, visiting scholar at UCLA Ziman Center for Real Estate, discusses econometrics and develops a new method of constructing a rental index that tracks market-wide rent dynamics more accurately than the conventional methods.

The Commercial Rent Blues

New Study Shows Rental Growth Is Slower and More Volatile Than Usually Perceived

By Xudong An, Visiting Scholar, UCLA Ziman Center for Real Estate

This article was adapted from Commercial Real Estate Rental Index: A Dynamic Panel Data Model Estimation by Xudong An along with, Yongheng Deng, National University of Singapore; Jeffrey D. Fisher, Indiana University – Kelley School of Business and Maggie Rong Hu, University of New South Wales

The value of commercial real estate is largely determined by its income-generating capacity. Therefore, the risk and returns associated with commercial real estate investment are heavily affected by the cash flow dynamics of commercial properties. In this paper, Professor Xudong An and his coauthors take a deep dive into econometrics and develop a new method of constructing a rental index that tracks market-wide rent dynamics more accurately than the conventional methods.

In fact, the research finds that the long-term rental growth is significantly lower than what is usually perceived or estimated. A 3 percent rental growth assumption (close to inflation rate) is often seen in pro forma analysis, and if one were to apply a conventional time series model to average rental growth the estimated long-term rental growth can be even higher. However, the current research finds that the long-term average rental growth for all property types combined is only slightly over one percent.

“Rental growth rate is significantly overestimated: When all property types are combined, the long-term average rental growth is slightly over one percent.”

The research applied a dynamic panel data model to individual property-level rent data. It looked at the actual rents paid by tenants of 9,066 properties owned by the National Council of Real Estate Investment Fiduciaries (NCREIF) members between the second quarter of 2001 and the second quarter of 2010. Using this rich dataset and a rigorous methodology, the authors confirmed a number of economic intuitions regarding the commercial real estate rental market.

Based on the index constructed, in the nine years between 2001 and 2010 the markets have experienced a full growth cycle as evidenced by positive rental growth in the early 2000s, followed by a downturn between 2003-2004, followed again by strong rental growth in the years between 2005 and 2008 in the US commercial real estate sector.

Rental rates started to fall again from the third quarter of 2009, in the aftermath of the global financial crisis. Certainly, the cyclical nature of rental growth is intuitively expected: Commercial real estate (offices, retail space and industrial space) is highly dependent on employment, consumption and production. Thus, the general business cycles have a strong impact on rental growth. Further, construction lags and the difficulty of demolishing spaces can force supply-demand imbalances for relatively long periods, thus forcing prolonged ups and downs in rental growth.

Second, rental growth tends to lag behind economic recessions. For example, although the dot com bubble burst in 2001, and was quickly followed by a serious economic recession, we begin to see rent to decline only in the second quarter of 2002. More recently, the growth in rental rate slowed down significantly in the last quarter of 2008, but it only turned negative in the third quarter of 2009. The timing of the downturn lagged behind the mortgage market crisis, the financial crisis and the subsequent economic recession. However, such sluggishness is to be expected, given that commercial real estate leases – especially office, retail and industrial leases – tend to stipulate relatively long-term periods, and rate adjustments tend thus to be slow. Model estimates also show that rental growth is mean-reverting: That is, large waves of rental growth are usually followed by weak growth in rent.

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The biggest surprise discovered by the current research is that the long-term average rental growth rate is significantly smaller than what is usually perceived. Our estimate shows that the nominal long-term average rental growth is slightly over one percent when all property types are combined. Also, we find that the use of the simple average method of constructing the index results in a substantial overestimation of long-term rental growth, and an underestimation of rental growth volatility.

Across different property types, the growth of rents follows significantly different patterns. The raw data shows that apartments have the lowest average rental growth. However, from the risk-return perspective, retail spaces are the worst performing as they demonstrate only moderate long-term average rental growth rates, while boasting the highest levels of growth rate uncertainty. Different supply-and-demand elasticity could be the main driver of the different time series pattern in rental growth.

The recent decades have witnessed the development of a more unified capital market that has strong impact on commercial real estate development and investment. Moreover, real estate management has become more standardized and cross-region property management is now very common with the big management companies for institutional investors. Therefore, it is interesting to see whether there is still significant geographic variation in the commercial real estate rental market and how the geographic variation has changed over time.

The research discovered that among the top five metropolitan statistical areas (MSAs), Washington DC stands out in most parts of our study with a significantly higher rental growth period than Chicago, Atlanta, Dallas and Los Angeles, while those four MSAs have very similar rental growth patterns. This is not totally unreasonable given that Washington DC has the US government as its economic base and there are many government leases in the office market, and thus, it is fairly immune from recession.