

**PROPERTY VALUATION
AND APPRAISAL**

**U.S. INFORMATION
SYSTEMS AND
RECOMMENDATIONS FOR
POLAND**

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LIST OF ACRONYMS

AVM	Automated Valuation Model
BOMA	Building Owners and Managers Association
CMBS	Commercial mortgage-backed securities
GIS	Geographic Information System
GUS	Central Office of Statistics
IREM	Institute of Real Estate Management
MLS	Multiple Listing Service
US	United States

ABSTRACT

Real estate appraisals can provide current market value estimates to support multiple purposes, including purchase or sale, financing and related underwriting, property listing, assessment for tax purposes, and value at transfer (inheritance or gift). Readily available real estate data facilitates more accurate appraisals, allowing real estate risk to be more precisely assessed by buyers, lenders (primary and secondary), and regulatory authorities.

Three appraisal methodologies are standard for U.S. appraisers and for most appraisers worldwide, including those in Poland:

- Sales comparison: The value indicated by recent sales of comparable property in the market.
- Income: The value of a property's earning power based on the capitalization of its income.
- Cost: The current cost of reproducing or replacing the property, plus improvements, minus the loss in value from depreciation, plus site value.

The reliability of the final estimate of value, however, is intimately tied to the reliability of the data. In the U.S., the real estate valuation process typically begins with a broad overview of market forces using general data, continues with an analysis of regional and local market conditions, and ends with an analysis of specific data applicable to a particular property or properties. In most geographic locations, for most types of property, extensive data are available, both public and private, and the available data are generally able to support the chosen valuation methodologies. This is not the case in Poland nor in the transition countries in general, since under the state-dominated real estate sector, a valuation process, as used in market-based transactions, did not exist. Thus, Poland now needs to establish the relevant data series and build the corresponding databases.

This paper reviews the residential and commercial appraisal process in the United States, describes the databases that support them, and discusses the particular roles of the public and private sectors in making data available. It identifies the general macroeconomic data (national and regional) and the property-specific data needed if appraisals are to accurately assess both value and potential risks. It surveys the strengths and weaknesses of the current U.S. and Polish systems, and points out that, though Polish appraisers understand and use all three appraisal methodologies, an engineering tradition that focuses on physical attributes, combined with lack of market transactions and income data, may lead them to emphasize the cost approach. In addition, the Central Bank, in its role as regulator of mortgage banks now being established in Poland, must determine the rules underlying the concept of "mortgageable value" for the underlying collateral of mortgage bonds. Thus, a unique opportunity exists in Poland to develop a system of collection and distribution of real estate data based on current international best practice, and the paper makes general recommendations as to the components of such a system and how it might best be developed in Polish circumstances.

PROPERTY VALUATION AND APPRAISAL

U.S. INFORMATION SYSTEMS AND RECOMMENDATIONS FOR POLAND

1.0 INTRODUCTION

The output of the appraisal process in the U.S., is typically a current market value of an individual real estate asset or group of assets. This valuation can provide information to support multiple purposes, including:

- Purchase or sale
- Financing and related underwriting
- Property listing
- Assessment for tax purposes
- Value at transfer (inheritance or gift)

The ability of individual actors in an economy to accurately determine the market value of a real estate asset is a critical variable in order to avoid catastrophic losses in real estate property and capital markets.

In the world of real estate, it is not always possible to make a precise estimate of market value. More information allows investors to more accurately assess risk and make informed decisions. This results in more efficient allocation of capital among competing investment alternatives. For example, to recognize value real estate assets permits corporate owners of real estate the recognition of opportunity costs associated with under-utilized assets and ultimately re-deploy capital to more productive uses. For lenders, the ability to accurately value real estate collateral permits underwriters to allow higher loan-to-value ratios. The existence of a transparent valuation process also allows for development of secondary mortgage markets, as the information contained in an appraisal permits subsequent investors in a loan to assess critical areas of the original underwriting procedure. Readily available real estate data generally results in more accurate appraisals, allowing real estate risk to be more precisely assessed by buyers, lenders (primary and secondary), and regulatory authorities.

Section 2.0 provides an overview of appraisal information systems in the U.S., including national, regional, and local data describing macroeconomic and market trends and specific local data germane to the appraisal of residential and commercial properties. Section 3.0 critiques the U.S. system and amplifies some of its key shortcomings.

Section 4.0 comments on the current situation in Poland with regard to the appraisal process and availability of data and offered initial recommendations designed to move toward an improved system. Appendices I to III provide, respectively, a list of real estate trade associations, real estate research centers, and a comprehensive listing

of real estate data sources used in appraisal in the U.S. This listing, provides an overview of the involvement of both private companies and public agencies in data provision.

2.0 OVERVIEW OF US DATABASES AND INFORMATION SYSTEMS

The analysis of real estate data begins with an investigation of market trends at all market levels - international, national, regional, community and neighborhood. The examination of these different levels of data helps the appraiser to understand the interrelationships among the principles, forces, and factors that affect real property value. This report is written to assist Poland in developing data systems appropriate to support internationally recognized valuation procedures. Like Polish appraisers, U.S. appraisers utilize the same three methodologies that are standard for most appraisers worldwide:

- Sales comparison approach—The value indicated by recent sales of comparable property in the market.
- Income approach—The value of a property's earning power based on the capitalization of its income.
- Cost approach—The current cost of reproducing or replacing the property, plus improvements, minus the loss in value from depreciation, plus site value.

Each approach requires the gathering and analysis of sales, cost and income data that pertain to the property being appraised. The reliability of the final estimate of value in an appraisal is intimately tied to the reliability of the data. Real estate markets tend to be heterogeneous. Markets and sub-markets have different patterns of price movement within the confines of regional and national economic conditions. It therefore requires substantial resources to track market conditions within a large geographic area, such as the U.S. national market, regional markets, and innumerable sub-markets.

Real estate market information can be loosely categorized as general data and specific data. The real estate valuation process typically begins with a broad overview of market forces using general data, continues with an analysis of regional and local market conditions, and end with an analysis of specific data applicable to a subject property.

General socio-economic data include information on social, economic, governmental, and environmental forces that affect property value. General data also include real estate data indices made available from a variety of sources. The understanding and analysis of the general economic data forms the basis for proper interpretation of the interaction of market forces that ultimately influences property



value. Users of general data must understand the economic conditions and trends to properly analyze a specific property. A list of economic and real estate data sources (“U.S. Real Estate Data Sources”) has been compiled and included in Appendix III of this report.

At state and local levels, building and planning agencies/departments can provide data on population, households, master plans, zoning, building permits, etc. This type of general data is useful in supply and demand projections. There is no consistency in the format or availability of state and local data. It may be compiled and readily available in published and/or electronic format, or non-existent, depending on local/state budget and staffing constraints.

Real estate trade associations can also be useful sources for information. These organizations publish topic-specific and general real estate data and market analysis. An alphabetical list of real estate-related professional organizations is included in Appendix I.

Specific data consists of details relating to the property being appraised, comparable sales, cost data, comparable property income and expense information and rates of return. Reliable data is necessary to make meaningful comparisons to a specific property.

2.1 The Use of Data by Appraisers, Brokers, Banks and Regulators

Single Family Residential

Brokers use comparable transactional data for determining listing or bid price for a subject property and for undertaking ad hoc valuation (often for the same purpose—determining listing or bid prices). Appraisers use the same data for more formal valuation exercises for numerous purposes, including financing (third party appraisals are required by lenders), litigation, property assessment appeals, estate settlement and so on. Clearly, the validity of the final estimate of market value is quite dependent on the quantity and quality of the market data used in the analysis. Specific market data is required in all three traditional approaches to value.

Banks and regulators use data in a number of ways. First, the data are used indirectly, in that regulators require third party appraisals as part of the loan underwriting process. Also the data may be used directly in several ways. Lenders are usually required to undertake an internal asset review annually. This means that lenders must assess collateral values to be certain that the bank’s capital is not at risk. For single family homes, this is usually done at an aggregate level. That is, lenders may use prices indexes derived from the above data to determine changes in collateral value not by individual property, but rather by region or market area. If an individual asset becomes non-performing (i.e., the borrower fails to make three consecutive payments and is over

90 days in arrears), then the loan will be reviewed more often. In this case, internal bank policy will determine how the collateral valuation is undertaken. Often, non-performing pools will involve the use of “broker price opinions” and/or more sophisticated statistical techniques (see below).

Neighborhood or regional price indexes are usually used to adjust collateral values on a mortgage pool basis to determine whether price changes imply the need for further reserves. These adjustments usually occur on an annual basis. Typically, specific property, periodic appraisal updates are not required for performing residential loans over the loan term.

Commercial Properties

Real estate brokers typically use comparable data (lease rates, sales prices of properties - land, land and improvements) for the purpose of establishing values of properties for listing purposes. Most brokers have access to the same local information that appraisers do, but since they are parties to the transaction and are aligned with a buyer, seller, landlord or tenant, they are not normally called upon to provide independent estimates of value of property or lease transactions.

Banks require third party appraisals when a loan is underwritten. Appraisers performing appraisals for federally related transactions must be licensed and certified (by the state in the U.S.) and abide by the Uniform Standards of Professional Appraisal Practice¹ and specific bank appraisal guidelines. Once a loan is originated, periodic asset review may require access to comparable sales data or leasing information. For example, a typical federally regulated institution will require that commercial borrowers submit financial information on both the property and the borrowing entity’s financial situation on an annual basis. The submission of such information is usually contractually required and failure to provide the information may constitute a default on the part of the borrower.

In a secondary mortgage market (defined to include securitization and the sale of loans), the ability of third parties to evaluate financial contracts (terms, conditions and collateral) is critical. Loans are often acquired, pooled and then securitized by intermediaries who did not originate the loans. This activity can only occur if the transactions are transparent².

¹ Published by the Appraisal Foundation as authorized by Congress as the source of appraisal standards and appraiser qualifications.

² Types of multivariate methodologies used to adjust for differences among comparables vary according to whether the data are for single family residences or commercial properties.

