

The Full Spectrum of Real Estate Risk Analysis¹

by Gary P. Taylor, MAI, SRA, and William E. Endsley

The full spectrum of real estate risk analysis begins with the traditional banking infrastructures needed to fund property development and economic growth. The spectrum extends to the newer securitization products and property rating systems being developed to accelerate growth in mature economies. This spectrum also includes developing economies, economies in crisis, and economies in transition. Without a plan to spread rational and transparent capital development to every area of the world, economic uncertainty and threats to security will spread instead. Most importantly, the real estate spectrum includes a diverse group of citizens, governments, civil societies, and corporations that share power, often in inequitable ways.

This paper looks at the role of the independent real estate valuer in examining the current distribution of the wavelengths that make up the continuum of real estate and capital markets. It examines the strands that make up this spectrum and offers suggestions for strengthening these individual strands and thereby amplifying the whole. Independent, ethical, and informed real estate valuers must analyze the full spectrum of real estate risks to protect the assets of a global public and help ensure an equitable sharing of economic power in the future.

Spectrum Analyzers

“Common spectrum analyzer measurements include frequency, power, modulation, distortion, and noise. Understanding the spectral content of a signal is important, especially in systems with limited bandwidth. Transmitted power is another key measurement. Too little power may mean the signal cannot reach its intended destination. Too much power may drain batteries rapidly, create distortion, and cause excessively high operating temperatures. Measuring the quality of the modulation is important for making sure a system is working properly and that the information is being correctly transmitted to the system.”²

As markets become more sophisticated and transactions increase, real estate valuers must become the spectrum analyzers of real estate markets. Property rights, legal and regulatory frameworks, the application of the three approaches to value, transparent transaction databases, and value cycles are among the component parts of a market, but how are these parts interacting? Are they humming along at the right frequency? Are there distortions that prohibit the system from functioning efficiently? Where are the system drains? In markets with “excessively high operating temperatures,” what can be done to correct power flow and correct injustice?

Just as engineers use sophisticated instruments to analyze power signals produced by electronic and radio equipment, the valuation profession needs tools to analyze real estate market systems. Some markets are able to absorb shocks quickly, which speeds recovery; some markets spend years coping with downturns, which prolongs the suffering of citizens. The key difference is often market fundamentals: property rights, legal and judicial support, independent and competent valuation professionals, and other institutional infrastructures must be in place for a market to produce a system strong enough for new capital and growth.

Over the last few years, several organizations that deal with real property market issues have formed a coalition to address the development of real property markets. In their guide *Real Property Markets: The “Real” Solution for Economic Development*, the group points out:

“Property is more than ownership: the legal property system organizes and drives the market in every developed nation. Effective property systems represent assets in standardized ways that allow owners to verify assets and use them to guarantee credit and contracts, to store and transfer the value of their assets, to divide and represent assets as shares that can be traded,

1. This paper was presented at the 21st Pan Pacific Congress of Real Estate Appraisers, Valuers, and Counselors in Taipei, Taiwan on October 19, 2004.

2. Agilent Technologies, “Spectrum Analysis Basics: Application Note 150,” Agilent Technologies (April 2004): 8.

and to use the reliable instruments of patent rights, promissory notes, bills of exchange, and bonds.”³

The first level of analysis must be the status of property market essentials and the presence of distorting elements or interference. In transition economies, valuers must focus on standardization, valuer training and data availability. Recognizing the importance of the valuation profession, on May 5, 2004, the United States Agency for International Development issued a request for proposals (RFP) for technical assistance for a financial services project in Egypt. The RFP’s statement of work included assistance for the establishment of a real estate appraisal industry and support for international valuation standards.

In developed economies valuers must continue to analyze market signals and warn of potential problems. In the United States, evidence of home mortgage fraud is on the increase. The Appraisal Institute recently participated in congressional hearings on widespread abuses in mortgage lending in the Pocono Mountains area of Pennsylvania. Almost one-fifth of the mortgages originated in the area over the last decade have gone into foreclosure. In many cases an inflated appraisal was a part of a mortgage scheme to defraud inexperienced home buyers of limited means.

