

# Incorporating a Discussion of Risk in Appraisals: A New Direction for the Appraisal Industry

by Martin A. Skolnik, MAI

## Abstract

Risk is an ongoing discussion in the mortgage lending industry, both across property types and geography, and on a property-specific basis. During an appraisal engagement, appraisers collect and discuss many risk factors that might tangentially describe the risk to the mortgage lender, but the appraiser's analysis of risk is embedded into the report's narrative and not a distinct discussion. This article outlines a framework for a potential expansion of the appraiser's scope of work (and new business opportunities) to evaluate and discuss risks, which might affect how lenders analyze the subject property, and also result in a more uniform consideration of mortgage risk. This framework would also provide a new value-added opportunity between lenders and appraisers beyond what is typically part of appraisal reports.

## Introduction

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Traditionally, commercial appraisers have been engaged by lenders to provide a written credible opinion of market value for an income-producing property that is used as part of the loan package as support for a lending decision. In a customary 100- to 150-page narrative appraisal report, the focus of the lender-client primarily has been on the appraiser's estimate of market value, which is used in conjunction with loan-to-value criteria and information from the income approach to help inform the lender of the property's debt coverage capabilities. Appraisals for income-producing properties are typically used by lenders to identify the value portion in the loan-to-value analysis, and the net operating income in the debt coverage ratio analysis.

Since the Great Recession of 2008, however, there has been considerably more focus in the commercial lending industry on factors beyond a property's market value and its net operating income. The industry is placing considerable emphasis on identifying risks associated with the loan, with the borrower, and with the property. It

is here that there is a disconnect between the needs of lender-clients and appraisers' traditional appraisal report writing and analytical focus.

## Descriptive versus Analytical Appraisal Reports

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A commercial mortgage lender typically reviews an appraiser's report and extracts the estimate of value and the net operating income as part of its underwriting analyses. However, the data and analyses within the report could be useful to the lender for much more than just those numbers, and the appraiser could be a more significant contributor to the lender's underwriting process.

A flaw in contemporary appraisal reports is that there are pages and pages of description (i.e., description of the subject's regional market and local market, its site and improvement characteristics, zoning, and property taxes), but there is little discussion of how this material has been used by the appraiser and very little about its applicability to the valuation of the subject property. Even though many appraisers title

these sections as “analytical” (i.e., market analysis, site analysis, zoning analysis), these sections are descriptive, not analytical.

Examples of where analytic information could enhance descriptive information and help the lender-client assess risk include the following:

- **Flood zone**—The appraiser might *describe* a property as being in a 100-year floodplain and also *analyze* or discuss its impact on market value.
- **Zoning**—An appraiser might *describe* a property as being legally nonconforming and also *analyze* or discuss the valuation implication or investment risk of such a classification.
- **Market/Geographic**—An appraiser might *describe* the subject property’s metropolitan area in detail and also *analyze* the subject property’s location within or outside a redevelopment zone.
- **Data**—The appraiser might *describe* capitalization rate data taken from a published survey and also *analyze* or discuss the risk that the survey is weak for the subject property’s use, type, or location.
- **Comparable sales**—The appraiser might *describe* the comparable sales’ characteristics and also *analyze* or discuss the risk implications if the most recent comparable sales transferred significantly before the date of value.

The list of examples could be extensive. The point is, the contemporary appraisal report is becoming increasingly a descriptive document, not an analytical document structured to assist the lender-client with its decision making. As data continues to become inexpensive and widely available, this trend toward descriptive reports will continue, to the detriment of the appraisal industry and to its lender-clients who would benefit from analytical assistance in identifying risk in their lending activities.

### One Size Does not Fit All

Appraisal reports from commercial appraisal firms are fairly uniform in their composition regardless of the firm or the client’s intended use. For example, the format of an appraisal report for

lending purposes looks, feels, and reads very similar to an appraisal report developed for condemnation purposes, for a property tax assessment appeal, or for bankruptcy or foreclosure. This inhibits the appraisal report’s practical usefulness to the lending industry. If all reports are formatted the same, with most data from the same providers (making the data ubiquitous), and the analytics within the report indistinguishable between firms, then it is clear why a lender might view only a few numbers in a report as being germane to its underwriting efforts. The analytical and evaluation needs of a lender-client are different from those of a tax appeal client, so why are the underlying data, discussion, analyses, and reporting formats similar?