Services such as Mortgage Risk Assessment Corporation and Case Shiller Weiss, Inc. provide on-line access to existing home transactions data which can be used in hedonic models for estimating the price of a subject property. Appraisal of single properties is usually undertaken by professionals who manually adjust prices of comparables to arrive at an estimate of value for the subject. Hedonic techniques are more commonly used in either mass assessment modeling or for valuation of collateral in loan pools. In either of the latter



Since commercial properties are usually not homogeneous, lenders will require, as a matter of policy and procedure, that the borrowers provide periodic (annual) updates of property level income and expense data as well as information on financial condition. This information, combined with market data from third parties, will permit lenders to undertake 'desk-top' appraisals of collateral for existing commercial loans. In cases where large value changes are likely or when property conditions or attributes change, an updated third party appraisal may be required. An appraisal is also usually performed when a loan is in default. Federal regulators required appraisal updates on commercial collateral during the U.S. banking crisis in the 1980s and early 1990s, with a concentrated effort in the Southwest and Northeast. This had a great impact on the appraisal community, resulting in a windfall of new business, substantially higher fees and a shortage of qualified appraisers. The restriction of new and rollover loan capital resulted in property prices plummeting, distressed sales (i.e., distressed comparable prices), lower appraised values and an increase in performing/non-performing loans³. Prices and appraised values spiraled downward and many banks were forced to close or merge with a stronger institution.

2.2 How the Data are Gathered, Processed and Made Available

The types of data collected by federal, state, regional and local governments are extensive and numerous. Most commonly, these data begin with the agency or entity that has a practical purpose for collecting them. For example, local planning departments, as a matter of course, keep track of the number and value of building permits issued per period in the jurisdiction. Usually, these data are free and their availability depends on the form in which they are maintained and the willingness and budget of the agency or government entity involved.

The most common collector of transactional data is the state, county or local property tax jurisdiction. Often transactional data are critical for assessment purposes. It is usually required that the seller, the buyer, the lender or the appraiser submits these data at the time of sale. Sale prices are often recorded in the registry of deeds as either the actual dollar amount of the transaction or as a percentage of the price in the form of transfer taxes.

cases, multiple properties must be valued (usually quickly) at low cost on a per unit basis. Repeat sales indexes are used for the same purpose. Choice of methodology is usually the result of the preference of the user or data availability (repeat sales indexes may be difficult to generate for markets in which there are limited numbers of transactions).

Entities such as Torto-Wheaton CB Commercial and Property & Portfolio Research are involved in using econometric techniques to predict rents and vacancy rates for major metropolitan areas across the country. Usually these models and predictions play a role in valuation exercises undertaken by more sophisticated entities such as real estate research departments in larger lending institutions and real estate portfolio advisors.

³ A typical performing/non-performing loan is one where the payments are current (performing) but L/V ratios are in non compliance.

Private firms maintain data for various purposes. Usually, the underlying bases for private data sets are the public data sets often maintained by the property tax authority. Private firms acquire data from the local property tax authority and sometimes clean or augment the data and, in turn, provide the data on-line to private subscribers. The data sets normally include for each property the transaction price, date of closing of the sale, name and address of buyer and seller and other variables describing the property. The descriptive information is fairly complete for single family homes but usually inadequate for commercial properties; thus, the data must be augmented in the case of commercial properties. The most common subscribers to these services are appraisers, lenders, and real estate brokers. These on-line services are typically used for valuing property on a single transaction basis. In other words, at the time of a listing or a sale and subsequent financing, on-line data sets would be used to identify comparable transactions in the neighborhood of the sale. Private providers often check and enhance the quality of the data or, at least, facilitate ease of access by the user.

In most areas of the U.S., access to property records, which are public data and fall under the freedom of information guidelines, are free. Copies of deeds, field cards, and lot plans usually require a small fee for use of the copy machine. Some jurisdictions provide the data free on web sites. Some private data providers collect and organize the data and sell it on a subscription basis. Also, third party subscription services are available.

Recently, many properties have been appraised using these data sets. The typical application is the valuation of collateral for a geographically diverse mortgage portfolio. Therefore, breadth (geographic diversity) of coverage has become important. Speed and economy are also important. Large numbers of properties, which individually are collateral for separate residential mortgages, must be valued during a short time and at minimal cost (less than \$25 per property). The researchers⁴ are interested in quick, reasonably accurate, unbiased estimates of collateral value. These data sets allow collateral valuation without site visits, which radically reduces the time and cost of the valuation process. Often the user will augment the data analysis with a broker's site visit for the purpose of assuring that the property has not been physically damaged and that the physical description matches documentation data.

Unfortunately, the type of data discussed above refers primarily to the types of data available for single-family homes and small, multi family properties (2 to 4 units). Since commercial properties are relatively heterogeneous and data that would permit computerized valuation of multiple properties are not easily available. Both property price and income information are necessary for a meaningful appraisal of investment real estate. Since lease terms are private information in the U.S., part of the equation is missing for the valuation of investment properties by parties other than those having

⁴ Researchers include statisticians, appraisers acting as portfolio advisors, market analysts, etc.



access to private information (e.g., direct lenders, appraisers directly involved in the transaction, brokers, etc.).

General economic and market data are typically compiled and disseminated by federal, state and local government agencies, trade associations, universities and private data vendors. The largest resource for general economic data comes from the federal government. Reports are available with much of the collected data on the Internet. A sampling of Federal Government data is shown in Table 1. A more complete listing is shown in Appendix III of the report.

Table 1
Examples of US Government Housing Data

Agency	Publication	Data
Council of Economic Advisors	The Economic Report of the President	Housing, housing starts and financing statistics
Federal Reserve	Federal Reserve Bulletin	GNP, GDP, housing, construction, mortgages
Department of Commerce	Census of Housing	
Department of Commerce	Annual Housing Survey	
Department of Commerce	Survey of Current Business	Value of new construction
Housing and Urban Development	Development report	Housing starts, vacancy surveys

Many professional real estate organizations publish quarterly, semi-annual and/or annual reports on a variety of real estate market segments and statistics. These reports are available to organization members for free. A small fee is charged for non-members. A sampling of periodic reports published by various organizations is shown in Table 2.

Table 2
Examples of Data Published by Real Estate Organizations

Organization	Report Description
Building Owners and Managers Association	Income/expense analysis for office buildings
International Council of Shopping Centers	Factory outlet index, monthly mall merchandise index. Handbook on shopping center operations, revenues and expenditures. Indexes track sales activity for factory outlet shopping centers and regional malls.
National Association of Industrial and Office Properties	Industrial income and expense report
Society of Industrial and Office Realtors	Industrial real estate market survey, review and

Urban Land Institute (ULI)	forecast ULI market profiles
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Universities and colleges sponsor real estate research departments and offer copies of research publications for a small fee. The publications usually address local real estate issues such as growth and land use patterns. Several universities publish price indices. The University of Connecticut Center for Real Estate and Urban Economic Studies offers on-line residential price indices for Connecticut. (Prominent real estate research centers in the U.S., are listed in Appendix II).

Databases and research publications have become increasingly available on-line and on CD-ROM in recent years. The data sources include a broad range of topics including housing inventory, vacancies, demolitions and conversions, commercial construction, zoning regulations, demographics and housing forecasts. General data is also cumulative and an integral part of an appraiser's office files.

Specific types of data are made available by a variety of public and private sources.

Property Sales Data

Comparable sales data comes from a variety of sources including public records, published news, real estate professionals, multiple listing services and private data vendors:

■ **Public Records.** Public property records (deeds) are most often recorded and made available at municipal or county registrar offices. The information in the deed typically includes the full names of the parties involved in the transaction, the transaction date, a legal description of the property, the property rights conveyed, easements and restrictions on the property and, in some cases, the consideration paid for the property rights. Sale price recording practice varies from state to state. Some states require the true and actual price paid either to be reported as an actual dollar amount or recorded as an amount of tax ("transfer stamps") based on the sale price ("price disclosure"). Other states do not require the disclosure of sale price for real estate (non-disclosure states). Appraisers working in these jurisdictions must obtain sale price data from other sources. Other sources include public (media) announcements, real estate brokers, informal and formal data sharing arrangements between appraisal offices in local markets, lenders, and private data vendors. Specific price data in non-disclosure jurisdictions typically come from parties involved in the transactions. Appraisers and tax assessors often use a variety of combinations of price information sources, depending on availability in a given market.



■ **Published News.** City newspapers and trade publications typically report news on property transactions. Although the information may be incomplete (or inaccurate), it is a good lead source for sales data. A typical trade newspaper such as the New England Real Estate Journal is published biweekly and the subscription price is \$99 per year.

■ **Real Estate Professionals.** Real estate appraisers, agents, managers and mortgage bankers can often provide transaction data and data leads.

■ **Multiple Listing Services.** Multiple listing services (MLS) are the primary source for comparable sales data for residential real estate appraisers. The annual cost to subscribe to a multiple listing service, which requires a National Association of Realtors membership, starts at approximately \$750 and increases depending on the size of the real estate firm. In most urban and suburban markets, multiple listing services publish real estate listings and sale data in both hard copy and electronic form. Most multiple listing services serve the residential market; however, some services include commercial and investment divisions. A typical multiple listing service may participate in 65 to 75 percent of all single family sales activities, whereas commercial and industrial sales activity participation may be only 10 to 15 percent.

■ **Residential multiple listing books are published biweekly or monthly.** A property listing includes descriptive information, a photo, and the asking price. Supplemental data include a list of properties put into agreement between buyer and seller or sold since the last publication as well as sales and listing data. Many multiple listing services publish quarterly volumes listing properties sold, including the final sale price and sale date.

■ **Electronic Data Interchange (EDI).** Electronic data interchange was developed by the National Data Service Work Group to allow the electronic exchange of information between parties using standardized data formats. EDI was created to streamline the residential mortgage process. Appraisal data is electronically entered in a standardized format by the appraiser, which is then sent to a residential property database.

