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Evaluation of real estate property and market risk for real estate backed financial products

Note by the Real Estate Market Advisory Group

Summary

This document provides a framework for discussing the evaluation of real estate property and market risk for real estate backed financial products. It was prepared by the Real Estate Market Advisory Group at the request of the Working Party on Land Administration and the Committee. This draft will be revised based on comments by the Committee and other stakeholders.

The Committee is invited to endorse this document.
The preparation of this report was overseen by the United Nations Economic Commission for Europe (UNECE) and the UNECE Real Estate Market Advisory Group (REM) with the support of the Appraisal Institute, The European Group of Valuers’ Associations, and the International Real Estate Federation.

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<td>BIS</td>
<td>Bank for International Settlements</td>
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<td>CDO</td>
<td>collateralized debt obligation</td>
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<td>CRD</td>
<td>capital requirement directive</td>
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<td>EAD</td>
<td>exposure at default</td>
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<td>EU</td>
<td>European Union</td>
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<td>FIABCI</td>
<td>International Real Estate Federation</td>
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<td>IIF</td>
<td>Institute of International Finance</td>
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<td>IMF</td>
<td>International Monetary Fund</td>
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<td>IRB</td>
<td>internal ratings-based</td>
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<td>IRRS</td>
<td>internal risk rating systems</td>
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<td>IVSC</td>
<td>International Valuation Standards Committee</td>
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<td>LGD</td>
<td>loss given default</td>
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<td>LTV</td>
<td>loan-to-value</td>
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<td>MBS</td>
<td>mortgage-backed securities</td>
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<td>PaM</td>
<td>Property and Market Rating system (of TEGoVA)</td>
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<td>PMRS</td>
<td>property and market rating systems</td>
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<td>REV</td>
<td>Recognized European Valuer</td>
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<td>REM</td>
<td>Real Estate Market Advisory Group</td>
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<td>RICS</td>
<td>Royal Institution of Chartered Surveyors</td>
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<tr>
<td>SEC</td>
<td>U.S. Securities and Exchange Commission</td>
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<td>TEGoVA</td>
<td>The European Group of Valuers’ Associations</td>
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<td>UNECE</td>
<td>United Nations Economic Commission for Europe</td>
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<tr>
<td>VÖB</td>
<td>Bundesversband Öffentlicher Banken Deutschlands</td>
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DEFINITIONS

interest cover - a measurement of an entity’s ability to make interest payments on outstanding debt, given the entity’s income.

loan origination - the process of applying for and processing a loan application.

loan-to-value ratio – the ratio of the amount of a loan to the value of the underlying asset

obligor – an entity which is obliged to issue payments to another; a debtor

real estate covenant – an agreement regarding the use of a piece of land

securitisation – the process of distributing the risk for loans, such as mortgages, by pooling claims to these loans and selling them as bonds or other income-generating securities

underwriting – the process by which a financial institution determines whether or not a customer is eligible to receive its products; for example, the process by which a bank determines whether or not a borrower is eligible for a mortgage loan.
I. Introduction


   “Analyses of the current global economic crisis have shown that unclear regulatory frameworks in the financial and real estate sectors were among its main causes. The crisis brought up a range of problems and demonstrated the urgent need for UNECE to respond by providing guidance and promoting sound real estate markets in the region”.

2. In 2009, the UNECE Real Estate Market Advisory Group (REM) was requested by the UNECE Working Party on Land Administration (WPLA) to create a document which contributes to the clear and transparent risk assessment of real estate properties used as collateral for financial products. This request was supported by the UNECE Committee on Housing and Land Management at its seventy-second session. Real estate rating systems used together with an assessment make a significant contribution towards risk analysis and the efficiency of loan procedures where loans are guaranteed by real properties. A “real estate rating” is understood to be, “the evaluation of the reliability of the investment on the basis of the overall quality of the building and of its potential to preserve over time its usefulness and its value in order to minimize the risk of the capital invested” (translated by the authors from Tecnoborsa 2011).

3. Real estate is a fundamental sector of national economies and the appropriate financial use of real estate is a driving force for economic sustainability and growth, especially for countries in transition. Better regulations for the risk assessment of real properties when linked with financial products will: (a) strengthen credit systems; (b) provide better insights into the factors underlying the global financial crisis; (c) contribute to avoiding similar disasters in the future and (d) accelerate the exit from the crisis while restoring confidence in the market.

