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THE ACCURACY OF PROPERTY FORECASTING

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ABSTRACT

Property forecasting is an important component within a property investment strategy. This paper will review recent developments regarding property forecasting; particularly highlighting recent studies concerning the accuracy of property forecasting in the US, UK and Australia, and the role of expert judgement in property forecasting.

INTRODUCTION

Property forecasting is an important component in property investment decision-making (Chaplin, 1999; Mitchell and McNamara, 1997). This has become increasingly important as global funds under management have significantly increased from US\$ 23 trillion in 1996 to US\$ 49 trillion in 2004. In particular, many investors have developed global property portfolios, with an increased focus on the maturing Asian property markets; particularly those with high levels of property market transparency (see Table 1), and the recent development of global property securities funds (see Table 2) and the significant development of REITs in Asia.

While all forecasting is subject to some degree of uncertainty, a high degree of sophistication has been developed over recent years, with a range of advanced quantitative and qualitative procedures now used in property forecasting, including judgemental procedures, causal/econometric procedures and time series/trend analysis procedures (Higgins, 2000; Rowland and Kish, 2000). The role of judgement, in which property forecasts are mediated and reviewed within property organizations, has also been highlighted (Gallimore and McAllister, 2004).

This has seen numerous property forecasting studies in forecasting property rents, stock levels, returns, yields and cash flows (eg: Brooks and Tsolacos, 2001; Chaplin, 1998, 1999, 2000; Matysiak and Tsolacos, 2003), econometric and structural modelling (eg: Chaplin, 1999; Matysiak and Tsolacos, 2003; Tsolacos, 1998) and the comparison of forecasting procedures (eg: Ball and Tsolacos, 2002; Brooks and Tsolacos, 2001; Chaplin, 1998, 2000; Newell and Karantonis, 2003; Stevenson and McGrath, 2003; Wilson and Okunev, 2001; Wilson et al, 2000).

Despite this increased sophistication in property forecasting methodologies, differences in property forecasts still occur due to differences in the structure of the econometric models, statistical procedures and data used (Mitchell and McNamara, 1997), as well as the use of potentially flawed economic forecasts and poor data (Ball and Tsolacos, 2002; Higgins, 2001). In many instances, simple forecasts (eg: via naïve predictors) have been found to be more accurate than using complex econometric models (Chaplin, 1999, 2000; Higgins, 2001; Wilson et al, 2000).

Assessing the accuracy of economic forecasts has been regularly conducted; for example, IMF forecasts (Arora and Smyth, 1990) and OECD forecasts (Ash et al, 1990), with professional forecasters often seen to add little to forecasts generated by simple models (Leitch and Tanner, 1995) or to perform poorly (Chumacero, 2001; O'Connor, 1997). However, the equivalent level of analysis of the accuracy of property forecasts has not been conducted, with much of this property forecasting research focusing on developing a suitable model, with-holding data and testing the model's predictive ability, rather than using industry expert opinion-based property forecasts.

As such, this paper will review recent developments regarding property forecasting; particularly highlighting the accuracy of property forecasting and the role of expert judgement in developing commercial property forecasts.

ACCURACY OF PROPERTY FORECASTING: AUSTRALIA

The following section highlights the results of a recent study conducted by the author (with John MacFarlane, UWS) on the accuracy of property forecasting in Australia.

Surveys have been conducted six-monthly since 1998 by the Australian Property Institute to assess one year ahead real capital growth forecasts for the Sydney CBD office, non-CBD office, retail and industrial property markets. Typically, 29 respondents participate in this survey, including the leading commercial property players in Australia in the areas of property fund managers, property analysts and valuers; results are only available at the consensus level, not for individual property forecasters. These property forecasts over 1999-2005 were compared against the Property Council of Australia's property performance indices to assess the accuracy of these Australian property forecasts.

Figure 1 presents the forecast and actual performance for these four property markets over 1999-2005. Key aspects to emerge are:

- forecasters tended to be consistently optimistic; particularly for Sydney CBD office and non-CBD office property,
- forecasters tended to be conservative; particularly for industrial and retail property,
- forecasters were most effective in getting the market turning points correct for CBD office and to a lesser degree for non-CBD office,
- some inertia was present in forecasters responding to changes in the market,

- forecasting uncertainty was a more critical issue than forecasting disagreement,
- forecasters out-performed naïve property forecasting strategies (eg: zero growth strategy, no change strategy) for industrial and retail property, but not for CBD office and non-CBD office property,
- no significant differences were evident in property forecasting ability for fund managers, property analysts and valuers, although valuers tended to be less optimistic than the other two groups of property forecasters.