On April 15, 2004, Fitch Ratings, a leading global credit ratings agency, announced a policy that penalizes the use of automated valuation models instead of valuation opinions by appraisers in declining markets. Although the signals and modulations are different, competent real estate valuers are the analysts that can provide solutions to problems in markets where the fundamentals are weak and in markets where transactions are so frequent that distortion and fraud can creep in.

Real Estate as Commodity

Spectrum analysis in various real estate markets is difficult because no two properties are identical. The information available about property transactions is limited and often distorted. Real estate markets are constrained by a rigid supply, infrequent trades, and a negotiated pricing process. Over the last decades, loans backed up by real property have been pooled and bonds have been sold in markets similar to agricultural commodity markets. What is the difference

between a pool of “homogeneous” home mortgages and a truckload of pigs? At the same time, the popularity of real estate investment trusts (REITs) and commercial mortgage-backed securities (CMBSs) has led investors to diversify their strategies and move billions of dollars from the traditional stock and bond markets into these real estate investment vehicles. Are these investments more or less secure in the long term?

When real estate is treated as a commodity, like corn futures or corporate bonds, then the importance of independent, ethical, and well-educated real estate valuers and counselors is increased. To advise real estate investment clients and protect the public, the scope and perspective of the valuer must expand from market fundamentals to include the full spectrum of risks associated with the accelerating use of real estate as a product of world trade. The valuation profession must create more transnational networks where lessons learned from both booms and busts can be shared and education can take place so future shocks are avoided. In addition, universal operating systems, including international valuation and data standards, must not only be developed but also deployed on every desktop so that every market can be analyzed uniformly and efficiently.

Money as Power

While REITs and CMBSs are creating a demand for more sophisticated real property market analysis tools, the soundness of traditional bank supervision cannot be overlooked. Lending institutions are the original power source and real estate valuers are the analyzers of this first wave of transmission. As with a mechanical instrument, if the power source is weak or poorly aligned, then the power will not reach the intended users. Too much power distributed in unprotected directions can lead to system failures. On October 28, 2003, the United States Federal Financial Institutions Examination Council⁴ issued a statement to address concerns identified during their bank examinations regarding the independence of the collateral valuation process. The statement reminded banks of the existing standards for independence within the appraisal and real estate lending regulations and the Interagency Appraisal and Evaluation Guidelines.

3. Jean Rogers, *Real Property Markets: The “Real” Solution for Economic Development*, Center for International Private Enterprise, International Real Property Foundation, Appraisal Institute, and Fannie Mae’s International Housing Finance Services (March 2004): 4.

4. The Federal Financial Institutions Examination Council is made up of the Office of the Comptroller of the Currency, the Board of Governors of the Federal Reserve System, the Federal Deposit Insurance Corporation, the Office of Thrift Supervision, and the National Credit Union Administration.

“The Guidelines establish minimum standards for selecting individuals who may perform appraisals or evaluations. Among other considerations, the selection criteria must provide for the independence of the individual performing the appraisal or evaluation. That is, the individual has neither a direct nor indirect interest, financial or otherwise, in the property or transaction. Consideration should be given to the individual’s qualifications, experience, and educational background.

“It is also important to ensure that the program is safeguarded from internal influence and interference from an institution’s loan production staff. Individuals independent from the loan production area should oversee the selection of appraisers and individuals providing evaluation services.

“Internal controls should confirm that appraisals and evaluations are reviewed by qualified and adequately trained individuals who are not involved in the loan production processes. An institution should establish more in-depth review procedures for appraisals of large, complex or out-of-area commercial real estate credits and for those appraisals and evaluations that are ordered by agents of the institution, such as loan brokers or another financial services institution.”

The fundamental starting point for real estate risk analysis is the independence of valuers. As individual loans are pooled, the potential damage from biased or poorly trained valuers or reviewers will be amplified. If U.S. regulators are concerned in markets that have been relatively stable over the last decade, regulators in developing economies and other economies in transition should be even more concerned with the status of the valuation profession and the independence of valuers.