4. As noted in Principle 8, Property Valuation, of UNECE REM (2010):

   “In order to contribute to the creation of more efficient and developed markets, it is necessary on the one hand to improve the reliability of valuation processes for transaction purposes or for landed-property financings based on prudent LTV [loan-to-value] ratios. On the other hand, developing and fostering the introduction of real estate rating systems may reduce sector investment risk and encourage loans at lower interest rates”.

5. The present document provides a framework for creating an accurate and transparent rating for real estate properties to be used as collateral for financial products. It includes criteria and methodologies for an appropriate risk assessment of real estate properties that will be comparable across borders.
II. THE NEED TO REASSESS THE RISKS TO LENDERS

6. Inadequate underwriting of residential mortgages, particularly subprime mortgages, contributed significantly to the global financial crisis. Underwriting practices often failed to correctly take account of the risk of the lender failing to repay the mortgage. Subsequent securitization and other structured financing of unviable mortgage loans passed on the risk arising from poor underwriting to purchasers in banking, securities and insurance sectors around the globe. This has caused doubts regarding the effectiveness of loan origination, portfolio management and the integration of real estate as collateral within financial institutions’ internal risk rating systems. One result of the regulatory gap exposed by the financial crisis has been inadequate information on real estate risk, which has arguably eroded prudent mortgage underwriting practices and hampered the effectiveness of monitoring by regulators and risk-rating agencies.

7. A number of institutions have underlined the importance of the above issues:

   (a) In March 2008 the Senior Supervisors Group\(^1\) noted in a report: “firms that experienced the most significant challenges in meeting their funding liquidity needs were those that, before the market turmoil began, had not priced contingent liquidity internally or externally to reflect the \textit{ex post} assessment of the nature and risk profile of these liabilities”.

   (b) In July 2008, the Institute of International Finance urged banks to take into account “the liquidity of relevant underlying assets, the structure of underlying liabilities, and any legal or reasonably anticipated reputational contingent liquidity risk exposures”.

Clearly, regulators need to encourage, and banks need to implement, new rules that will reflect all the dimensions of liquidity. The Joint Forum at the Bank for International Settlements (BIS) has further stated that it “believes that sound, consistent and effective underwriting practices should apply to financial products” and that, “problems arising from poorly underwritten residential mortgages contributed significantly to the financial crisis”.

8. In their January 2010 report, the Joint Forum made some recommendations on underwriting practices at loan origination, including advice on:

\(^1\) A group of senior financial advisors from ten countries which advises the G20’s Financial Stability Board on emerging supervisory and risk issues.
(a) The effective verification of income and financial information
(b) Reasonable debt service coverage
(c) Realistic qualifying mortgage payments
(d) Appropriate loan-to-value ratios
(e) Effective appraisal management
(f) No reliance on house appreciation
(g) Mortgage insurance
(h) Recourse.

9. The International Monetary Fund (IMF) has addressed both the importance of securitization in the financial system and the flaws in its implementation (IMF 2009). It commented as follows: “The methodologies and inputs used to rate non-prime residential MBS (mortgage-backed securities) and CDOs (collateralized debt obligations backed by MBS) were particularly flawed, overestimating the quality of the underlying loans and underestimating the correlation of their performance.... As a result, most of the senior tranches of such products have either been downgraded, or are soon expected to be”. Improved disclosure and transparency standards providing detailed information on the assets underlying structured finance products are a part of ensuring better understanding of risk.

10. According to the European Commission, “the most acute phase of the crisis in the banking sector has now receded, but the situation remains very fragile. EU banks are still highly leveraged and persistent worries about the quality of their assets have fuelled concerns about the overall health of their balance sheets. Additional problems for banks have emerged as the financial crisis has extended to the real economy”. The operating environment for banks is likely to remain challenging; in large part due to credit losses linked to their real estate loan portfolios.

11. In 2008 the U.S. Securities and Exchange Commission (SEC) proposed rules “to prohibit rating agencies from issuing a rating on structured products unless information on assets underlying the product was available” and from “structuring the same products that they rate”.