■ **Secondary mortgage market agencies.** (Fannie Mae and Freddie Mac, the Federal Home Loan Mortgage Corporation) have mandates to standardize electronic information in order to facilitate the mortgage lending process. However, the pooled data are not yet available to the independent appraiser.

■ **Private Data Vendors.** Many appraisers have developed private data vending services. These services typically cover a specific geographic area, such as a county or state. The type and level of detail of the data vary. Most comparable sales data services provide basic transfer information, including property address, buyer, seller, date of sale, price and index (book and page). The data usually include all recorded

transactions (residential, commercial, industrial, land, etc.) without property use categories. The annual cost for an area the size of Rhode Island (population 1 million) is \$370 per year (from the vendor County Comps). Masscomp is a private data vendor serving the State of Massachusetts. Its data are more comprehensive than County Comps, providing not only the basic recording (deed) data, but also property use categories, land size, building size, and the assessor's map and lot designations. The typical annual fee is \$1,500. A similar service, available in Connecticut, requires an annual fee of \$960. Several companies provide comprehensive non-residential data in the primary commercial U.S. markets with annual subscription rates exceeding \$10,000. There have been several attempts by private companies and professional organizations over the past decade to organize a subscription-based national commercial real estate database. The Appraisal Institute has recently announced funding to continue the quest. Basic impediments include the cost to develop and maintain the system, lack of interest of targeted data sources (appraisers⁵ and assessors), lack of standardized reporting formats and the proprietary nature of real estate transactional data.

Generally, the availability of real estate data is directly related to the amount of market activity in a given area. Where markets have been active, usually in major metropolitan areas, private companies have developed which specialize in providing real estate data. Less active areas may have no private data service available. Standardization of industry-wide data reporting has not evolved, with the exception of EDI noted above. Traditionally, real estate industry participants have been oriented toward a single geographical region, seldom larger than a Metropolitan Statistical Area (MSA). As a result, data gathering systems have focused on individual markets and sub-markets. In addition, property ownership records are typically maintained at a county or municipal level. Therefore, for both jurisdictional and business reasons, the result has been a parochial, sub-market approach to the collection and re-distribution of real estate transaction data.

Construction Cost Data

Construction cost data can be obtained from a variety of sources. Builders and building material suppliers can often provide cost data on buildings recently constructed that are similar to the property being appraised. Most engineering firms provide cost estimating services. Most appraisers rely on manuals published by cost estimating services such as Marshall Valuation Service and E. H. Boeckh. Published cost manuals and electronic databases are updated periodically and indexes are provided to adjust to current costs and locational differences. Annual subscription fees are approximately \$200.

⁵ Although appraisers would be the prime beneficiaries of the data, many confine their practice to a local geographic area and have no need for "national" data.



Rental Income and Expense Data

Rental income and expense data are usually difficult to obtain. A majority of leases are not recorded and income and expense data are considered proprietary by property owners or managers. In certain cities, abstracts of recorded leases are published by private data services. Typically, an appraiser collects and maintains income and expense data from income producing properties being appraised, for re-use in future appraisals of similar property types. Some professional organizations publish income and expense rates, ratios, and averages based on member input, but the data is not specific to a particular submarket and is typically used for benchmark comparisons and cost-trend analysis.

Capitalization Rates and Rates of Return

A capitalization rate is a relationship between net income and capital value. An “extracted” rate, or “going-in” rate, is typically determined by dividing the net income on the date of sale by the sale price. Although the sale price may be public information, the net income generally is not. Appraisers extract capitalization rates from appraised properties that have just recently sold and for which income and expense data were provided as part of the appraisal process. Extracted capitalization data are supported by published real estate investor surveys, which provide rate indices. Real estate investor surveys are funded by subscription income and typically published by private companies. The Korpacz Real Estate Investor Survey is an example. The subscription rate is \$225 per year. It was developed by a regional appraiser to supplement fee appraisal income. It is published quarterly and distributed nationally. Survey participants include pension fund real estate advisors, Real Estate Investment Trust officers, nationally recognized appraisers⁶ and real estate portfolio managers involved with institutional grade properties⁷. The participants complete a survey form each quarter which includes questions pertaining to local and regional market conditions, current criteria for real estate purchases and sales such as yield requirements, income and expense growth assumptions, capitalization rate requirements, etc. The responses are disaggregated by property type (retail, office, hotel, and industrial) and regional (geographic) categories. Appraisers use the published data as benchmarks, adjusting for local market conditions and property type (institutional vs. non-institutional grade property).

2.3 The Payment Structure Supporting the Information Systems

A variety of information systems are supported by public and private entities. Substantial government resources are required to collect and maintain general

⁶ Typically affiliated with a national or multi-national corporation.

⁷ Institutional grade property is loosely defined as that which would be purchased and held in a national investor's portfolio. Typical examples include central business district office buildings, modern business parks, high profile hotels, and regional malls.

economic data. Federal government agencies including the Departments of Labor, Housing and Urban Development, Commerce, and the Census Bureau all participate in the collection, maintenance and publication of economic data related to real estate markets. State governments supplement related federal activities through economic development agencies, housing agencies, and departments of community affairs. Private real estate and professional organizations which publish data are funded by membership dues and typically provide publications free of charge to their membership. They may charge a subscription fee or one-time charge for specific data requests from non-members. Private data vendors profit through “per item” and subscription sales to appraisers, lenders, property managers, etc.

Single Family Residential Data

The primary provider of residential transactional data are Realtor Multiple Listing Services (MLS)⁸, as noted above. Real estate brokers generally are “dues-paying” members of a local realtor organization which provides a Multiple Listing Service. The MLS is typically a separate organization, but an affiliated, self-supporting entity related to the local realtor organization. As part of the organization membership agreement, the broker provides detailed descriptions of listed properties to the MLS for publication and use by its members. The data are provided in hard copy and, most often, also in electronic format. The MLS is funded by subscription fees. The data are used by brokers, appraisers, bankers and regulators.

Commercial Property Data

Most commercial property transactional data is compiled and resold by private vendors either on a subscription or per item basis. The service is typically regional in scope and the data are not audited. Several attempts have been made to collect and distribute commercial sales data on a national scale in the primary commercial markets in the U.S., but with only moderate success. Many appraisers share collected data with other appraisers across the country as an informal professional courtesy. There is no primary provider of commercial transactional data similar to the residential MLS system.

3.0 CRITIQUE OF THE ADEQUACY OF U.S. DATABASES AND INFORMATION SYSTEMS IN U.S. APPRAISAL PRACTICES

Introduction

Clearly, extensive data and data analysis are at the heart of an adequate real estate appraisal process. A major and positive trend in the U.S. is that as technology continues to lower the costs of data collection, storage and dissemination, both the

⁸ Realtor refers to state realtor organizations under the umbrella of the National Association of Realtors.



quantity and quality of data available for real estate appraisers in the U.S. have improved. Data from both the public and private sectors are becoming more readily available. The major flaws in the U.S. system are the limited consistency in data collection procedures, reporting formats and calculation methodologies for specific property data. Nor is terminology consistent. There are also abundant sources of data that remain untapped in mortgage lending files. The residential mortgage industry is now in the process of setting standards and capturing transactional data. As meaningful data becomes more accessible and affordable through technological advances in the U.S., real estate markets will become more transparent, which should allow more efficient and accurate pricing. This section provides a critique of U.S. data collection procedures by type of data.

3.1 A Critique of National and Regional Macroeconomic Data in the U.S.

National macroeconomic data are readily available in the U.S. from a variety of federal sources through print and digital (Internet) media. However, macroeconomic data which are necessary to support regional and local economic analyses that provide the necessary context for a meaningful local market analysis may or may not be available, depending on the jurisdiction. Much nationally available data are available disaggregated for larger metropolitan areas, usually indexed by census tract and/or MSA (Metropolitan Statistical Area). Regional or local data are not normally standardized, nor are their methods of collection consistent. Usually, appraisers can find the sources needed, but regional variation in who produces and maintains the data often make the process of data identification and collection unnecessarily time-consuming and expensive.

Although the U.S. Census Bureau collects and publishes demographic, economic and housing data down to the census tract and block group level, it is compiled by census only once every ten years and thus quickly becomes out of date. There are private companies that update and market revised data annually based on economic and demographic reports compiled at the regional and local government level. The data are useful for real estate analysis only to identify broad-based trends, not neighborhood or site specific changes.

Although, as noted, macroeconomic data is readily available in the U.S., it is scattered among a plethora of federal, state and local authorities and must be independently collected and reassembled by appraisers and real estate market researchers. Private enterprise is beginning to develop systems of collection and redistribution sold on a subscription basis, but usually the data is processed and privately held within practicing real estate-related enterprises. Technological advances and the internet will likely result in the development of easily accessible, consolidated macroeconomic data sources for incorporation in real estate price analysis in the near future.

Finally, Geographic Information System (GIS) is being adopted in the U.S. by various public agencies and private firms. However, it is not widely employed. Lenders are, however, required to geo-code their loans, and there are various services that undertake that function as a line of business. Lenders must match loans to census tracts in order to facilitate assessment of fair (non-discriminatory) lending practices. Unfortunately, more general adoption of GIS techniques to examine spatial aspects of real estate market activity is occurring at a slow pace, reflecting the cost of the technology, the training required, and the up-front commitment of time to geo-code information.

3.2 Single Family Residential Price Data in the U.S.

In the last five years, rating agencies', issuers' and investors' demand for and the availability of on-line databases for single family home sales that can be used for valuation has increased dramatically. In fact, this activity has become an industry in and of itself. The models that the firms develop are termed "automated valuation models" (AVMs) and employ both hedonic and repeat sales index methodologies. In general, these data sets are valuable and complete. Currently, most mortgagors still require a third party appraisal for each transaction, but those loans deemed low risk might allow for an exterior inspection only and less in-depth comparable sale analysis. AVMs are still untested as a replacement for third party appraisals, but the trend is moving in that direction. The biggest drawback is that not all geographic areas have full coverage. Most services indicate that less than 50 percent of nationwide transactions are included in their data sets. On the other hand, the transactions included tend to be in the larger metropolitan areas in markets where loans are easily securitized and there is demand for information about collateral. In rural areas and smaller communities there is less demand for information, as large national lenders, investors, and issuers will not typically target origination or investment in loans in these areas.