In an International Monetary Fund working paper, “Real Estate Market Development and Financial Sector Soundness,”⁵ Paul Hilbers, Qin Lei, and Lisbeth Zacho find:

“Banks may underestimate the risk of heavy exposure to the real estate sector because of inadequate information and weak analysis. Even under the best circumstances, it may be difficult to estimate the present value of a real estate project. It will depend, among other things, on projected rents, discount rates, anticipated inflation, loss in value due to depreciation and vacancies due to the development of competing projects. Data on building permits, new construction

contracts, rents, market prices and vacancy rates are often not readily available or difficult to obtain and verify. Often banks rely on appraisals based on comparable properties, which will give an idea of current and past market values, but which may depart significantly from sustainable, long-run, equilibrium prices.”

The proposed Basel II Accord on banking supervision that is set to begin implementation in 2006 also gives a higher capital adequacy ratio for “high volatility commercial real estate” loans. Last summer the Appraisal Institute conducted a seminar for the national bank examiners of over twenty nations at the Financial Stability Institute in Switzerland outlining the importance of well-trained valuers as Basel II is implemented. All of these factors combine to emphasize the critical importance of the valuation professional and the need for the profession to continually evolve and adapt. Valuers in established societies must do more to help valuers in developing and transitioning economies. Capital knows no borders and valuers must become more international in focus to meet the needs of clients.

The Second Wave

As standardization takes place and the first wave of loans from banks becomes secure, a secondary market can develop. In *Real Property Markets: The “Real” Solution for Economic Development*,⁶ Soula Proxenos of Fannie Mae’s International Housing Finance Service notes:

“In the consulting work that has been done, it has become clear that four essential factors are needed to develop the (secondary) market:

- The first factor relates to the environment—the legal, tax, and regulatory framework must be in place.
- The second prerequisite is a robust primary market.
- The third essential is a capital market with the appetite or preparedness to take on a mortgage-backed security or mortgage-backed bonds.
- The fourth required element is an economic incentive to securitize and to create a secondary mortgage market. Even if all the other pre-conditions are met, the market is not actually going to move to create a secondary mortgage market without an economic incentive.”

5. Paul Hilbers, Qin Lei, and Lisbeth Zacho, “Real Estate Market Developments and Financial Sector Soundness” (working paper, International Monetary Fund, September 2001), 7.

6. Center for International Private Enterprise, “Real Property Markets: The ‘Real’ Solution for Economic Development,” http://www.cipe.org/whats_new/events/webevents/property.htm.

In secondary markets the frequency, power, modulation, and potential distortion of real estate transactions increase and so must the level of analysis. Secondary markets assume the standardization and accuracy of transaction data, so valuers must first work to ensure that the valuations done on primary loans are uniform and that the data is in a form that can be easily redacted and shared. As the primary market becomes robust and securitization begins to take place, real estate analysts will no longer be evaluating single transactions, but large pools of loans. This analysis requires a broader look and a more sophisticated skill set. The real estate valuer moves from a data gatherer to an information arbiter. Instead of providing only a single value opinion at a single point in time, the valuer becomes more of a market analyst who makes sound value predictions based on cycles and helps to identify and price risk.

Regarding the third precondition in the development of a secondary market—capital market appetite—valuers must work to form and strengthen valuation organizations that can educate valuers and market analysts and promote and enforce standards and ethics. Peer review is critical. Capital market investors hate uncertainty. Valuation organizations with proven track records can assure investors that qualified valuers are in place, that valuations done by members meet international standards, and that unethical players are disciplined or removed. Valuation organizations can also monitor the status of the market and help prepare analysts as markets move along the spectrum of risks. The World Association of Valuation Organizations was recently formed to help promote international valuation standards and to develop standard qualifications and training norms for valuers around the world.

Concerning economic incentive, Heywood Fleisig and Nuria de la Peña of the Center for Economic Analysis of Law in an issues brief⁷ for the World Bank and International Monetary Fund find:

“A good legal framework of secured transactions permits more property to serve as collateral, permits more lenders and borrowers to write contracts using collateral, and permits more transactions to be designed that use collateral.

“Expanded use of collateral, in turn, improves access to credit dramatically: compared to unsecured

loans, well secured loans can reduce interest rates to a few percentage points over the government borrowing rate; it can increase the amount lent, relative to cash flow or income, by a factor of ten; and it can increase the length of time for repayment by a factor of nine. No other social institution can improve access to credit as much.”