### Identification of Risk

In 1996, Eric T. Reenstierna observed that an appraiser traditionally is asked what a property is worth, but the appraiser should analyze more than just the property’s value. Reenstierna states:

The simplicity of the question masks larger issues. Value is complex. To discuss value for buyers, sellers, and lenders properly requires that appraisers not only provide a one-number answer but address value in its complexity. To the extent that appraisers can address not only the simple question but also the need for risk assessment that gives rise to it, they can provide their clients with more comprehensive services that are better suited to those clients’ needs.<sup>1</sup>

What if an appraisal for lending purposes focused on analysis of risk in addition to providing an estimate of market value? The components of the analysis are already enumerated in the appraisal, so the appraiser would only need to incorporate an analytical framework for the measurement and discussion of these risk elements.

Appraiser training has focused on providing analytical tools to assist the appraiser in developing a credible opinion of market value. However, a comparison of the needs of the lender-client with the techniques and focus of appraiser training suggests there is a gap between the lenders’ needs and the appraisers’ report. This gap is

1. Eric T. Reenstierna, “Risk Assessment,” *The Appraisal Journal* (July 1996): 288–294.

quickly rendering the usefulness of the traditional appraisal report moot and shunting the valuable analytical skills of the typical appraiser to the side.

In 1935, Frederick M. Babcock recognized that the techniques used in loan selection are central to conducting mortgage investment activities and the determination of mortgage risk. He observed:

[A] proposed mortgage cannot represent an investment loss until some future time and the hazard of loss exists from the time of commitment until recovery of investment has been made. Past situations and present conditions provide clues to the nature of the mortgage risk, but the determination of mortgage risk involves forecasting. Prediction and the weighting of probabilities forms the essence of mortgage-risk rating and appraisal procedure.<sup>2</sup>

Babcock also identified some of the components of mortgage risk, including troublesome collection experience, expenses associated with foreclosure, costs necessary to rehabilitate a property after foreclosure, loss of income during the period before resale, and potential losses from not fully recovering the outstanding mortgage balance.<sup>3</sup>

During the loan underwriting process, a commercial mortgage lender is trying to identify issues to mitigate the various risks of the loan. Putting a more contemporary slant on Babcock's conclusions, some of these risk-related issues include the following:

- The risk that the appraiser's estimate of market value is either too aggressive or too conservative
- The risk that the appraiser's estimate of market value is not adequately supported and is not credible
- The risk that the borrower will not repay the loan
- The risk that the borrower cannot repay the loan
- The risk that the property will not produce sufficient income to repay the loan
- The risk that the property's operations will not provide a significant cushion in case the income and expense estimates are not met

- The risk that the local, regional, or national demographic might shift, causing a disturbance to the income and expense estimates
- The risk that new properties might be built nearby to compete with the subject for tenants
- The risk that older properties nearby might be renovated to compete with the subject for tenants
- The risk that the property's physical nature might change, which might result in the income and expense estimates not being met
- The risk that the property might be affected by outside physical forces, which might cause the income and expense estimates not to be met
- The risk that the borrower might not be able to refinance the loan at the end of the mortgage term due to rising interest rates
- The risk that the borrower might not be able to acquire other funds during the term of the loan to keep the physical condition of the property competitive
- The risk that the borrower or investor has tied up its money in the subject property for the long term while interest rates fluctuate on competitive investments resulting in opportunity cost losses

These issues can be summarized into six primary types of risk associated with the valuation of an investment property:<sup>4</sup>

1. **Market Risk.** Risk that net operating will be affected by changes in the market (e.g., shifts in demand, supply, or both), influenced by the type and location of the property and by its stage in its life cycle.
2. **Financial Risk.** Risk related to the use of debt to finance an investment, including the risk of default, unanticipated prepayment, or contractual financing terms that cannot respond to interest rate changes.
3. **Investment Risk/Capital Market Risk.** Risk that market value will be affected by changes in capital markets, such as changes in mortgage yield rates, equity yield rates, overall yield rates, or overall and terminal capital-

2. Frederick M. Babcock, "The Determination of Mortgage Risk," *Journal of the American Institute of Real Estate Appraisers* (July 1935): 316–323.

3. Babcock, "Determination of Mortgage Risk," 316.

4. For additional discussion, see Appraisal Institute, *The Appraisal of Real Estate*, 14th ed. (Chicago: Appraisal Institute, 2013), 158–159.

ization rates. Risk also may be related to changes in levels of interest rates, availability of capital (both mortgage and equity), and rates of return for alternative investment opportunities.