Relatively few descriptive variables comprise these data sets. Fortunately, most of the variability in price is captured in six or fewer variables including, for example, square feet of living area, age of structure, number of rooms, number of bedrooms, number of baths, fireplace, and lot size. Cross-sectional hedonic regression models are used to predict sale prices, and/or repeat sales indexes are used to adjust the prior sales price of a property to current value. Sometimes this approach requires further adjustment if there is evidence of changes in property attributes. Research in the U.S. suggests that within a region there can be fairly dramatic differences in property price changes and the process tends to homogenize neighborhood price differentials. One of the primary drawbacks is the inability to effectively quantify neighborhood boundaries as they relate to price. It is not unusual to have price variances of over 50 percent within the same census tract or even block group in older, urban residential areas. Tracking demographic changes as they relate to property price has yet to be mastered by proponents of AVM technology.



Generating repeat sales indexes requires the ability to identify properties that have been sold repeatedly over time. When price indexes are used, it is important to be able to distinguish sales in relatively small (localized) geographic areas. A primary drawback with repeat sale indexes is the inaccurate accounting for building changes/improvements between sale dates.

This data is usually provided in the first instance by public agencies (e.g., property taxing authorities) which collect the data regularly from property title records⁹ and physical inspections. They maintain its accuracy to carry out their administrative mission (for example, periodic assessment of properties and determination of property tax liability). Since property taxation is a state or local responsibility in the U.S., there is significant intra-state variation in the availability, timeliness and cost of transactional data that is collected for property assessment purposes.¹⁰

As noted, the Multiple Listing Services (MLS)¹¹ are usually associated with the realtor organization in an urban area. Many federal and local government agencies rely on MLS data to track single family housing trends in some serviced areas. MLS services are usually operated by realtor associations in a particular city or urban area. Unfortunately, there is no national point of collection or clearinghouse to standardize and consolidate the independent databases. Moreover, not all sales are handled through brokers. For example, private sales (sales by owner) are normally not included in MLS data sets.

Cost data provided by national cost data services are useful to test the reasonableness of actual project costs. However, they do not allow for consideration of specific site cost overruns (due to unfavorable site conditions such as ledge, wetlands, uneven grade, etc.); temporary, local material price spikes; custom construction; and other conditions. Due to the reliability and availability of residential comparable sale data, the cost approach in the appraisal process is typically relied upon less in the reconciliation of the three approaches to value to obtain a final opinion of market value.

Due to the aggregate size of the U.S. residential mortgage market, the focus for developing efficient access to price related data has been primarily in the single family residential sector. The driving force has been from secondary mortgage market participants, primarily Fannie Mae and Freddie Mac. Their vision is to allow a mortgage applicant to apply for, and close, a mortgage loan within 1-3 days. Part of this vision includes access to rapid, low cost property value estimates. AVMs are the chosen vehicle, but issues such as tracking shifts in price related to local demographic changes, the introduction of negative neighborhood influences, sale price confirmation and non-

⁹ See disclosure/non-disclosure discussion in Section 2.1, Property Sales Data, Public Records.

¹⁰ It is common practice in full disclosure jurisdiction for tax authorities to collect transactional price data from title registries for property assessment purposes.

¹¹ See Section 2.1, Property Sales Data, Multiple Listing Services.

standardized micro data sets will continue to challenge the reliability of market value estimates.

3.3 Commercial Property Price, Income and Cap Rate in the U.S.

Jurisdictions (title registries) that record transaction prices for single family residential sales also typically record price information regarding commercial properties. Unfortunately, because of the heterogeneity of commercial properties, the data from a single transaction are not very useful unless income and other descriptive data are available. Thus, the effective use of commercial price data involves piecing together data from several sources.

Price data and descriptive information. Price data, in the first instance, will be available from public sources and serve as a check on the accuracy of vendors' private data that provide more detailed information. Private vendors (such as Comps, Inc.) provide descriptions of improvements, site area and measurements, zoning, other publicly available data, and photographs, in addition to the sale price of each comparable property. Their online software permits users to (geographically) define market areas from which to draw comparable sales. Unfortunately, this company services only urban areas and only in 22 of the 50 states. Other competitors exist in the most populous markets and appraisal firms maintain their own databases for this purpose. These private companies began providing a service to the appraisal industry and thus data are now used by lenders, brokers and many other professionals as a dependable source of transactional information on commercial properties, including land.

Attempts have been made by national appraisal organizations to pool commercial property data provided by their memberships. The attempts have failed for the most part due to lack of incentive, fiduciary issues and parochial attitudes.

Market leasing and vacancy information. National brokerage firms can readily provide leasing and vacancy information in many of the markets in which a property is located. The national real estate firms typically participate in the 60 primary U.S. urban commercial markets and publication of leasing and vacancy information is specific to these areas. There is no single source for related data in secondary markets. Local real estate companies (sales, management and appraisal) typically compile data on the markets in smaller communities and rural areas and data availability is unpredictable.

Property Revenue and Expense Information

Property owners are required to submit income and expense information annually regarding a financed property as a condition of the commercial loan. Obviously these data can be checked through an audit, if permitted, and through comparison to benchmark data sources (e.g., leasing information from brokers and expense



information from BOMA or IREM¹²). Typically, revenue and expense information is considered proprietary and, although trends and indices are developed and published in certain markets, specific property data is usually available only to the parties to the transaction, the lender, and the appraiser, who is bound by confidentiality rules. Professional organizations such as BOMA and IREM collect data from their membership and aggregate the information, providing only summary ratio data, thereby protecting the privacy of individual property owners or managers.

Capitalization rate data

Finally, capitalization rate¹³ information would be obtained from national information providers such as the Korpacz Real Estate Investor Survey or the National Real Estate Index (a joint venture of Ernst and Young, Kenneth Leventhal and the Koll Company). Most appraisers maintain their own private databases of transactional information that include this information. Investor survey rate data is usually used as a benchmark in the appraiser's determination of an appropriate overall rate for a particular property. The favored method is the extraction of overall rates from similar properties that have sold. A second method is the application of a mortgage/equity rate development formula which weight mortgage and equity contributions allowing a weighted average result based on the appraiser's assessment of risk combined with market mortgage terms. This method also allows for adjustments for anticipated property appreciation or depreciation.

The nature of commercial real estate is such that the financial attributes of transactions and the physical attributes of buildings are quite heterogeneous. Benchmark valuation exercises can be undertaken using localized comparable sale data (including implied overall capitalization rates), current market rental rates, current property lease abstracts, and additional micro-market data regarding occupancy rates and trends. Unfortunately, this type of data is only available in the 60 or so primary U.S. markets and is generally applicable to investment grade real estate.

The evolution of commercial mortgage-backed securities (CMBS) markets has pushed the commercial real estate industry to make transactions more transparent. Rating agencies and investors in CMBS require full disclosure of lease terms associated with buildings that collateralize mortgages in the CMBS pool. Commercial Mortgage Backed Securities consist of securities collateralized by a pool of commercial mortgages

¹² BOMA is the Building Owners and Managers Association (www.BOMA.org) and IREM (www.IREM.org) is the Institute of Real Estate Management.

¹³ The overall capitalization rate is the ration of a property's net operating income to the property's market value. Ratios from comparable properties are employed along with estimates of income from a subject property to determine an estimate of market value. Most financial institutions will undertake such desktop appraisals on commercial properties on an annual basis to ascertain the current loan-to-value ratio and assess the current debt coverage ratio. For properties of significant value, discounted cash flow analysis would be employed.

that are packaged and sold to investors. An equivalent are the secondary residential mortgage backed securities issued by Fannie Mae and Freddy Mac. As the CMBS market has grown, so has the demand for more and better market information to permit adequate due diligence with respect to default risk. Rating agencies require stress testing of after-debt property cash flows under various negative scenarios. Knowledge of contractual cash flows and market rental rates are essential for the development of alternative scenarios.

Progress in moving toward transparency in the commercial real estate sector is far behind the residential sector, but growth in the CMBS markets will promote ways and means to achieve a more efficient data system applicable to commercial real estate. The U.S. markets have grown from mostly locally owned commercial property to a national, institutional market sector for larger institutional grade real estate. Real estate service providers, including appraisers, have generally not kept up with the pace of change, and many find it difficult to abandon parochial business practices. More sophisticated real estate players are searching for more efficient methods of valuation by combining technology and available data sources. The gap in demand for efficient valuation services and existing provider services will naturally narrow, but currently the solution is not fully adequate.

4.0 AN OVERVIEW OF APPRAISAL INFORMATION IN POLAND AND PRELIMINARY RECOMMENDATIONS

Introduction

Real estate appraisal methodology is relatively well developed in Poland. The body of knowledge is well integrated with international and European standards and is closer to English and American than to German and French appraisal practices. The Polish Federation of Appraisers maintains contact with numerous regional and international professional organizations.

Appraisal practices in Poland have been influenced by a number of largely historical factors, including the following:

- First, most Polish appraisers come from the land surveying and construction engineering professions, both of which tend to emphasize detailed property descriptions and cost approaches to value, rather than the analysis of relevant market trends, underlying macro-economic and local socio-economic factors, and comparable sales data.
- Secondly, at present, the market for appraisal services has been dominated by statutory requirements associated with the privatization process, including sales of government owned apartments and auctions of other government



property. Frequently, the sales prices have been arbitrary and/or subject to very substantial discounts. These assignments have used a sales comparison methodology but without in-depth, market-based analysis. As a result, the clients (usually city and state officials) misunderstand real estate transactions and appraisal. There has been an insignificant market for appraisal services associated with market-based mortgage lending activities.