Add the signals from the secondary market to the base signals from the primary market and the amplitude and phase of the market become stronger, but also harder to harmonize. Interference and unwanted emissions such as excessive government control or overextended borrowers impair the operation of the entire system. As spectrum analyzers, real estate valuers can provide early warnings and keep the market on track.

The Next Wave

Assuming the sine waves of the primary and secondary markets are in sync and being monitored by property-calibrated real estate risk analyzers, the markets can take on more risk. Investors will become comfortable with mortgage-backed securities and these markets will expand with new and even more sophisticated instruments. Investors will be looking for ways to distinguish between the financial strength of various property types, property markets, or financial instruments in the same way they are accustomed to choosing between corporate stocks or municipal bonds. Real estate valuers can provide investors this service through property and market rating systems.

The National Council of Real Estate Investment Fiduciaries (NCREIF) publishes the NCREIF Property Index (NPI) that provides historical returns, in aggregate and by property sector and region. It includes information on vacancy, operating income, capital expenditures, market value, and location and property type identifiers. The real estate counselor can use such analytical tools to provide market inferences such as that provided in the NCREIF 2003 First Quarter Highlight:

“In the early 1990s, when the market repriced commercial real estate on a wholesale basis, cap rates rose significantly from their cyclical lows achieved in 1987–90. Over the last two years, while cap rates declined noticeably in the industrial, office, and retail sector,

7. Heywood Fleisig and Nuria de la Peña, “Should the Bank and the Fund Support the Reform of Secured Transactions?” (presented at the Global Forum on Insolvency Risk Management, Washington, D.C., January 2003), 1.

the decline in apartment cap rates was nothing short of spectacular.

“Both the reduced income due to weakening space markets and the strong capital markets for real estate have caused the cap rate declines. Although the numerator and the denominator of the cap rate ratio likely contributed to the changes in the ratio, important differences exist among the sectors in their relative contribution. Because of long-term leases and a near absolute pause in leasing activities, most of the industrial in-place income for office and industrial properties has not been market to market yet.”⁸

In Europe, real estate analysts will begin dealing with a higher demand from institutional investors January 1, 2005, with the implementation of International Accounting Standards. Achim Reif and Rebecca Holter of the Association of German Mortgage Banks look ahead to the implementation of Basel II in 2007:

“In light of the regulations under Basel II, suitable rating instruments are being created to assess the quality of property finance. Since the property assessment forms the basis for credit standing analyses in property finance, it stands to reason that the property itself should also be rated. The property rating systems currently available in the market go only part of the way towards satisfying the stringent requirements of the banking industry for individual property assessment.”⁹

Certainly such indexes and rating systems are not complete representations of the power of real estate markets over time. The NPI only represents a subset of the true universe of institutional-quality real estate, and in the United States, developers are concerned that the implementation of Basel II will constrain the capital available for construction. The real estate investor is wise to remember that a real estate analyst is not a power meter. The real estate valuer is presenting an opinion of the results of the current distribution of capital power. A complete analysis of a real estate market's potential will require a team of professionals that includes accountants, brokers, developers, engineers, lawyers, and government regulators. When real estate holdings are a large portion of an investor's portfolio, or a corporate balance sheet is heavily dependent upon real estate performance income streams, then valuers

should take the lead. In other instances, the valuer will only be a contributor to another intermediary's product. In both cases, real estate valuers must embrace new technologies and adapt to the changes demanded by the market for a higher level of analysis.

Diverse Spectrum

Whatever the individual risks analyzed by real estate valuers, the paramount risk is the dependencies created by the global market. No market is immune from the effects of market collapse in any sector or region, or by the disenfranchisement of any group of citizens. There is great disparity in even the most basic requirement for market development—property rights:

“Working with the Center for International Private Enterprise (CIPE) more than 20 years ago, Hernando de Soto and his Institute for Liberty and Democracy in Peru pioneered the idea that strong property rights institutions were not only critical to a functioning market economy, but essential to the health of democratic institutions as well. Since that seminal work, the link between property rights and the underpinning institutions has been demonstrated in a variety of countries. These rights, in turn, give owners/citizens a stake in the system, creating a positive relationship between participatory democracy and economic development. Recent research in Egypt even shows that secure property rights also track with human rights.”¹⁰