12. The need for a fundamental review of practices in loan origination and effective loan portfolio management on a bottom-up basis is clear. Any process of property and risk evaluation should also be designed so that it can be integrated with the internal risk rating systems (IRRIS) under Pillar 1 of the Basel III Accord and the requirements of the European Union’s Capital Requirements Directive IV (CRD IV). Recent BIS

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2 Mortgage-backed securities are created when mortgages are securitized by the originating bank or other lending institution; the resultant security represents a claim on repayments to the mortgage.

3 Basel III is an international system of banking regulations which regulates minimum capital requirements and other aspects of banking. The regulations are determined by a Committee made up of 26 countries, including all G-20 countries, and the Hong Kong Special Administrative Region of China. Basel III, in effect since 2010-2011, is an update of Basel II, which is an update of the Basel I agreements. The first of the three pillars of the Basel III deals with maintaining capital in order to address credit risk, operational risk, and market risk. The
reports have drawn attention to the need to reinforce policies and processes for collateral valuation and management.

European Union implements the first pillar of Basel III through its Capital Requirements Directives. For more information on Basel III, see BIS (2012).
III. CURRENT BANKING PRACTICES TO ASSESS RISK

13. The underlying quality of a borrower for real estate loans is recognized in the regulation and lending practices of financial institutions indirectly, through use of the credit risk of the obligors and, more directly, by valuation and the assessment of LTV ratios and interest cover at loan origination.

14. The capital adequacy discount applied to residential and, in limited circumstances, commercial property under the Basel II and III Accords reflects the relative robustness of such loans in terms of the potential loss given default (LGD) compared with unsecured lending. Nevertheless, the focus of IRRS has been on well-developed systems to assess the credit risk of the obligor, not of the underlying asset. Valuation in accordance with established guidelines does not provide an explicit, objective assessment of the underlying risk inherent in a real estate asset or any indication of future performance, sustainability or likely volatility related to real estate cycles. Nonetheless, such an objective assessment is required to determine the “mortgage lending value” in the Directive 2006/48/EC of the European Parliament and of the Council (European Union 2006). Commercial due diligence on corporate acquisitions, focusing on the exit position of the debt or equity investor, is prescribed by current valuation standards. Principle 7, Transparency and Advanced Financial Products, of UNECE REM (2010) draws attention to the need for greater transparency in the valuation process.

15. The real estate market is characterized by inherent volatility with distinct features that differentiate it from traded capital markets in stocks and bonds, which include:

(a) Heterogeneity of individual markets, assets and players
(b) Illiquidity and lengthy marketing and trading periods
(c) Large financial lot sizes
(d) Significant leveraging linked to bank borrowing
(e) Cycles typified by leads and lags due to supply side constraints
(f) Medium to long run hold periods
(g) Opacity and limited market data.

Illiquidity and a lack of transparency contribute to volatility and thus undermine debt and equity investors’ ability to price or regulate risk.

16. The cyclicality inherent in real estate markets and the relative illiquidity of property are recognized as major issues for debt and equity investors. However, allowances for aspects peculiar to real estate and assessments of asset-specific risk are not generally included in debt or equity investor risk-management systems. The risk-management departments of banks have not had any means to assess the risk profile of the assets on their loan books that come from their real estate departments. Communication has been hampered by the lack of a common language that would enable the real estate bankers who are originating loans or others wishing to establish the value of a bank and its assets, such as an appraiser to articulate a qualitative
assessment of the relative risk of an asset or portfolio and to share this information with others such as the bank’s risk-management department.

17. At loan origination, the credit risk of the obligor, the valuation of the collateral, LTV ratios and interest cover all form part of the decision tree when deciding whether to grant a loan and when determining the pricing of the loan or its risk premium (defined, for example, as the margin over the Euribor). The lender currently lacks an objective assessment of relative medium-term marketability/liquidity and prospective volatility in market value compared with other securities in order to price and subsequently manage the loan book.

18. An example of the negative consequences of this situation can be found in the residential market. The granting of subprime loans to high-risk borrowers, buy-to-let mortgages, loans at high LTV ratios or loans to the self-employed is recognized by lenders as carrying additional credit risk. However, the position on default regarding underlying quality or medium-term saleability (or liquidity) of the asset would be unknown. It is a well-understood phenomenon that better quality residential properties will sell even in difficult market conditions.