4. **Physical Risk/Environmental Risk.** Risk that the market value of a property will be affected by its physical environment, such as abnormal deterioration due to man-made circumstances, natural hazards, or inattention by ownership/management, and costs associated with dealing with potential environmental problems.
5. **Operational Risk/Management Risk.** Risk that the property management cannot ensure the property meets its operating goals, such as income and expense targets including rents, occupancy, cash outlays, and net operating income.
6. **Valuation Risk.** The risk that the appraiser's estimate of market value, valuation assumptions, and conclusions are not adequately supported or sustainable due to these other risks.

### Components of Risk Analysis

Babcock observed that “mortgages do not fall into two simple classes: the good and the bad.”<sup>5</sup> He noted that there is a degree of risk in the lending process and the task of the mortgage lender is to “determine the extent to which they are *relatively* good.” (Emphasis in original). In his 2006 *Appraisal Journal* article on risk assessment, Barrett A. Slade stated,

risk is the possibility that an investment's actual return may be different than is expected, including the possibility that some or all of the original investment may be lost. Therefore, prudent investment analysis requires that this uncertainty be examined so that appropriate steps may be taken to mitigate the potential loss.<sup>6</sup>

Risk analysis has three components: (1) identification of the risk, (2) assessment of the probability of the risk occurring, and (3) assessment of the impact of the risk. These three components can be visually presented subjectively as probabilities in a nine-box matrix analysis as shown in Exhibit 1.<sup>7</sup>

## Framework for Risk Analysis for Appraisals

The scope of this article does not include a discussion of the merits, factors, detail, or application of economic or quantitative modeling to analyze and describe risk associated with a property valuation. However, a basic qualitative framework can be developed without modeling or statistics to provide lenders with the appraiser's interpretation of the risk factors based on the data, discussion, and conclusions within the appraisal development process.

**Exhibit 1** Nine-Box Risk Analysis Framework

<b>Impact of the Risk</b>	High	<b>Medium</b>	<b>High</b>	<b>Very High</b>
	Medium	<b>Medium/Low</b>	<b>Medium</b>	<b>High</b>
	Low	<b>Very Low</b>	<b>Medium/Low</b>	<b>Medium</b>
		Low	Medium	High

**Probability of the Risk Occurring**

5. Babcock, “Determination of Mortgage Risk,” 316.

6. Barrett A. Slade, “Property Risk Assessment: A Simulation Approach,” *The Appraisal Journal* (Fall 2006): 347–357.

7. The nine-box matrix (sometimes referred to as nine-blocks) was developed by the consulting firm McKinsey & Company based on a paper by Frederick W. Gluck, “The Evolution of Strategic Management,” reprinted in the June 2000 *McKinsey Quarterly* under the title “Thinking Strategically.” Originally, the nine-box analysis was used to evaluate the strengths and weaknesses of a business unit along two dimensions: the unit's competitive strength in the industry (the X-axis of the matrix) and the attractiveness of the unit (the Y-axis). In the 1980s, the nine-box concept was adopted by Jack Welch at General Electric to evaluate leadership potential of its management staff and for succession planning, by correlating an employee's performance (X-axis) and leadership (Y-axis). For additional discussion, see <https://mck.co/2BMnq5r>. Today, the matrix is used to analyze a wide range of business functions to identify probability of outcome strategies. Some companies have expanded the matrix into a 25-block matrix for a more granular analysis of possible outcomes.

Although each property type has its own inherent risk structure (i.e., multifamily operational risk would be more susceptible to fluctuations in marketwide employment than, say, an industrial warehouse), there are common risk factors across most real estate types that can be evaluated using this framework.

The evaluation of risk might be based on the appraiser's research into recent economic or physical trends at or near the property and consider the probability of those trends continuing. The appraiser also might catalog and evaluate the probability of prospective events, such as planned changes to the subject property or to competitive properties, and marketwide events and impacts. For example, suppose a standard risk evaluated by the appraiser is the subject property's location in a floodplain. If the subject is located within a fifty-year floodplain, but the building is constructed on twenty-foot stilts and has substantial storm water management ponds or bulkheads, then perhaps the probability of the risk is high but the impact of the risk is low, resulting in an overall medium/low affect. Or, suppose a multifamily property is located in a market that a large multinational organization is considering as one of three finalists for relocation of its corporate headquarters, which could add 20,000 professional jobs in the market. The probability of this event could be high and the impact of the event on the subject's market value could be high, too, so then the overall effect would be very high.