While developed markets whirl along, creating vast databases and sophisticated automated valuation tools, many sections of the world are still struggling to provide housing for their people. The informal sector brought to light by Hernando de Soto still predominates in many areas of Africa, the Middle East, South America, and Southeast Asia. De Soto's work to characterize the time and costs of moving informal property transactions into the formal system is only the first step. Valuers and valuation organizations, as protectors of the public good, must do more to help develop the intermediate professionals necessary to accelerate rational real estate market development. International development banks must understand that the development of a

8. Youguo Liang, “The NCREIF Database Offers More than Just Returns,” NCREIF Quarterly Highlight (First Quarter, 2003): 1.

9. Achim Reif and Rebecca Holter, “Property and Market Rating,” Real Estate Fact Book, 2nd ed. (November 2003): 52.

10. Rogers, 2.

strong, ethical valuation profession is the critical linchpin to financial-sector development, and such banks must provide more funding to assist the valuation profession.

Even in developed markets, issues of diversity must be addressed. Take a seat at any conference table of real estate professionals and the faces are not likely to match the demographics of the population. Property is closely tied to power and without deliberate efforts to include all citizens, inequalities in age, disability, gender, race, religion, and sexual orientation will be reflected in professional societies as well. Just as interdependence of markets requires outreach by organizations in developed markets, those organizations must also make efforts to be more inclusive within their own spheres of influence.

Conclusion

The collection of signals that make up real estate markets is increasingly complex. Real estate valuation professionals accustomed to analyzing local markets and working for traditional clients such as banks, taxing authorities, and attorneys must expand the scope of their analyses and the breadth of their client bases. Standardization in some markets has led to securitization while others struggle with market fundamentals. Real estate valuers can be full spectrum risk analyzers and monitor real estate markets for strength as well as unwanted emissions and unintentional radiators.

Analysis must begin with the health of the banking support system and the independence and competence of the valuer. Properly supported, transparent, and vibrant primary markets can lead not only to securitization and secondary markets, but new and more diverse credit flows such as microcredit for those citizens without collateral. For markets to become securitized, valuers must establish and implement uniform reporting and data standards. As securitization takes place, valuers must broaden their outlook and focus on the condition of entire markets and property sectors. Investors demand the information to price risk, and as markets evolve, valuers can provide property rating systems and performance indexes to meet investor need and ensure that property holds an appropriate place in portfolios.

Finally, valuers must not mistake isolationism for independence. Moment by moment the world becomes more interconnected and interdependent. Land is a limited resource and land use is the foun-

dation of capital and power. The task of protecting investors must also include bringing the disenfranchised into the fold, or threats to global security will increase. To meet these demands, valuers and valuation organizations must become team players—sometimes acting as the lead analyst, directing the investigations, training new valuers, and devising winning strategies; and sometimes as supporting technicians, providing analyses as developers, governments, or corporations manage their real estate and capital assets. Whatever the case, the valuation profession must become full spectrum analyzers capable of performing a wide variety of signal measurements and trusted by all citizens to ensure that real estate market power is distributed impartially and without impairment to other systems.

Gary P. Taylor, MAI, SRA, is president of the Appraisal Institute and has been a member of its Board of Directors since 2001. Taylor has a long history of service to appraiser education, representing the Appraisal Institute at meetings of the Appraiser Qualifications Board; serving as chair of the Instructor Subcommittee; serving as member of the Educational Programs Committee; and teaching and developing Appraisal Institute courses and seminars. Taylor is the Appraisal Institute's Board of Directors liaison to the teams developing and revising courses to meet the new AQB criteria. **Contact: T 631-434-3300; E-mail: gtaylor@appraisalinstitute.org**

William E. Endsley is the manager of business development for the Appraisal Institute. He has overseen the organization's international activities for the last five years, traveling extensively and meeting with valuers from over 40 nations. He is a member of the American Marketing Association and the Association Forum of Chicagoland. He holds a bachelor's degree in communication and fine arts from the University of Memphis. **Contact: T 312-335-4230; E-mail: bendsley@appraisalinstitute.org**