- Thirdly, there has been, and still remains, a lack of access to sales information and other economic/financial data. Even when transactional information is available, its quality is questionable, since recorded sales prices are often underreported in order to avoid transfer taxes.
- Finally, the less frequent use of the income approach has meant that there exists little demand for data regarding rental markets, typical operating costs, capitalization rates, discount rates and mortgage rates.

Leaders of the appraisal organizations in Poland claim that their members are trained in, and apply, the three approaches to value in the appraisal process. However, it is clear that a lack of reliable, transactional data and limited income approach experience result in a tendency to use the cost approach to value. Although the cost approach is a useful tool in appraisal, the indication of value can be outside market value parameters without corroborating support from the remaining two market data-based approaches (direct sales comparison and income).

4.1 Public Cadastres

Much of the transactional data in the U.S. originates in a jurisdictional registry of deeds which is captured by tax authorities to maintain local ad valorem tax systems. In Poland, collaboration between the Ministry of the Interior (physical cadastre), Ministry of Justice (legal cadastre), and Ministry of Finance (fiscal cadastre) has been a difficult struggle. Just recently the three have agreed to work together on developing communication standards and links between the various nodes of their systems. The physical cadastre, called “evidence of land and buildings” (there is a movement to change the name to real estate cadastre), has land surveying data on land parcels and very incomplete data on buildings. The legal cadastre (the perpetual books) which registers ownership titles has very scanty coverage of the country’s real estate. The fiscal cadastre (the property tax register) has data on taxable objects, a list of property owners and the owners’ tax liability. Property taxes are based on area, so information on taxable property is very limited and insufficient for any future ad valorem system. However, it is noted that tax offices deal with other property taxes, the transfer tax and gift and inheritance tax, which are related to market prices. Therefore, they have to regularly monitor market sales in order to control declared sales, gift and inheritance taxes. In fact, this is the only system in Poland that systematically and regularly collects transaction data.

Poland recently completed territorial division and decentralization reforms. Self government in Poland is now divided into 16 regions (voivods), 380 counties (powiats) and some 2500 municipalities (gminas). The court system is divided into some 50 district courts. The physical cadastre is located at the powiat (county) level with the provision that the largest 46 cities are both powiats and gmina (so called urban powiats). About 50 district courts run the legal cadastre. The fiscal cadastre is run by larger gminas or by their powiat-like common treasury services. Each cadastre is run by a different level of government and is overseen by different ministries.

In order to be valid, real estate transactions have to be administered at a notary public office (fully privatized in Poland since the early 1990s). At the notary's office, a deed of conveyance is executed and the title passes (declaratory passage of title). Thus, notary offices are the primary source of sales data, since all transactions have to be executed there in order to gain validity by law. The notary is required by law to send three copies of the deed of conveyance: one to the legal cadastre, one to the physical cadastre, and one to the fiscal cadastre.

Title records in the legal cadastre are incomplete. The deed of conveyance is held as an attachment to the title records, but is not publicly available (it is accessible only to the owner or other "entitled" party). Information on the new owner and the boundaries of the property is publicly available. There is also no obligation to register a title, since the title passes through a deed of conveyance with the notary. The cost of title registration (stamp duty) is also a detriment to legal cadastre recording. This is not to be confused with the transfer tax collected by the notary. It is likely that title-recording activity will increase as mortgage financing becomes more widespread and borrowers are required to have their titles registered. It is unlikely, however, that the legal cadastre will register transaction prices.

The notary sends the second copy of the deed of conveyance to the physical cadastre. This cadastre is relatively complete regarding parcels of land, but very incomplete as to building descriptions. The physical cadastre registers new owners, although they have no legal requirement to do so. The physical cadastre describes the class of soil and, if available, the building location on the lot, with footprint area, number of stories in the building, and building materials (fireproof, not fireproof).

The notary sends the third copy of the deed of conveyance to the fiscal cadastre. Local tax offices need to collect deeds of conveyance not only to register a change in ownership, but also to monitor market trends in order to audit price/value declarations made in deeds of conveyance and in cases of gifts and inheritances. If the tax office feels the declared price/value is understated, it may order a special appraisal based on market transaction data and adjust the tax accordingly. The fiscal cadastre system is the only systematic and comprehensive system in Poland collecting and using market transaction data. As the government prepares for ad valorem reform of property taxes, it



is considering enhancing the physical cadastre data and collecting additional information on taxable properties through direct taxpayer declarations.

An important issue is whether the fiscal cadastre data will be made available for public use. The Ministry of Finance, which is working on the ad valorem reform, has publicly declared the need to make this data available to the public, since the appeal process will require open access to the data. The Ministry has also indicated an awareness that transparency in the market is needed in order to stimulate economic activity, provide for easier ad valorem assessments, and generate more revenues from property sale activity.

4.2 National and Regional Macroeconomic Data

The Central Office of Statistics (GUS) collects macroeconomic data that are disaggregated by voivodship zones. It is a systematic process, but often lacks spatial disaggregation into smaller areas (city districts, smaller municipalities, villages) and excludes much data relevant for appraisal purposes (e.g., disposable household incomes, location of employment, office space inventory, etc.). It is important to note that much statistical data is collected in Poland both through census and through regular corporate reporting, but there is a lingering tradition in which most of it is collected for central government purposes rather than for an information infrastructure for economic development. This is changing, but a strong push for more open access is recommended.

Additional information exists at the government level concerning housing construction, housing stock and household statistics, mostly gathered through infrequent census programs. Poland is well acquainted with the technologies associated with Geographic Information System (GIS). Although there is a professional movement advocating development of a GIS system for the country, it lacks a formal authority. Existing geo-coded data sets are focused almost entirely on physical attributes of real properties recorded at the physical cadastre.

Recommendations

- Encourage central and local governments to provide to the public macroeconomic data to promote economic development.
- Educate the authorities on the merits of disaggregating demographic data into much smaller basic geographic units, such as census tracts or electoral districts, which could be geo-coded (x, y coordinates of centroids) for GIS analysis.
- Commission thorough review (with recommendations) regarding what type of data should be collected to monitor population and economic trends. Also

assess the data collection responsibilities of different parts of government in order to eliminate any duplication of effort and assure accountability for data accuracy. Generally speaking, all locally specific data collected at the powiat level and provided to the regional government level.

4.3 Residential Data

As has been noted, residential transactions data with value-determining attributes are required for a meaningful market-based, sales comparison analysis. Currently, price and ownership data are recorded in notarial deeds (of conveyance) and sent by notaries to: (a) title registry (legal cadastres); (b) evidence of land and buildings (physical cadastres); and (c) treasury/tax chambers (fiscal cadastres). All transactions are covered by the notarial deeds system, but few value-determining attributes are recorded in the documentation, and not all transfers are recorded. Information on these transactions is not currently available to the public, so it is often difficult to get the data in its raw (notarial deed) form or in any enhanced form.

The only institutions that are required by law to systematically collect and analyze the sales information are treasury/tax chambers. This is associated with their obligation to collect transfer taxes, which are related to reported prices (reported in notarial deeds). The tax chambers have the right to inspect notarial deeds and question the reported prices if they are inconsistent with market activity. Collection and analysis of all sales data makes it possible for the chambers to pick out suspiciously low notarial prices. They can initiate a special investigation, which needs to prove that the reported price is considerably lower than prevailing market prices.

The primary source of information, other than notarial deeds, is street knowledge about real negotiations between buyers and sellers. Unfortunately, these can only be known to the parties themselves or to brokers, if they have been involved. The brokers in Poland are usually serving both buyers and sellers, and have little interest in revealing true prices and losing the confidence of both parties. The efforts to start a Multiple Listing Service have not been widely successful in Poland, as the exclusive right to sell is poorly enforced, which makes many brokers apprehensive about sharing their listings with others. In addition, many transactions are completed privately, without the involvement of brokers.

Recommendations

- Encourage an enhancement of transactional data collected by treasury/tax chambers by adding a number of value-determining (hedonic) attributes to the data set being collected. These chambers will become powiat/county fiscal offices, which will have the role of operating physical and fiscal cadastres (for ad valorem property taxes).



- Educate real estate brokers about the benefit of multiple listing services. MLS participants might also be educated on the benefits of GIS technology.
- Allow public access to all transactional data.
- Work towards lowering of transfer taxes or reclassifying them as administrative fees independent of transaction prices. This is currently being considered in legislative work on ad valorem property tax reform.
- Allow public access to land use, zoning, planning and building permits data.
- Suggest that lenders participate in the real estate data system with price and descriptive information of properties, which are financed. This will be an alternative check on cadastre data accuracy. Lenders would likely support this data collection effort when they recognize the value of the data set for collateral valuation and portfolio maintenance.

4.4 Commercial Data: Property Price, Income, Expenses and Cap Rate

Comments in the recording of residential sale price data, noted in Section 4.3 above, are also relevant to commercial transaction. In Poland, data are needed relating to value-determining factors which are not linked to physical characteristics (as with residential real estate). Data are also needed related to income-earning potential (rental income and operating expenses) and on discount and cap rates (risk adjusted return requirements), as well as mortgage markets (mortgage interest rates and terms).

Appropriate application of the income approach includes an analysis of actual income achieved by similar properties in a given market. Leases are typically not recorded. Property management professions and property owner organizations are still in early stages of development in Poland. Little data is available on vacancy rates, and market condition surveys are found only in the primary urban real estate arenas.

Market capitalization rate data is essentially non-existent in Poland and the derivation of these rates from other data (capital and financial markets) is not well understood by most appraisers. There are some general benchmarks published on the cash-on-cash rates to be applied for commercial investments in Warsaw and several of the major cities, but no formal surveys exist.

It is unlikely that the public sector will extract and maintain data necessary for commercial property valuation. Similar to the single-family residential market, transactional price data could easily be maintained by a property taxing or assessment agency. This would insure that one of the critical pieces of data (not otherwise available) for accurate appraisals would be publicly available. As in the case of the single-family residential market, it would be important to encourage reporting from multiple sources (e.g., buyer, seller, and lender) so that accuracy is monitored.