19. For commercial properties, obligors of good, investment grade, credit ratings can, as has been shown in the recent recession, still default on their loans. At default, the lender has to assess exposure at default (EAD) and LGD. And at this point the lender will look to valuation carried out at origination, typically updated using indices of property prices. Because the underlying quality of the asset is not properly recognized in existing systems, both pricing at origination and subsequent management are inappropriate and the potential loss exposure of the lender cannot be fully known.

20. The lender has no means of knowing within the loan portfolio the relative marketability, volatility (such as Beta) or the sustainable value of individual assets. It is not unusual for an investment-grade corporate obligor to operate from premises that have a special value to that obligor but are not well adapted to the general market where the property is located. A similar and perhaps more striking example is provided by an investment property, let on a long-term, good quality lease contract to a good quality lessee (for example, for the back office of a financial institution) located where there would be little local market for this type of asset. If the lessee and the “good covenant” (contract), on which the valuation was founded, goes into receivership, and the landlord or obligor consequently breaches his or her loan covenants, the only resort for the lender would be to repossess an asset for which there is a limited market. Competent loan portfolio management is impeded by an inability to correctly evaluate risk.

21. Credit risk, income and the business cycle are strongly related to loan default risk. The marketability of the asset, the underlying quality of the asset and the prospective volatility of the asset’s value, which are measured by property market risk-rating systems, are indicative of the potential recoverability of losses when a loan defaults.

22. Market analysts have long known that, in a real estate market that is active and either rising or nearly peaked, even poorly located secondary property of all real estate asset
classes will sell. These same assets, which typically demonstrate high price volatility, may not be saleable or only saleable at a deep discount in a recession. Conversely, prime properties will be less price sensitive in a market downturns and will be the first to sell as conditions improve.

23. A well-constructed risk-rating system for property markets should complement and enhance existing risk-management systems (valuation, LTV and credit risk) and provide a robust risk-management tool to ensure the transparency and enhanced performance of secured lending programmes and facilitate an active market in asset-backed securities and covered bonds.
IV. AN OVERVIEW OF EXISTING PROPERTY MARKET RISK-RATING SYSTEMS

24. Several property market risk-management systems exist. Most such commercially available systems have been based on modern portfolio theory, which was largely developed for institutional investors. These systems are based on the diversification of risk through exposure to different asset classes and locations; so avoiding a concentration of risk within a portfolio. Rating agencies have developed similar systems for financial institutions to use in constructing their portfolios. However, such systems often do not take into account the underlying fundamentals of a property asset; in particular, they do not address key issues inherent to the nature of real estate markets, and, therefore, to property and market rating systems (PMRS) such as such liquidity, volatility and sustainability.


26. A number of banks in Germany, Austria and Switzerland have developed analogous internal systems focused on meeting the Basel II requirements. These systems are not publically available. Some consulting firms in Germany also offer risk-management systems for banks that incorporate aspects of PMRS. German banking institutions also employ “mortgage lending value”, a variant of market value, to recognize risk by identifying medium-term sustainable value when making real estate secured loans. More recently, some UK banks have also considered adopting internal systems analogous to PMRS.

27. National Governments have also published their own guidelines for valuation standards. For example, the Government of Poland published a law on 4 January 2010 on valuation for loan security purposes, “Krajowe Standardy Wyceny – Specjalistyczne 3” (“National Valuation Standards - Special 3”; Government of Poland 2010). This requires, inter alia, the valuer to provide, as an annex to the valuation report on market value,

(a) An appraisal of property related risk
(b) Foreseeable changes to the market
(c) Risks associated with the evaluation of the subject property by investors
(d) An opinion of the influence of investors on future value.

process from the perspective of investors in commercial property. One conclusion of this work is that an unmet demand exists for this type of analysis.
V. A Property and Market Rating System

29. Valuation standards have developed across Europe and internationally that reflect generally accepted principles and country-specific, customary or legal requirements. The International Valuation Standards Committee (IVSC) has set broadly based standards, which are analogous with TEGoVA European standards. The latter also incorporates requirements under EU Directives. RICS Valuation Standards that incorporate IVSC standards apply, with certain exceptions, to chartered surveyors in many countries around the world.