ACCURACY OF PROPERTY FORECASTING: UK

The following section highlights the results of a recent study conducted by the author (with Patrick McAllister and George Matysiak, University of Reading) on the accuracy of property forecasting in the UK.

Surveys have been conducted quarterly since 1998 by Investment Property Forum to assess one year ahead forecasts for capital growth, rental growth and total returns for the UK property market. An average of 24 property forecasters participate, including property advisors, fund managers and equity brokers from leading UK property organisations; results are available at the consensus level and anonymously (to the project research team only) for individual property forecasters. These property forecasts over 1999-2004 were compared against the Investment Property Databank's property performance indices to assess the accuracy of these UK property forecasts.

Figure 2 presents the forecast and actual performance for capital growth, rental growth and total returns over 1999-2004. Key aspects to emerge are:

- forecasts tended to have high levels of uncertainty rather than disagreement,
- evidence of consensus or “herding” amongst forecasters was high, with limited disagreement,
- forecasts tended to be conservative, biased and less volatile compared to actual property returns; this was reflected in forecasts tending to be under-estimates in an improving market and over-estimates in a deteriorating market,
- forecasts tended to be inefficient, with forecast errors persisting,
- ability to pick market turning points was not high.

As well as these consensus level results, individual property forecaster behaviour was assessed. The key results were:

- consistent top performance by property forecasters is difficult to achieve; see Table 3,
- there were no differences between property forecasters and non-property forecasters in terms of consistent top performance; see Table 4,
- most evidence of forecasters being able to repeat strong performance was for rental growth,

- significant reduction in consistent top performance occurred for two year ahead forecasts (compared to one year ahead forecasts),
- property advisors and fund managers tended to be marginally more accurate than equity brokers,
- in specific years, “best” individual forecasters were property advisors (45% of years), fund managers (20%) and equity brokers (35%); however, this performance was generally not repeatable by individual property forecasters,
- some “banding” was evident, with property advisors tending to be optimistic for capital growth, rental growth and total returns; see Table 5,
- forecasters tend to be conservative , by under-estimating in an improving market and over-estimating in a deteriorating market; see Table 6.

Overall, the forecasting results from these recent property industry expert surveys in Australia and the UK raise significant issues concerning the accuracy of property forecasting. This complements previous research; in particular, Ling (2005) found no positive correlation between property analysts’ forecasts and property return performance in the US over 1991-2000, as well as Newell and Karantonis (2003) finding that naïve property forecasts performed at least as well as investor sentiment surveys in Australia over 1991-2000.

EXPERT JUDGEMENT IN FORECASTING

Property forecasting is an essential, but difficult process in property investment decision-making. As shown above, uncertainty is a critical factor in property forecasting. Whilst quantitative econometric models are a useful starting point in producing property forecasts, the significant role of uncertainty sees the need for expert judgement in modifying these initial model-driven forecasts by using in-house consultation before final presentation of these property forecasts to clients (Gallimore and McAllister, 2004). Using interview surveys of major UK producers of property forecasts, Gallimore and McAllister (2004) have provided an incisive analysis of the nature and extent of how expert judgement is used in producing these final property forecasts.

Whilst Figure 3 indicates the general role of expert judgement intervention in the property forecasting process, the key specific aspects identified by Gallimore and McAllister (2005) in their interviews were:

- property forecasts are not the final product, but part of a range of inputs into the property investment decision-making process,
- the property forecasting process is complex, with both quantitative analysis and expert judgement considerations having a key role in developing the final forecast,
- forecasters acknowledged the limitations in their econometric modelling; both in terms of data reliability and unexpected shocks; highlighting the need for expert market participant insights,
- expert judgement plays a more significant role in forecasting property yields, with econometric techniques more evident in rental growth forecasting,

- the degree of uncertainty in property forecasts is rarely communicated to clients in a formal manner,
- forecasts need to be acceptable to the user to maintain client confidence and credibility,
- forecasters try to avoid presenting extreme or contentious forecasts, with “self-censoring” or “censoring” applied via in-house consultation,
- the behavioural aspect of “anchoring” may be evident, reflected in smooth or conservative forecasts,
- forecasting success (or failure) is often defined in relative terms; more importance is often placed on getting the performance rankings correct rather than getting the forecasts absolutely correct.