Industry and trade groups or private entrepreneurs need to be encouraged to develop and maintain databases that are publicly available at low cost. Providing rental rate data, undertaking periodic market studies to generate vacancy rate information and providing updates on market-wide capitalization rates are natural outgrowths of the commercial leasing and investment brokerage business. The reporting of expense ratios by property type is a natural outgrowth of property management professional groups. To the extent possible, government officials and agencies need to support and encourage the development of such activities. As professional or trade organizations are formed, information collection and dissemination should be part of their mission.

Bank regulations should require lenders to include, as a condition of loans, the annual updating of property and borrower financial information critical to the original underwriting of the loan. This would facilitate periodic “desk-top” appraisal updates. A non-response on the part of the borrower should be viewed as a technical default. Lenders should also require the right to inspect the property. For larger properties, copies of lease documents should be provided to lenders. The collection and cataloging of operating data would provide a valuable source information for market trend analysis and portfolio maintenance. The National Bank of Poland could then issue market reports on economic and real estate trends similar to those issued by the Federal Reserve Banks in the U.S.¹⁴

Recommendations

- Transactional data – See Section 4.3, Residential Data – Recommendations.
- Support efforts to geo-code demographic and transactional data as well as easy and quick user-fee supported access to these data.
- Encourage and support the property management profession to begin building data sets from their members that will provide annual information on operating expenses of alternative types of property (office, multi-family, retail (shopping malls), industrial).
- Encourage and support commercial leasing brokerage professional organizations and/or private companies to begin building data sets from their members that will provide periodic information on rental markets by geographic market area and property type.

¹⁴ Samples—Call Reports (issued to Federal Reserve by U.S. Banks), New England Economic Indicators, New England Banking Trends, published by the Federal Reserve Bank of Boston.



- Promote public access to lender-collected data supplied by borrowers in initial loan transactions and periodic updates generated through loan portfolio maintenance procedures.

4.5 Further General Comments: The Public Sector, the Real Estate Professions and the Banks' Role in Information Provision

The public sector, mostly through ad valorem property tax involvement, should be encouraged to provide public access to price and property attribute information. It is critical that sales price reporting remains consistent and unchanged, beginning at the notary level and following to the cadastre level. Dissemination of actual sale price and property attribute data would most likely come out of the powiat/county levels (380 of them in Poland). Macro aggregate data collection is currently maintained at the regional and national levels.

Free market development of additional and value-added data should be encouraged. Real estate professions should play an important role, given that they have achieved professional recognition through the creation of licensing and obligatory membership. The role of banks is also critical, not only in providing portfolio-related data, but also in developing meaningful and enforceable appraisal requirements to be followed by professional appraisers providing valuation services in mortgage transactions.

A unique opportunity exists in Poland to develop a system of collection and distribution of real estate data based on best practice now in place in the U.S. and Europe. National price disclosure policies (absent burdensome tax disincentives), combined with up-to-date physical inventory registries in which professional real estate associations participate, could provide a model system for real estate market price monitoring. Implementation of such a system would require significant resources, abandonment of residual bureaucratic attitudes, and substantial cooperation between government entities, lending institutions, and the real estate community. Although a perfect system of market-based valuation cannot insure against economic downturns and future property price fluctuations, it can provide critical, timely information to economic policy makers and allow them to monitor regional economic conditions and make fiscal adjustments accordingly.

APPENDIX I

Real Estate Trade Associations

The Appraisal Foundation
American Hardware Manufacturers Association
Appraisal Institute
Appraisal Institute of Canada
American Institute of Architects
American Industrial Real Estate Association
American Motel Hotel Brokers
American Planning Association
American Real Estate Association
Association of Real Estate License Law Officials
American Society of Appraisers
American Society of Home Inspectors
Building Owners and Managers Association
Certified Commercial Investment Member
Counselors of Real Estate
Commercial Real Estate Secondary Market and Securitization Association
Employees Relocation Council
European Real Estate Society
Federal National Mortgage Association
International Real Estate Federation - American Chapter
The Foundation of Real Estate Appraisers
Federal Home Loan Mortgage Corporation
The GeoBusiness Association
Government National Mortgage Association
Housing Inspection Foundation
International Association of Assessing Officers
International Council of Shopping Centers
International Development Research Council
Institute of Property Taxation
International Real Estate Institute
Institute of Real Estate Management
Lincoln Institute of Land Policy
Mortgage Bankers Association of America
International Association of Corporate Real Estate Executives
National Association of Home Builders
National Association of Housing and Redevelopment Officials
National Association of Independent Fee Appraisers
National Association of Industrial and Office Properties
National Association of REALTORS
National Association of Real Estate Brokers
National Association of Real Estate Editors NAREIT

National Association of Real Estate Investment Trusts
National Association of Residential Property Managers
National Council of Real Estate Investment Fiduciaries
National Multi Housing Council
National Network of Commercial Real Estate Women
Pension Real Estate Association
Real Estate Capital Resources Association
Real Estate Educators Association
Real Estate Information Providers Association
Royal Institution of Chartered Surveyors
Society of Industrial and Office Realtors
Urban Land Institute
Urban and Regional Information Systems Association
Women's Council of Realtors WIRE -- Women in Real Estate

APPENDIX II
U.S. Real Estate Research Centers/Web Site Addresses

University
Internet Web Address

Alabama Real Estate Research and Education Center
<http://cbasss3.cba.ua.edu/college/r/realmain/>

Arizona Real Estate Center
<http://www.cob.asu.edu/seid/arec/>

Florida State University Real Estate Research Center
<http://www.fsu.edu/~rmidept/real/research.html>

Homer Hoyt Center for Land Economics and Real Estate
http://www.ispa.fsu.edu/homer_hoyt.html

Indiana University Center for Real Estate Studies
<http://www.indiana.edu/~cres/cres.html>

MIT Center for Real Estate
<http://web.mit.edu/cre/www/>

New York University Real Estate Institute
<http://www.sce.nyu.edu/rei/>

Southern Methodist University Center for Research in Real Estate & Land Use
Economics
<http://www.cox.smu.edu/finance/realcen.html>

Real Estate Center at Texas AM University
<http://recenter.tamu.edu/>

University of British Columbia Centre for Real Estate and Urban Land Economics
<http://www.commerce.ubc.ca/RULE/rule.html>

University of California/Berkeley Fisher Center for Real Estate and Urban Economics
<http://www.haas.berkeley.edu/~creue/>

University of Cincinnati Center for Real Estate Studies
<http://www.cba.uc.edu/getreal/>

University of Connecticut Center for Real Estate and Urban Economic Studies
<http://mktg.sba.uconn.edu/fin/realest/index.html>

University of Hawaii Real Estate Research and Education Center
<http://www.cba.hawaii.edu/rec/>

University of Illinois Office of Real Estate Research
<http://www.cba.uiuc.edu/orer/orer.htm>

University of Kentucky Center for Real Estate Studies
<http://ukcres.gws.uky.edu/exp/index.html>

University of North Carolina Center for Urban and Regional Studies
<http://www.unc.edu/depts/curs/>

University of Reading Department of Land Management and Development
<http://www.reading.ac.uk/LM/>

University of Southern California Lusk Center Research Institute
<http://www.usc.edu/dept/supd/Research/LCRI/>

University of Wisconsin Center for Urban Land Economics Research
<http://wiscinfo.doit.wisc.edu/bschool/urbland.html>

Virginia Center for Housing Research
<http://www.arch.vt.edu/CAUS/RESEARCH/vchr/VCHR.html>

Washington State University Real Estate Center
<http://www.cbe.wsu.edu/~wcrer/>

APPENDIX III U.S. REAL ESTATE DATA SOURCES

- I. General and Macroeconomic Data
- II. Construction Data
- III. Residential Real Estate Data
- IV. Commercial Real Estate Data

I. General and Macroeconomic Data

Organization: American Council of Life Insurance
Series name: Mortgage Loan Delinquencies
Description: Quarterly data on mortgage loan delinquencies and foreclosures for life insurance companies. Data are provided by collateral (1-4 family, apartment, retail, office building, industrial, hotel/motel, farm, etc.) and by region of the country regarding delinquent total loans outstanding, delinquent loans, loans in foreclosure, foreclosed loans (for all classes, numbers and amount of principal are provided.)

Organization: American Council of Life Insurance
Series name: Real Estate Owned by U.S. Life Insurance Companies.
Description: Data on real estate owned by U.S. life insurance companies by year and by state (by farm and non-farm) and type (occupied by company, acquired in satisfaction of debt, and purchased for investment.)

Organization: Board of Governors of the Federal Reserve System
Series name: Senior Bank Lending Officers Survey
Description: Quarterly survey of senior bank lending officers. Provides data on bank lending policies with regard to various loan categories including real estate loans. Focuses on tightness/ease of credit standards by banks.

Organization: Board of Governors of the Federal Reserve System
Series name: Flow of Funds Accounts
Description: Flows of financial assets and outstanding financial assets/liabilities in the U.S. economy. Includes data on mortgages owed and owned by sector of the economy including households, financial institutions, and various classes of business.

Organization: Board of Governors of the Federal Reserve System
Series name: Balance Sheets for the U.S. Economy
Description: Estimates of the dollar value of tangible and financial assets, liabilities, and the net worth for the private sectors of the economy (household sector, business, and private financial institutions). Includes data on real estate (structures and land) and mortgages. Structures data are from the Bureau of Economic Analysis Fixed Reproducible Tangible Wealth series.

Organization: Bureau of Economic Analysis
Series name: U.S. Direct Investment Abroad
Description: Estimates covering the financial structure and operations of non-bank foreign affiliates. Includes data on U.S. investment in foreign real estate. Includes data on employment and financial status of real estate firms' foreign activities, Similar data for construction and engineering firms.