30. In order to contribute to the creation of more efficient and developed markets:
   a. It is necessary to improve the reliability of valuation processes for transaction purposes or for landed-property financing based on a prudential LTV ratio for land or buildings; and
   b. Developing and fostering the introduction of a real-estate rating system may reduce sector investment risk and enable lower-interest-rate loans (UNECE REM 2010).
   c. Modern standardized appraisal systems contribute to tax equalization (fairness), by avoiding the application of very different tax rates to assets having similar economic and technical characteristics — and also avoid economic rent-seeking that may sometimes accompany the application of differentiated tax rates.

31. Currently prevalent valuation standards focus on defining “market value” based on a comparison with recent market transactions on the assumption of a perfect market (i.e., with all relevant facts known by the purchasers), the comparability of the properties in question (i.e. one is not, unknowingly comparing apples with oranges) and that the properties used as the basis for comparison were valued. Whereas a well-founded assessment of market value is essential, on its own it does not provide all of the information that a lender requires, in particular as related to market risk. No quantitative assessment of the degree of risk associated with the direct acquisition of commercial property for debt or equity investment purposes is generally carried out. There is almost always a total reliance on unquantified, subjective impressions, with no attempt to transform such a qualitative treatment into an analytically more acceptable and useful form. While, for income-generating assets, the investment capitalization rate (net operating income divided by purchase price) should, to an extent, reflect the investor’s view of the future earnings capacity of a particular property, this yield rate is principally a function of general market sentiment (as reflected in both rental income and purchase price) and thus may not significantly take into account the inherent risk characteristics of an individual investment or of a predictable cyclical overrun.

32. It is particularly notable that the influential (and for members mandatory) RICS Valuation Standards, for prudential reasons, does not allow the forecasting of future values other than the potential sale price within a defined marketing period starting on the date of valuation. TEGoVA, in advising on the valuation of assets held as security for loans and in relation to valuation for securitization purposes, proposes a more pragmatic approach that is congruent with its Property and Market Rating (PaM) system and recommends that the valuer “should prepare a structured risk
assessment (considering both market and property risks) for each property in mortgage loan portfolios at the moment when the relevant mortgages were granted. If this assessment was not carried out at the time when the individual properties were financed, this must be done for the first time at the point when the mortgage loans are being sold to the special purpose vehicle” (TEGoVA 2009).

Outline of the property and market rating systems

33. Property and market rating systems consist of objective assessments of the relevant factors underlying the sustainable quality, volatility, liquidity and marketability of the subject property on a risk-rated scale. The analysis, which would normally take place at valuation, is based on an objective bottom-up assessment built from weighted averages. This seems to conform to the requirements under Basel III, Pillar I, which sets out the basis for determining the ratio of capital to risk-weighted assets (i.e. assets whose value has been adjusted to take into account risk). Table 1, below, shows equivalent risk ratings between existing risk-rating systems and the risk-rating model proposed in TEGoVA (2003). The table is, in part, based on Trotz (2004).
### Table 1 Comparison of risk-rating models

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<thead>
<tr>
<th>Aaa to AA3</th>
<th>A1 to A3</th>
<th>Baa1 to Baa2</th>
<th>Baa3 to Ba1</th>
<th>Ba2 to Ba3</th>
<th>B1</th>
<th>B2</th>
<th>B3 to Caa</th>
<th>Moody’s</th>
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<tr>
<td>AAA to AA</td>
<td>A+ to A-</td>
<td>BBB+ to BBB</td>
<td>BBB- to BB+</td>
<td>BB to BB-</td>
<td>B+</td>
<td>B- to C</td>
<td>S &amp; P</td>
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</tbody>
</table>

- **excellent**
- **very good**
- **good**
- **above average**
- **average**
- **below average**
- **poor/special mention**
- **very poor/substandard**
- **doubtful**
- **loss**