Exactly how a risk analysis would be incorporated into the appraisal report for a property can be the subject of further discussion and refinement. The categories of risk discussion and evaluation in a report may vary with the property type, but the six core risk categories that were previously described would include the following elements:<sup>8</sup>

#### 1. Market Risk

- Changes in supply—for example, building permits for this property type and for complementary-use properties
- Changes in demand—for example, employment trends

#### 2. Financial Risk

- Number or rate of foreclosures for this property type and in this market
- Availability of foreclosed properties

#### 3. Investment Risk/Capital Market Risk

- Depth and availability of the commercial mortgage-backed securities market
- Stability of long-term interest rates
- Availability of financing for the property type
- Activity in the secondary mortgage market

#### 4. Physical Risk/Environmental Risk

- Location in a geologically sensitive area
- Location in a floodplain
- Recent or prospective weather activities, such as hurricanes or blizzards
- Property-specific experience, including physical condition at the time of appraisal and proposed repairs or capital improvements by management or ownership

#### 5. Operational Risk/Management Risk

- Experience of the property's management and owner
- Amount (scope and cost) of necessary repairs
- Observed deferred maintenance
- Occupancy trends in the market and submarket

#### 6. Valuation Risk

- Adequacy, availability, and validity of the appraiser's data
- Availability of the subject property's past financial statements and validity of these materials
- Depth of the appraiser's property inspection
- Experience of the appraiser in this property type and market competency
- Clarity of the appraiser's data, discussion, and analysis

There are certainly more risk categories and items than mentioned in this list, but this is a starting point for the risk analysis conversation.

#### Communicating the Nine-Box Risk Analysis

A method for communicating the results of the appraiser's evaluation of risk might include a series of nine-box matrix evaluations, one for

8. Additional types of risk in investment properties are discussed in *The Appraisal of Real Estate*, 14th ed., 157–162.

each risk category. The matrix evaluations would be supported by (1) a discussion of the factors that the appraiser considered in developing the risk evaluation, and (2) the data, discussions, and analyses collected and presented in the body of the valuation section of the appraisal report. The following examples offer what might be considered as a skeleton for a discussion of Operational Risk/Management Risk (Example 1) and for Market Risk (Example 2).

**Example 1, Operational Risk/Management Risk.**

Operational risk/management risk is the risk that the property’s management cannot meet the property’s operating goals, such as income and expense targets, rents, occupancy, cash outlays, and net operating income. For this risk analysis example, assume the following information is known:

- The 500-unit multifamily subject property has been continually operated by the same property management firm for the past five years with increasing rents and stabilized occupancy every year.
- Last year, management noted a potential roof deterioration issue and contracted to have it corrected within two months.
- This firm has ten other similar properties in its portfolio in this market with similar operational success.

In the nine-box analysis for operational risk/management risk for the subject (Exhibit 2), management would have a medium impact on risk but the probability of management failure for this property is low, so the resulting overall operational risk/management risk is medium/low.

**Exhibit 2 Framework for Operational Risk/Management Risk Analysis**

<b>Impact of the Risk</b>	High	Medium	High	Very High
	Medium	Medium/Low	Medium	High
	Low	Very Low	Medium/Low	Medium
		Low	Medium	High
		<b>Probability of the Risk Occurring</b>		

**Example 2, Market Risk.** Market risk is the risk that the subject will be affected by changes in supply and demand in the subject’s submarket or in its larger metropolitan statistical area. Market risk is influenced by the type and location of the property and by its life cycle stage. In this example, the report’s analysis of market risk could state the following related to supply and demand:

**Supply.** A review of the county’s building permit queue (discussed on page XX of this appraisal) shows that a large number of flex-office/industrial projects are in the preliminary plan approval stage (X number of potential square feet) and the typical time from preliminary approval to actual construction in this county is X months/years. Additionally, there are six new flex-office/industrial projects that have received final plan approvals, and according to their developers, four projects (representing X square feet) have financing in place to begin construction.

As noted in the cost approach section of this appraisal (page X), there have been only two similarly zoned land sales in this metropolitan area in the past three years for new development, and these represent a total of X square feet of space that would be competitive with the subject. One of these land sales has preliminary plan approval for X square feet of competitive space and is located in the same business park as the subject with better visibility and signage potential.

**Demand.** As noted in the market analysis section, the vacancy rate is 18% for similar or competitive properties in the subject’s market, up from 15% in 2017 and 12% in 2016, which indicates demand for flex-office/industrial space is decreasing in this market.

Also noted, recent leasing data for this type of space indicates that rents dropped 5% in 2018, 5% in 2017, and 2% in 2016, which also reflects the weakening demand for competitive space. The lease for the subject’s largest tenant, occupying 38% of space, expires in nine months and the tenant has indicated it is moving to a competitor’s space and will not renew.