Organization: Bureau of Economic Analysis
Series name: National Income and Product Accounts (annual) (NIPA)
Description: Annual data on gross product originating in subsectors of the U.S. economy. Includes the following data for construction, non-farm housing services and real estate except non-farm housing services: (1) current dollar gross product originating in the sector, (2) wages and salaries paid, (3) supplements to wages and salaries, (4) net interest generated, (5) proprietor's income, (6) proprietor's inventory valuation adjustment, (7) corporate profits before tax, (8) corporate inventory (9) rental income of persons (real estate only), (10) business transfer payments, (11) indirect business tax and non-tax liability (12) subsidies (13) non-corporate capital consumption allowance, (14) corporate capital consumption allowance, (15) index of real gross product originating, (16) constant dollar gross product originating (fixed 1987 weights) (17) current dollar gross output (18) current dollar intermediate inputs (19) constant dollar intermediate inputs, (20) intermediate inputs fixed-weights implicit price deflators.

Organization: Bureau of Economic Analysis
Series name: Fixed Reproducible Tangible Wealth (FRTW)
Description: Estimates of the dollar value of all assets in the U.S. exclusive of inventories. Valued at current-cost and constant-cost. Estimates of gross stock, capital input, net stock, depreciation, discards and investment. While the mission of the FRTW excludes land, the staff prepares unpublished estimates of the total value of land by private, federal and state governments.

Organization: Bureau of Economic Analysis
Series name: Foreign Direct Investment in the U.S.
Description: Data on foreign investment in the United States by industry and country. Includes data on foreign direct investment by country in U.S. real estate. Also data on employment, sales, etc. in real estate by country of ownership. Similar data for construction and engineering.

Organization: Bureau of Economic Analysis
Series name: Input-Output Accounts of the U.S.
Description: Input-output tables show estimates of the amounts of various goods and services that are used as inputs to the production of other goods and services. In particular, the tables show measures of where the output of real estate sectors are used as inputs to other sectors as well as the amount that is used to meet final demand. The tables also show the amount of other goods and services are used as inputs into the real estate industry.

Organization: Bureau of Economic Analysis
Series name: National Income and Product Accounts (Quarterly) (NIPA)
Description: The NIPAs show the nation's production, distribution, consumption, and saving. Includes quarterly statistics on spending on residential and non-residential structures, deflators for detailed product groupings including structures and housing services.

Organization: Bureau of Labor Statistics
Series name: Multifactor Productivity
Description: Productivity measures of the business economy and major subsectors. Includes detailed annual data on productivity, prices, and stocks of structures, rental residential capital, land, as well as equipment and inventories. Data are subdivided into broad sectors as follows: manufacturing/non-manufacturing and farm/non-farm.

Organization: Bureau of Labor Statistics, Office of Employment Projections
Series name: Productivity in real estate services and construction
Description: Output in current and constant dollars, employment, hours of all persons, average weekly hours all persons. Includes figures for the real estate and construction industries.

Organization: Bureau of the Census
Series name: Survey of Income and Program Participation (SIPP)
Description: Provides microdata records for households from a longitudinal survey. The survey provides information on the economic, demographic, and social situations of the household members. Includes data on real estate and mortgages.

Organization: Bureau of the Census
Series name: Census of Financial, Insurance, and Real Estate Industries
Description: Detailed data from the 1992 census. Data by 4-digit codes on number of establishments, revenues, payrolls, number of employees, industry concentration, and legal form of organization. Geographic area series includes data by state and metropolitan area allocated to 4-digit codes.

Organization: Bureau of the Census
Series name: Government Finances
Description: Covers government finance activities. Includes data on expenses and income (including property taxes) by state at various levels of government (state, county, municipalities, townships, school districts, and special districts.)

Organization: Bureau of the Census
Series name: Census of Governments: Taxable Property Values
Description: Provides detailed data, by state, of assessed property values. Data can be used to infer value of property if assessed values can be grossed up to yield estimates of market values.

Organization: Callan Associates
Series name: Callan Real Estate Database
Description: Consists of data from approximately 170 open-end (40 funds) and closed-end commingled funds (approximately 130 funds). The database has a market value of approximately \$40 billion. Provides data on returns (broken down by income and capital appreciation/depreciation (net of investment management fees) and market value.

Organization: Department of Housing & Urban Development
Series name: Survey of Mortgage Lending Activity
Description: Data on construction and mortgages loans by class of lending institution, class of collateral (1-4 family, multifamily, non-residential, farm). Also data on loan originations, loan purchases and sales, repayments, etc.

Organization: Department of Transportation
Series name: American Travel Survey 1995
Description: Measures interstate and inter-metropolitan passenger travel nationwide by trip and traveler characteristics for all modes and for intermodal combinations. Data will be reviewed and released after each quarter in 1995.

Organization: Department of Transportation
Series name: National Transportation Statistics: 1995
Description: A compendium of selected national transportation data and transportation-related energy statistics. Includes data on journey-to-work trends.

Organization: Economic Research Service
Series name: Major Land Uses (MLU)
Description: MLU database contains acreage estimates of major land uses for the United States by region and states for each Census of Agriculture year between 1945 and 1987. Land use categories are: urban, wildlife areas & parks, forest land, pasture land, cropland and miscellaneous (desert, tundra, swamp, highways, defense areas, etc.)

Organization: Evaluation Associates,
Series name: Real Estate Profiles
Description: Real Estate Profiles covers over 100 open-end and close-end commingled real estate funds offered by banks, insurance companies, and independent advisors. Provides data on portfolio characteristics and performance. Includes summary data on fund averages including, data on property type, property location by region, property size, property age, investment type, total return, etc.

Organization: Federal Deposit Insurance Corp. (FDIC)
Series name: Statistics on Banking
Description: Detailed data on U.S. banking sector. Includes data on real estate-secured loans. Breakdown by various categories of loans and size of and type of financial institution.

Organization: Federal Deposit Insurance Corp.
Series name: Survey of the Real Estate Trends
Description: Residential and commercial real estate trends. Based on assessments by Senior Examiners and Asset Managers at Federal Bank and Thrift Regulatory Agencies. Includes indexes of perceived strength of real estate markets. Provides indexes for commercial and residential markets.

Organization: Federal Financial Institutions Examination Council (FFIEC)
Series name: Reports of Condition and Income (Call Report) Data
Description: Call reports are filed by financial institutions with the FDIC, Office of the Comptroller of the Currency, and the Federal Reserve. Call report data include detailed information on real estate finance by financial institutions including mortgage-backed securities, real estate loans.

Organization: Frank Russell Company
Series name: Russell-NCREIF Property Index
Description: The Index provides the following data broken out by property type and major regions: (1) Historical return series by year and by quarter (annual and annualized); (2) Count, or number, of properties for that category and time period; (3) The aggregate market value of the properties at quarter end; (4) Quarterly index values for total, income, and capital; and (5) Quarterly returns for total, income and capital.

Organization: General Services Administration
Series name: Federal Real Property in the U.S., By Agency and Bureau
Description: Includes information on Federal land acreage (urban and rural), Federal buildings (number and floor area-square ft.) and cost of land, buildings, and structures. Provides data by agency, state, and foreign locations

Organization: HSH Associates
Series name: Database provides data on mortgage rates. Represents the result of weekly surveys of about 2,500 lenders (3,000 once each month). Provides data on loan amount and terms including down payment, interest rates, points, application fee, etc.

Organization: Internal Revenue Service (IRS), Statistics of Income Division
Series name: Federal Estate Tax Returns Data
Description: Provides data on assets (including real estate) and liabilities (including mortgages) at death by taxpayers whose heirs are subject to the estate tax. Data are available by size of net worth.

Organization: Lehman Brothers
Series name: Mortgage Backed Securities Index
Description: Index includes all fixed-rate securities backed by mortgage pools of GNMA, Freddie Mac, FNMA mortgages

Organization: Liquidity Financial Group/Ernst & Young LLP

Series name: National Real Estate Index
Description: Quarterly data by market and property type (e.g., office, warehouse, retail, apartment), price per square foot, rent per square foot, cap rate.

Organization: National Association of Real Estate Investment Trusts
Series name: NAREIT Index
Description: Total return index for Real Estate Investment Trusts (REITs). Data based on closing price of the month for all tax-qualified REITs listed on the New York Stock Exchange and the NASDAQ. The data are market weighted.

Organization: National Association of Real Estate Investment Trusts
Series name: REIT Executive Compensation Survey
Description: Surveys salaries within the REIT industry for the top 17 positions.

Organization: National Association of Real Estate Investment Trusts
Series name: REIT Administrative Survey
Description: Survey covers administrative expenses, security offering expenses, advisor and trustee fees, fee structure and practices. Also includes stock option and dividend reinvestment and practices.

Organization: Office of Management and Budget
Series name: National wealth
Description: Estimates of a broadly defined national balance sheet. Includes estimates of national real estate assets (although real estate is sometimes co-mingled with equipment). Also includes education capital and R&D capital. The broadening the definition of national wealth to include education capital and R&D capital considerably reduces real estate's share of national wealth. According to these estimates, education capital accounts for half of national wealth.

Organization: Pensions and Investments
Series name: Pensions investment in real estate equity and mortgages
Description: Special issue of Pensions and Investments provides listing of the pension funds with the largest exposure in real estate equity, mortgages, and mortgage backed securities.

Organization: Real Estate Research Corporation
Series name: Real Estate Report
Description: Real Estate Investment Criteria by Property Type Real Estate vis-a-vis Capital Market Returns Inter-market Yield Spreads Historical Real Estate Yield Spreads (from 1979) Current Investment conditions by property type Equity REIT Outlook Apartment REITs

Organization: Real Estate Research Corporation
Series name: Real Estate Investment Survey
Description: Survey of expected returns, property selection criteria, and investment outlook of a representative sample of large institutional investors in the U.S.

Summary data include assessment of internal rate of return, going-in cap rate, income and expense growth rates, anticipated holding period, and long term inflation expectations.

