How do investors form their expectations?

How do investors form and update their expectations?" This question recently attracted much attention in academic literature. It has been puzzling how real estate investors and developers form and review their expectations about real estate returns amid market uncertainties. Past studies have shown that many investors use information in their own buildings as references to make their projections about future price gyrations. In this context, when investors of residential apartments observe unpredictable shocks that affect returns, they ought to be more capable than other investors in office and industrial buildings to evaluate the impact of shocks on residential apartment returns.

There are two schools of thought about investors' expectation formation. The first school argues that investors are rational and they could adjust their expected rate of returns efficiently in responding to ex-post fundamental changes (such as rent increases). They believe that investors make incredibly (but unrealistically) optimistic predictions of future income growth rates after prices have risen. The second school finds that investor sentiment significantly drives expected real estate market returns. In the US, institutional investor survey data collected by commercial firms such as PwC and Real Estate Research Corp have been used to derive proxies to measure investor sentiment. Studies using this survey-based data have found significant evidence of sentiment-induced mispricing in public commercial real estate markets.

Developing the first real estate sentiment index in Singapore

The real estate market is an important component of the Singapore's economy. Effects of economic fundamentals and market sentiment in driving real estate market cycles and performance are not mutually exclusive. Thus, it is important to develop a market sentiment index for the purposes of understanding and forecasting future movements in real estate prices.

The Singapore government, via its two agencies — the Economic Development Board (EDB) and the Department of Statistics (DOS), conducts two independent quarterly business expectations surveys for the manufacturing and services industries, respectively. These two business confidence indicators are widely used by policymakers and investors in financial markets. Details of the two surveys are summarised below:

- The Business Expectations Survey by EDB is a quarterly survey focusing on the six-month business outlook for the manufacturing sector, including chemical, transport engineering, electronics and precision engineering. It covers 400 firms, and respondents are asked to indicate their expectations on general business conditions and other indicators such as output and employment; and
- The Business Expectations Survey by DOS is a quarterly survey focusing on the sixmonth business outlook for the services sector. The sample includes some 1,400 enterprises in wholesale trade, retail trade, transport and storage services, hotels, catering trade, information and communications services, financial and insurance services, real estate and business services.

Despite the importance of the real estate sector, there was no formal indicator to track the sentiment of developers in the local real estate market until 2010. The real estate developers' body of Singapore, the Real Estate Developers' Association of Singapore (Redas), collaborated with the National University of Singapore's Department of Real Estate (DRE) in 1Q2010 to initiate a project to create a Real Estate Sentiment Index (Resi) in Singapore. Resi is intended to be an established barometer for the health of the local real estate market.

About Resi

Resi measures the perceptions and expectations of real estate development and market conditions in Singapore. It aims to provide a timely and useful indicator for market players such as developers, financial institutions and consultants in formulating their market strategies and forecasts. It can also provide useful market inputs for government agencies in the urban planning and policymaking process.

A survey based on a structured questionnaire is conducted among senior executives of Redas member firms. The survey will be conducted quarterly in March, June, September and December. Responses from the sample firms will be managed with the utmost care



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to maintain strict confidentiality. The survey responses are used to construct three indices. Resi comprises a Current Sentiment Index and a Future Sentiment Index, which track market sentiments over the past and following six months, respectively, and a Composite Sentiment Index, which is the derived indicator for the current overall market sentiment.

What do the indices measure?

The questionnaire is divided into two parts. The first part of eight questions cover recurrent questions to quantify respondents' perceptions and expectations on the current and future conditions of the local real estate market conditions. The questions include:

- Assessment of real estate market conditions in the past six months as well as expectations for the next six months;
- Assessment of performance of individual asset classes in the previous six months as well as likely future trends in the next six
- Views on the current equity and debt capital markets compared with the past six months as well as the six-month outlook;
- Six-month outlooks with regard to government land sales (GLS), en-bloc sales, project launches and unit pricing; and
- Identifying the level of concern on development cost over the next six months.

Resi scores range from 0 to 10 and are used to measure the extent of pessimism or optimism of the survey respondents ("0" = Deteriorate; "5" = No Change; "10" = Improve) (Chart 1):

A simple average methodology is adopted to compute the scores for the Current Sentiment Index and Future Sentiment Index. A Composite Sentiment Index is calculated by taking the simple weighted average of the two indices.

A "net balance percentage" approach is adopted to derive the scores for key determinants of the real estate market sentiment. The net balance is defined as the difference between the proportion of respondents who have selected the positive options ("Better" and "Increase") and those who have selected the negative options ("Worse" and "Decrease"). The respondents who have selected the neutral option ("Same" and "Maintain") are omitted from the calculation in this exercise.

Part II consists of two "hot topics", which are used to obtain respondents' views and feedback on public policies affecting real estate markets. The quarterly Resi survey results are released and made available on the 28th day of January, April, July and October (see Chart 2).

Real estate sentiment in 2Q2015

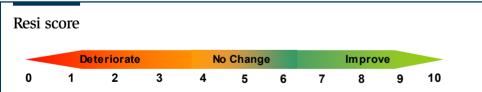
Since its launch in 2Q2010, NUS-Redas Resi has been providing alternative measures for real estate market outlooks and performance. Chart 3 shows that the three Resi indices converged to 3.9 as in 2Q2015. Chart 4 shows that the real estate market sentiment that has been deteriorating since the start of Resi has seemed to reflect the declines in private property market prices as indicated by the URA index. The correlations between the Composite Index and the URA Private Property Price Return and the Straits Times Index Return were estimated at 0.71 and 0.65, respectively.

Looking ahead

Resi is not meant to substitute the existing transaction-based real estate price indices by URA-PPI and NUS-IRES SRPI. Instead, it supplements the existing indices and offers an alternative indicator, which is a more forward-looking measure that could capture information that is not correlated with market fundamentals.

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Chart 1



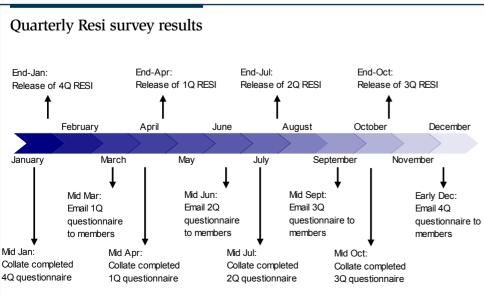


Chart 3

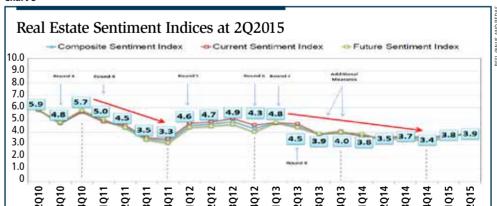


Chart 4

