ProMS®

Big Data: Big Deal or Big Yawn

Can the use of Big Data help commercial real estate investors make better decisions?

Radley & Associates Ltd

Should the CEOs of REITS and CRE Fund Managers be losing sleep because they can't see the relevance of Big Data to their businesses?

What the professional pundits say…

"Big data analytics offers you new opportunities for insight and business change"

Cap Gemini

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"While big data may be ready for business, are business leaders ready for big data?"

"For a lot of executives, big data is the land of false promises and lost dreams"

Deloitte Consulting

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"Big data ushers in the possibility of a fundamentally different type of decision making"

"The real estate industry has already seen how access to previously private data can change the dynamics of a market"

"In fact, big data may ultimately be a key factor in how nations, not just companies, compete and prosper"

McKinsey Quarterly

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Executive Summary

Should commercial real estate executives be concerned with all the hype surrounding Big Data? Many argue that it is transforming business decision making and is having a significant impact on some industries – does it have relevance for commercial real estate investors?

The property industry has recognised for many years that the collection of data is important with initiatives such as IPD and CoStar. However, it could be argued, the potential has not been realised because the tools to make use of the data have not hitherto existed.

New and sophisticated techniques are now emerging that enable real estate investors to make use of the extensive data that is available for decision making: but for property investors to gain value from these new insights a change in mind-set is required.

Big Data and Commercial Real Estate

Big Data, or the collection and analysis of vast amounts of information to improve forecasting and decision making, is transforming our understanding of phenomena as diverse as weather patterns, astrophysics, epidemiology, crime, and coffee prices. Is it time for property companies to hire data miners to trawl the internet for insightful data – or are we in danger in jumping on a bandwagon without fully understanding where to look for meaningful information, what questions we are trying to answer or knowing if the tools exist to make sense of the data we are looking at?

It could be argued the commercial property industry has long understood there may be value in data and thus the gathering of market information started well over forty years ago with IPD, CBRE, NCREIF and others gathering transaction and market information. DMGI and its subsidiaries have gathered data from areas ranging from CMBS defaults to which regions are affected by flooding. Market researchers and companies such as CoStar and Experian gather yet more data on tenancies, footfall, rents and asset prices. The question is what value has been generated so far? Have better decisions been made as a result and have investors avoided risks?

One might correctly assume that to date the main usage of this extensive amount of data is to draw anecdotal conclusions rather than quantitative analysis. As the tools to understand and mine economic and property data emerge it will become possible to produce better forecasts by incorporating the insights made available by using this information.

However, to make use of Big Data it is first necessary to reframe the questions that are being asked. Property investors tend to ask the question: what will my return on an asset be in absolute terms? A more useful question might be how does the risk/return of this asset

compare with the risk/return of another asset? Big Data is very good at helping answer these types of questions – it is no better than other forms of crystal ball gazing at knowing what the absolute outcome will be. In other words Big Data is about statistics and probability. The Meteorological Office crunches vast amounts of data that enables it to provide a probabilistic forecast: it cannot say with 100% certainty what will happen to the weather in the next 48 hours but it can give very reliable probabilities of what will and will not happen.

The most important factors influencing the rental and capital value performance of a building is what is happening to the economy around it – and how this impinges on the behaviour of tenants, what rents the market can bear, how long vacancies last and the value of the building.

This is where Big Data and the ability to analyse large amounts of information can provide insight. Through the measurement of key economic trends such as; economic growth, interest rates, consumer prices, the FTSE, bank lending, exchange rates, company failures we can begin to understand how economic factors interact with rental rates, discounts, void periods and capital values and from that we can identify trends and how assets will perform in the future. For these trends to be of any value we also need to be able to narrow our insights down to a local geography and industrial sector – and ultimately to a single building or unit.

By analysing economic data that stretches back nearly half a century we can develop an understanding of the trends that link individual properties with broader movements in the economy. Seeing how these move in concert (for example, when GDP falls; so do rents, more tenants default, vacancies increase and thus capital values also shrink) - and we can measure these precisely – it becomes possible to quantify how economic factors impact on a unit, building or portfolio of buildings. This approach allows us to get away from opinion and anecdotal evidence and use facts to support the analysis.

With the availability of powerful computing, which used to be confined to a few university based super computers such as those used for weather forecasting or modelling the behaviour of nuclear reactors, it is now possible to crunch – or simulate - large amounts of economic and property data. Computing simulation provides the tool to understand how the economy will affect the risk and returns of individual buildings and portfolios.

The challenge for the commercial real estate industry is twofold; firstly it is necessary to educate the industry on what is now possible with both big data and computing and, secondly, to recognise that no one knows the future but we can know the probability of different outcomes – this implies that it is more helpful to be thinking about the 'distribution' of possible values rather than demanding a single (but wrong) answer.

The commercial real estate industry needs to improve the education of its analysts and decision makers to include a better understanding of risk and probability. Without that change in culture and education the industry will not be able to make full use of Big Data. However, if the industry grasps this challenge, the ability to improve forecasting and risk measurement will enable those firms that adopt new approaches to make decisions that mitigate risk and improve investor returns. Big Data has the potential to transform the way in which commercial real estate is treated as an asset class as the types of analysis that it enables allows investors to measure risk and return on the same basis as other assets.

Radley & Associates is an independent firm dedicated to the development of advanced simulation based analytics for the Commercial Real Estate industry. Our clients include leading banks, fund managers and REITS. We have deep expertise in property, simulation modelling, econometric analysis and risk.

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