Overall, property forecasting is an important process, but involving a significant degree of uncertainty. This uncertainty highlights issues concerning the accuracy of property forecasts and importantly, the need for qualitative considerations in addition to the quantitative model-based considerations when developing property forecasts for clients. This paper has attempted to highlight key issues in these important aspects of property forecasting.

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Table 1: JLL global property transparency index 2004

Highly transparent (1.00-1.49):

Australia (1.19), New Zealand (1.19), United States (1.24), United Kingdom (1.24), Canada (1.37), Netherlands (1.37)

Transparent (1.50-2.49):

Hong Kong (1.50), Sweden (1.51), **Singapore (1.55)**, Germany (1.60), France (1.62), Finland (1.64), Switzerland (1.68), Ireland (1.82), Belgium (1.92), Denmark (2.01), Austria (2.08), Norway (2.15), Spain (2.19), **Malaysia (2.30)**, South Africa (2.37)

Semi-transparent (2.50-3.49):

Italy (2.73), Portugal (2.85), Czech Republic (2.88), Hungary (2.88), **Japan (3.08)**, **Taiwan (3.10)**, Poland (3.12), Mexico (3.14), Israel (3.21), Chile (3.24), Greece (3.31), Estonia (3.36), **South Korea (3.36)**, **Philippines (3.43)**, **Thailand (3.44)**

Low transparency (3.50-4.49):

Brazil (3.62), Russia (3.64), **China (3.71)**, Argentina (3.76), **India (3.90)**, Costa Rica (4.00), Columbia (4.10), **Indonesia (4.11)**, UAE (4.31)

Opaque (4.50-5.00):

Turkey (4.50), **Vietnam (4.60)**, Egypt (4.67), Saudi Arabia (4.67), Romania (4.71), Ukraine (4.86)

Source: JLL (2004)

Table 2: Global property securities funds: September 2005

Fund Name (top 14 funds)	Assets under management (US\$)	Listed	Inception Date	% Asia	% Europe	% North America
ING Clarion Global Real Estate Income Fund	\$2,701M	US	Feb-04	12.9%	16.6%	70.5%
Nikko AMP Global REIT Fund	\$1,263M	Japan	Jan-04	44.0%	9.0%	47.0%
ABN AMRO Global Properties Securities Fund	\$1,253M	Netherlands	Sep-95	-NA-	-NA-	-NA-
Sumitomo Mitsui Global REIT	\$874M	Japan	Jan-04	43.9%	11.9%	44.3%
AMP Capital Investors-Global Property Securities Fund	\$808M	Australia	Sep-02	17.0%	27.0%	52.0%
DLIBJ DIAM World REIT Income Open	\$768M	Japan	Apr-04	27.4%	16.1%	52.8%
Nomura Global REIT Fund	\$738M	Japan	Feb-05	29.0%	6.3%	56.0%
Kokusai World Reit Fund	\$630M	Japan	Jul-04	35.5%	15.5%	45.9%
ABN AMRO High Income Property Fund	\$518M	Netherlands	May-02	-NA-	-NA-	-NA-
Cohen & Steers Worldwide Realty Income Fund	\$456M	US	Mar-05	30.0%	27.0%	43.0%
Pramerica Worldwide Investors-WIP Global Real Estate Sec Fund	\$428M	Luxembourg	Jan-05	33.4%	16.3%	50.3%
Alpine International Real Estate Equity Fund	\$353M	US	Feb-89	31.2%	46.4%	21.3%
Nippon Global REIT Selection	\$265M	Japan	Jan-05	45.4%	11.6%	43.0%
Nikko LaSalle Global REIT Fund	\$254M	Japan	Mar-04	15.0%	11.3%	73.7%
Total (58 funds)	\$13.96 billion			27.5%	25.1%	45.4%

Source: EPRA (2005)

Figure 1: Forecast versus actual performance: Australia: 1999 - 2005