<table>
<thead>
<tr>
<th>1 (excellent)</th>
<th>2 (very good)</th>
<th>3 (good)</th>
<th>4 (slightly above average)</th>
<th>5 (average)</th>
<th>6 (slightly below average)</th>
<th>7 (mediocre)</th>
<th>8 (poor)</th>
<th>9 (very poor)</th>
<th>10 (disastrous)</th>
<th>TEGoVA PaM rating</th>
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<td>Example internal bank rating system</td>
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34. One example of a Property Market Rating System (PMRS) is the TEGoVA Property and Marketing Rating (PaM) system includes four principal elements that evaluate the underlying quality, stability of value, liquidity and medium-term marketability of any property. Each of these elements is subdivided into a number of subsidiary elements. The elements (and their component parts) are given weightings based on their relative importance in influencing the medium-term marketability of the property based on the results of an expert survey across the professional valuation bodies in Europe and further proof-tested via an analytical hierarchy process. The elements with their suggested weightings and selected subcomponents are shown in Figure 1.
Figure 1: The TEGoVA Property and Market Rating System

- **Market Environment (20%)**
  - Socioeconomic development
  - Demographics
  - Legal aspects
  - Economic situation

- **Location (30%)**
  - Suitability for property type and target occupiers
  - Image
  - Transportation infrastructure
  - Quality of facilities

- **Property (20%)**
  - Construction
  - Fitout / Finishing
  - Ecological sustainability
  - Profitability

- **Quality of cash flow (20%)**
  - Tenant situation
  - Rental and value growth potential
  - Letting prospects
  - Expenses

Overall Property Market Rating (1 – 10)
35. The evaluation of the market environment should be based on publicly available and comparable statistical sources and analysed with appropriate software. An additional country risk factor can be included to provide comparability across borders.

36. Although an assessment or rating can be formulated using the PaM model and a simple spreadsheet programme, this would be very time-consuming. A more sophisticated software model has the advantage of speed in use, consistency and the provision of an audit trail.

37. The PaM model typically replicates the considerations that an experienced real estate valuer should apply to the appraisal of market value. It makes explicit what is implicit in the valuer’s assessment, is a more objective means of appraisal, and provides a means of comparative analysis. Consistent results and the essential element of comparability from application of the model will depend on the proper training of the valuer or user as well as ensuring the appropriate measures are taken (some of which are described below) to verify valuations and to check against bias.

38. In order to ensure the consistency and comparability of results in PMRS systems it is important that there are:

   (a) Training programmes in the uniform application of evaluation criteria to ensure consistency
   (b) Certification upon successful completion of the training programme
   (c) Help files to reinforce the training
   (d) Measures to minimise the risk of conflicts of interest
   (e) Fixed weightings of criteria to ensure that artificial manipulation of the results is difficult
   (f) Facility to access data used in assessments of criteria to check the basis of the rating and audit results
   (g) Finalization of the rating following only senior third-party authorisation.

Practical applications of property and market rating systems

39. The principal potential applications of a robust rating system in bank lending include:

   (a) At loan origination, setting lending policy, pricing, and audit rules as well as establishing automated granting or refusal of loans;
   (b) During portfolio management and on-going risk assessment implementing, inter alia:
       (i) Multi-level cluster analysis to establish risk homogenous assets;
       (ii) Assessment of risk concentrations, warning systems, etc;
       (iv) Implementation of standardized appraisal systems;
(c) Meeting the foundation or advanced internal ratings-based (IRB)\(^4\) reporting requirements under the Basel II/III standard;

(d) Facilitating efficient pricing based on securitization and covered bond issuance.

40. The potential, enhanced process by which a lending institution could implement PMRS is set out in Figure 2, below. This approach takes into account the Basel II guidelines. Figure 2 is taken from Lützkendorf and Lorenz (2007).

\(^4\) The Basel II/III IRB approach is one in which institutions are “allowed to use their own internal measures for key drivers of credit risk as primary inputs to the capital calculation, subject to meeting certain conditions and to explicit supervisory approval” (BIS 2005).
Figure 2: Finance Decisions under the Basel II advanced IRB approach
41. In an initial phase, simple algorithms can be designed to speed, automate and control lending. Such algorithms would take into account, for example, the quality of the underlying property, the credit score of an applicant, the PaM rating of the applicant, the LTV ratio, and the profit margin of the loan over a reference interest rate such as the EURIBOR to compare loan applicants and determine which offers the best risk-adjusted return. An ideal application of this process would include full software integration of the resultant ratings process in banking risk-management systems, creating a very powerful tool for risk managers and banking regulators.
V. REM Real-Estate Rating Principles and Policy Options

42. Valuation supported by recognized valuation standards is an essential aspect of understanding risk in debt or equity investment. PRMS carried out simultaneously with valuation adds significantly to risk analysis and efficient lending processes where loans are secured against real estate collateral.