As discussed in the improvement description section of the report, the subject was constructed in 1983 and has multiple deferred maintenance observations, which make the subject less competitive against new developments in this market.

The imbalance between supply and demand noted in the appraiser’s report indicates that the subject property has the potential for increasing competition in the short-term, which might affect its ability to stabilize occupancy and rents. There

also is diminishing demand for space in the overall market and in the subject's specific location. Consequently, the nine-box analysis for market risk (Exhibit 3) indicates there is a high probability of market risk and a probability of high impact, so the resulting market risk is very high.

The appraiser could perform a similar analysis for the other five risk categories, as well as any additional risks that may have applicability to the subject. The appraiser then could draw a conclusion of overall risk based on the evaluation of all the analyzed risks.

**Exhibit 3** Framework for Market Risk Analysis

<b>Impact of the Risk</b>	High	<b>Medium</b>	<b>High</b>	<b>Very High</b>
	Medium	<b>Medium/Low</b>	<b>Medium</b>	<b>High</b>
	Low	<b>Very Low</b>	<b>Medium/Low</b>	<b>Medium</b>
		Low	Medium	High
<b>Probability of the Risk Occurring</b>				

### Professional Practice

A discussion of risk is not typically part of the appraiser's scope of work nor is it an item that many appraisers include in their analysis. A discussion of risk is sometimes implied in the appraiser's narrative, but it is rarely an explicit discussion since the appraiser's primary focus is on providing the client with an estimate of market value, supported by the material used or researched by the appraiser to develop that estimate.

The appraisal industry, aligned with both academia and the mortgage lending industry, could develop a more formalized and rigorous process for identifying and quantifying elements of risk that are important to the lending decision. A consistent framework also could be developed for reporting the analysis of the risk elements and the related conclusions. Additionally, the appraisal industry could develop educational programs jointly with the mortgage lending industry to provide guidance or training to appraisers and other risk practitioners to assist the commercial mortgage industry in identifying and mitigating risk in its lending activities.

## Conclusions and Next Steps

Appraisers do not have a crystal ball, but the evaluation of past and prospective events in a risk analysis is not so different from an appraiser's evaluation of past and prospective events in developing a discounted cash flow or in developing a prospective value upon completion of certain improvements. The appraiser has expertise in data collection and analysis, which can be brought to this type of risk evaluation.

Identifying and evaluating risk is a central function of the underwriting process and an imperative of a successful mortgage lending enterprise. Certainly, underwriting a loan involves issues and concerns not covered by an appraisal, including evaluation of the borrower's financial history and the capabilities of any counterparty to the loan, evaluation of the operating history of other properties from this same borrower, and consideration of other potential business opportunities with the borrower. But, incorporating the identification and evaluation of risk as part of the appraisal process and report could be a significant component of a healthy mortgage lending industry.

An appraisal report with the appraiser's evaluation of risk would not constitute the be all and end all of risk assessment, but it would contribute a formalized analytical structure using data mostly already being collected by the appraiser and using the professional capabilities of the appraisal industry. In turn, this would have a significant impact on the quality of loan origination and post-origination monitoring and loan surveillance.

The process of identifying and quantifying risk will inevitably evolve from the suggested qualitative framework to new analytics and machine learning as tools and techniques mature. There needs to be coordination with mortgage industry groups, such as the Mortgage Bankers Association; regulatory agencies, such as the FDIC and OCC; and the government-sponsored enterprises, such as Freddie Mac and Fannie Mae. These appraisal stakeholders are an important element in successfully incorporating a meaningful risk evaluation framework into commercial appraisal engagements.

SEE NEXT PAGE FOR ADDITIONAL RESOURCES >

### About the Author

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### Additional Resources

Suggested by the Y. T. and Louise Lee Lum Library

#### Appraisal Institute

- **Education**
  - *Advanced Concepts and Case Studies*
  - *Commercial Real Estate Training: Appraisal Engagement, Appraisal Reviews, and Evaluations*
- **Lum Library, External Resources, Knowledge Base [Login Required]**
  - Economic data
  - Special-use properties/commercial

#### CBRE—US Research and Reports

<https://www.cbre.us/research-and-reports>

#### CoStar—Comps

<https://www.costar.com/products/costar-comps>

#### Mortgage Bankers Association—Commercial/Multifamily Research

<https://www.mba.org/news-research-and-resources/research-and-economics/commercial/-multifamily-research>

#### Oracle—Crystal Ball risk modeling

<https://www.oracle.com/applications/crystalball/>

#### Society of Industrial and Office Realtors—Commercial Real Estate Index

<https://www.sior.com/resources/commercial-real-estate-index>