Real Estate Analytics: Unlocking Value in Commercial Real Estate in the Middle East

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On some level, institutional investors in the commercial real estate ('**CRE**') space have always collected and assessed data to make informed decisions when buying, operating or disposing of properties. Data analytics, therefore, is not a new topic. But the granular level of data that is now being aggregated, along with the latest developments in artificial intelligence, is paving the way for a new era in CRE. That is the reason why data analytics is now a central topic in boardroom conversations, with the main question being: How can management convert this data into knowledge that can deployed to be more efficient in managing CRE investments?

Data Analytics Defined

The Institute for Operations Research and the Management Sciences (INFORMS) defines data analytics as the scientific process of transforming data into insight for making better decisions. In general, data analytics can be classified in three main categories of techniques: descriptive analytics, predictive

analytics and prescriptive analytics.

Descriptive analytics is backward looking in that it is focused on describing the past. It is perhaps the most commonly used technique by CRE investors and asset managers who rely heavily on property performance reports, data dashboards and what-if spreadsheet models.

Predictive Analytics is the set of techniques used to extrapolate from past data forward looking projections. This category encompasses a number of tools (e.g. linear regression, time series analysis data-mining analysis, etc.) that decision makers rely on to get a better sense of what the future holds. In CRE, for example, real estate developers can examine past data in relation to their sales to construct a mathematical model that would predict future sales.

Prescriptive analytics differ from predictive models in that, through the use of rules, they are able to prescribe a course of action. This is why they are often referred to as rule-based models. Take the example of a real estate investment fund ('**REIT**') that requires income generating assets and where deal sourcing is an important process for the purposes of identifying future acquisitions. The REIT may develop a model that can predict the probability of tenants defaulting on the payment of rent under their leases. The management of the REIT could enhance the model by adding a rule that says if the estimated probability of default is more than 0.6, then the REIT would not explore the deal origination offer. This way, the predictive model, coupled with a rule, becomes a prescriptive model. The net effect is that the REIT could save substantial time and costs by rejecting offers that are not aligned with its core investment strategy.

The benefits of real estate analytics

The benefits of real estate analytics are numerous. CRE investors can leverage analytics across key steps in the asset life cycle, from deal sourcing, acquisitions, operations to asset disposals. We set out below some examples on the application of real estate analytics in CRE.

Example 1: Real Estate Developer

A real estate developer wants to identify underused but high-value parcels zoned for development. The developer can look into the sales and other information contained in previous listings on Property Finder for example or similar websites. These sources are the traditional cornerstone of information for CRE investors. However, these databases have their limitations and may not be able to anticipate future potential. The developer can rely on advanced analytics to quickly identify areas of interest, then assess the value of a given plot of land with a predictive lens. The developer can incorporate a number of variables in its model, some of which can be traditional (e.g. macroeconomic, demographic, median age of occupiers, etc.) with some other non-traditional (e.g. number of luxury restaurants with a 1 mile radius, building energy consumption, reviews of nearby businesses on commercial apps, etc.) in order to optimize the timing of the development, the mix of uses in the development, price segmentation and other factors to maximize value.

Example 2: Mall operator

A retail mall investor can use traditional property data around performance, combine it with alternative retail sales data that is retrieved from various sources (e.g. mobile sensors, social media, physical store sales, etc.) and use machine learning algorithms to analyse the behaviour of consumers within a specific area or to profile retail tenants.

Example 3: Asset Manager

An asset manager wants to expand and optimize a portfolio of office buildings. Machine learning algorithms can rapidly combine macro and hyperlocal data and forecasts (e.g. distance from the asset to metro, number of nearby coffee shops and gyms, etc.) with a view to prioritizing the areas with the highest demand for offices. This allows the asset manager to identify buildings in these areas that are undervalued but rising in popularity.

Challenges ahead

The benefits of real estate analytics are clear. This begs the question: what is preventing its scalability in the CRE space?

We believe that there are three barriers that CRE investors need to overcome.

First, CRE managers and investors continue to rely on traditional approaches to decision making. These approaches can be based on precedents (e.g. 'it has always been done this way'). In some instances based on gut feeling or market sentiment (e.g. 'the demand for residential properties is picking up'). In other instances, CRE managers and investors rely on rules of thumb (e.g. 'as a mall operator, we schedule twice the number of footfall on holidays').

Second, a large number of CRE managers and investors lack the awareness about new datasets and analytical techniques. Some may be unsure where to begin while others may not know which new skills and capabilities should be added to their workforce. An effective real estate analytics strategy requires upfront investment in the right mix of talent, tools, and technology.

Third and foremost, data risks and the uncertainty of the return on investment ('**ROI**') could make CRE investors and managers hesitant about deploying substantial investments in this field. New technologies are not risk-free and so appropriate due diligence should be carried out in order to ensure that the processing of data does not raise privacy concerns such as when the data contains personally identifiable information or other type of confidential information. In addition, investor organizations should give particular attention to the ROI analysis to ensure that it incorporates a realistic assessment of the returns that they would generate from investing in this field.

Embracing Analytics

Real estate analytics cannot serve as a crystal ball. Its primary function is to assist CRE investors and managers in validating the investment thesis. But when it comes to the typical real estate challenges, advanced analytics can provide powerful tools to assist in the decision making process and to help in identifying what matters most. Organizations who realize the potential of advanced analytics and invest in a robust data architecture will, most certainly, gain a competitive advantage vis-à-vis their peers for years to come.

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