43. This document aims to promote the use of property rating systems that facilitate the following:

(a) Transparency which facilitates
   i. Better decision taking by providers of debt and equity.
   ii. The appropriate use of real estate assets as guarantees for advanced financial products, which can also produce social and economic benefits.

(b) Marketability/Liquidity
   i. Identifying the marketability of real estate assets enables lenders to better manage loan portfolios and meet Basel II requirements.

(c) Objectivity
   i. Is an essential component of valuation and any system of risk rating.
   ii. Requires training and certification, as well as continuous professional development.
   iii. Needs an authorization process for property and market rating assessments that helps ensure compliance.

(d) Comparability
   i. Is necessary to enable effective multilevel analysis.

(e) Integration into lenders’ legacy systems
   i. Systems must be capable of both an independent analysis and integration into the advanced IRB approach under Basel II/III.

(f) Information extraction
   i. Is essential so that all aspects of a real estate rating can be tested to provide clarity and a quality check.

(g) Clear audit trails
   i. Enables all assumptions to be examined.
   ii. Allow an improved review of valuations following default. Currently these reviews are often carried out when the precise circumstances and rationale behind the original valuation judgements are opaque. A rating system should resolve this issue and reduce costly legal action.
44. The following are the key issues for an effective system of risk assessment of real estate that is to be used as collateral:

(a) The criteria for the evaluation and application of a real estate risk assessment must take into account the different uses of properties (such as residential, commercial, offices, industrial, or tourist accommodation) and the specific risk profile of the investment according to the nature of the project, be it the purchase of an existing property or the implementation of a real estate development project.

The risk analysis should examine the following elements:

iii. *Location* (including the national and local setting, the macroeconomic and environmental context, the socio-demographic setting and the market segment);

iv. *Market scenarios in the short, medium and long term* at the local and national levels. This includes analysing the potential and dynamics of the reference markets (a series of weighted factors that influence the marketability of an asset based on the long-term stability or potential volatility of the real estate market) according to the forecast of future scenarios regarding the marketability of the real estate in question (marketing, leasing or both) and an estimate of the potential rate of growth (or decline) of the income and value of the property;

v. *Cash flows* (operating costs and revenues) at the time of the evaluation and short/medium-term forecasts;

vi. *Quality of the buildings* with reference to:

1. Building envelope;
2. Quality of the interior finishings;
3. Energy efficiency;
4. Interior soundproofing;
5. Heating and air-conditioning;
6. Use and efficiency of floor space;
7. Safety systems;
8. Communication and cable systems;
9. Lighting;
10. Elevators;
11. Water use and treatment;
12. Management.
vii. *Structural solidity and seismic risk* (analysis of seismic vulnerability with consideration of any critical issues regarding technical regulations);

viii. *Other intrinsic and extrinsic characteristics* (including an analysis of the state of preservation and maintenance of the building) not included above as well as any risks due to the possible establishment of infrastructure or services that have a high impact on environmental quality and on market dynamics;

ix. *Quality of services, infrastructure and transportation*;

x. *Current use of the property and its potential alternative uses* on the basis of reference regulations (such as a general urban development plan) and of the possible evolution of town planning and building laws, with sensitivity and risk analyses;

xi. *Long-term and lasting aspects of the real estate*, including value increase and decrease factors. This includes, for example, the continued relevance of a building’s technology given expected future changes in environmental and other regulations;

xii. *Estimate of the loss given default*, i.e., of any difference in value existing between the current market price and the price obtainable in the case of forced sale due to a non-performing loan in the three to five years after the creation of the loan.

(b) Each category of the assessment should be given a score that is weighted based on the influence of the category on the strength of the investment.

45. A real estate rating system based on the above framework, if adopted as an industry standard, could assist in improving global standards in secured property lending and the market in securitized assets and other advanced structured financial products, with resultant socioeconomic benefits. In particular, the increased transparency and refinement of loan origination procedures could increase lender confidence, reduce finance costs for better-quality loans and increase home-ownership rates. It could also provide properly priced funds to businesses and generate sustainable economic growth.
REFERENCES


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