Organization: Real Estate Research Corporation/Equitable Real Estate
Series name: Emerging Trends in Real Estate
Description: Data on prices and yields, values, capital losses, capitalization rate bid/ask characteristics, capital flows, capital sources, total returns by property type, industrial, retail, office and apartment property returns, private construction v. industrial, office and apartment vacancy rates, multifamily housing starts, hotel occupancy and average daily rate. Based on interviews of a 100-person panel of experts. National and regional figures.

Organization: REIS Reports
Series name: REIS Reports
Description: Detailed trend information on demand, supply, vacancies and rents at the building, sub-market, and metropolitan levels. Has data on over 50 metropolitan areas and hundreds of submarkets. Based on proprietary database consisting of 39,000 apartment complexes, 39,000 office buildings, 26,000 shopping centers, and industrial properties.

Organization: Robert A. Stanger & Co.
Series name: Stanger Report
Description: Database covering real estate limited partnerships. Data include information on prices, sales, sponsors, registrations, Also includes data on REIT market performance and market value.

Organization: The Wharton School Real Estate Center
Series name: Credit Availability Index (CAI)
Description: The index is a compilation of standardized movements in nine economic variables including housing starts, money supply (M2), loans outstanding, S&P 500, consumer sentiment, unemployment, interest rate differentials, and gross saving.

Organization: Valuation International, Ltd. - Valuation Network Limited
Series name: Investment real estate data.
Description: Provides data based on surveys of local real estate experts. Data on inventory, vacancy rates, vacancy in square feet, mall absorption, space under construction, total value change, forecast total value change for retail, office, and industrial space. Also provides data on cap rates and discount rates. Some data for foreign countries.

Organization: Wharton Real Estate Center.
Series name: Leveraged Property Index Report
Description: This report presents value-weighted, chain-linked indexes analogous to those calculated for the unleveraged Russell-NCREIF Property Index.

Organization: Wilshire Associates Incorporated
Series name: Wilshire Real Estate Securities Index
Description: A market capitalization weighted index of publicly traded real estate securities such as: REIT, REOC, and partnerships. The Index is comprised of companies whose charter is the equity ownership and operation of commercial real estate. Includes five major categories of property: office, retail, industrial, apartment and misc.

Organization: Wilshire Associates Incorporated
Series name: Wilshire Real Estate Fund Index
Description: A composite average representing the performance of 47 open and closed end real estate funds and private REITs managed by 23 different investment advisors. The funds measured in the index acquire income-producing properties that are considered "core" investments: industrial office buildings, retail centers, and select multi-family properties. Acquisition structures are typical of institutional investors and are primarily equity oriented.

II. Construction Data

Organization: Bureau of the Census
Series name: Census of Construction Industries
Description: The Census of Construction Industries is reported in three series (1) industry series, (2) geographic series and (3) legal form of organization and type of operation. The industry series data are broken down into 27 construction industries. Data include number of establishments, value of construction work completed, payrolls, hours worked, and costs. The geographic area series provides statistics for States grouped according to the nine census geographic divisions. Data for each geographic region is given for establishments classified by employment size, and dollar value of business done. The legal form series breaks data out by corporation, partnership and sole proprietorship.

Organization: Bureau of the Census
Series name: Building Permits by State
Description: Provides residential and nonresidential data on computer printout and computer diskettes for states, metropolitan areas and permit issuing places. Annual data from 1980, monthly data from January

Organization: Bureau of the Census
Series name: Construction Statistics
Description: Presents information on new privately owned one-family houses sold during the month and for sale at the end of the month, together with related annual data and figures for prior months.

Organization: Bureau of the Census

Series name: Expenditures, Nonresidential Improvements & Repairs
Description: Presents, by size of building (in square feet) and selected building characteristics (principal activity, year constructed, and region), expenditures for improvements and repairs.

Organization: Bureau of the Census
Series name: New Residential Construction
Description: Presents quarterly estimates of the number of new, privately owned residential housing units authorized by building permits, authorized but not yet started, started, under construction, and completed.

Organization: Bureau of the Census
Series name: Value of New Construction Put in Place
Description: Presents estimates of the value of total new construction put in place by type of construction (residential, nonresidential, public utility, public buildings, and the like) and by type of owner (private, state or local, or federal government).

Organization: F.W. Dodge/DRI Construction and Real Estate Information
Series name: Construction Data
Description: Provides detailed data on construction put in place, construction contracts, etc. Publishes Dodge Index.

Organization: Marshall and Swift
Series name: Construction cost data
Description: Provides highly detailed construction cost data by geographic location and building type.

III. Residential Real Estate Data

Organization: Board of Governors of the Federal Reserve System
Series name: Survey of Consumer Finances
Description: Data on the ownership of assets based on a survey of households. Recent surveys were conducted in 1983, 1986, 1989, and 1992. Includes data on ownership of real estate and mortgages. Summary data available, but tapes with micro-data are also available.

Organization: Bureau of Labor Statistics
Series name: Consumer Price Index (CPI)
Description: Inflation in the house-price subindex of the CPI is a measure of house price changes.

Organization: Bureau of Labor Statistics, Office of Employment Projections
Series name: Consumer Expenditure Survey
Description: Provides detailed data on consumer spending patterns based on two survey panels of approximately 5,000 each. Data include spending on market value of home, expenditures on mortgages, property taxes, property insurance, utilities, and services, by tenure status and other breakdowns.

Organization: Bureau of the Census
Series name: American Housing Survey
Description: Data on housing and household characteristics for the four regions of the U.S. and the country as a whole. Also provides breakdowns by urban/rural area and metropolitan/non-metropolitan area. Data are provided on total housing units, occupied housing units, owner-occupied units, renter-occupied units, occupied units with a black householder, occupied units with Hispanic householder, units in central cities, and units in suburbs. Data include income of families, monthly housing costs, type of structure, costs of utilities, condition of building, amenities, type of finance, etc.

Organization: Bureau of the Census
Series name: Census of Population and Housing
Description: Provides highly detailed data on housing in the U.S. including data on occupancy, rent, tenure, units in structure, vacancy, value of home, congregate housing, boarded-up units, rent, number of rooms in housing unit, etc.

Organization: Bureau of the Census
Series name: Expenditures, Residential Improvements & Repairs
Description: Provides estimates of expenditures by property owners for maintenance and repairs, additions, alterations, and major replacements to residential properties during the current quarter and for specified preceding quarters, with some comparative data for earlier years.

Organization: Bureau of the Census
Series name: Housing Completions
Description: Provides monthly statistics on the number of new privately owned housing units completed and under construction.

Organization: Bureau of the Census
Series name: Housing Starts
Description: Provides monthly statistics for the United States and regions on new privately owned housing units started; authorized in permit-issuing places; and authorized, but not started at the end of period.

Organization: Bureau of the Census
Series name: New One-Family Houses Sold
Description: Presents information on new privately owned one-family houses sold during the month and for sale at the end of the month, together with related annual data and figures for prior months. Seasonally adjusted and unadjusted data on months'

supply at current sales rate, median number of months on the sales market, average and median sales prices. Also constant-quality house price index.

Organization: Bureau of the Census
Series name: American Housing Survey for the [name] Metropolitan Area
Description: Data on housing and household characteristics for eleven metropolitan areas [Anaheim-Santa Ana, Pittsburgh, Cincinnati, Kansas City, Miami-Ft. Lauderdale, New Orleans, Portland, Rochester, San Antonio, Riverside-San Bernardino-Ontario, Denver] Data are provided on total housing units, occupied housing units, owner-occupied units, renter-occupied units, occupied units with a black householder, occupied units with Hispanic householder, A very wide range of data includes building conditions, number of rooms, education of householder, income data, housing costs as a percent of income, etc.

Organization: Bureau of the Census
Series name: Housing Vacancies and Home ownership
Description: Provides statistics on occupied and vacant housing units, housing inventory, home ownership rates, and characteristics of vacant housing units.

Organization: Bureau of the Census
Series name: Market Absorption of Apartments
Description: Presents data concerning the rate at which non-subsidized, privately financed, unfurnished units in buildings with five or more units are rented or sold.

Organization: Case Shiller Weiss, Inc.
Series name: Home Price Indexes
Description: Home price indexes based on repeat sales methodology. Indexes are produced for metropolitan areas across the country and cover both single-family homes and condominiums.

Organization: Department of Housing & Urban Development
Series name: Federal Housing Agency (FHA)
Home Mortgage Characteristics Section 203(B)
Description: Very detailed data on characteristics of FHA mortgages. Includes data on price, characteristics of structure, borrower, and terms of mortgage.

Organization: Bureau of the Census
Series name: Current Housing Surveys: Miscellaneous Reports
Description: Occasional reports. Recent titles include: "Housing Characteristics of Selected Races and Hispanic Origin Households in the United States: 1987," "Housing Market Analysis in the Northeast Region," Housing Market Analysis in the South Region," Home ownership Trends in the 1980s," Housing Characteristics of Recent Movers," "Homeowners and Home Improvements: 1987," "Household Characteristics of One-Parent Households: 1989," "United States Regional Supply and Demand for Housing During the 1980s," "Home Alone in 1989," "How Regions Compare

in Housing Costs and Living Space: 1989," "First-Time Homeowners in 1989: A Comparative Perspective," Our Nation's Housing in 1991," "Housing in America: 1989/1990"

Organization: Federal Financial Institutions Examination Council (FFEIC)
Series name: Home Mortgage Disclosure Act Data
Description: Provides detailed data on home mortgage applications and approvals by demographic characteristics (age, sex, race), income, geographic location, and house characteristics.

Organization: Federal Home Loan Mortgage Corp. (Freddie Mac)
Series name: Mortgage interest data
Description: Monthly data on fixed-rate and adjustable rate mortgage terms including interest rates, fees and points by maturity.

Organization: Federal Housing Finance Board
Series name: Mortgage data
Description: Terms on conventional home mortgages. Categories include: contract rate, fees and charges, effective rate, term to maturity, loan amount, purchase price, loan-to-price ration, number with ARM. Data are available by type of lender, new and previously occupied homes, metropolitan area.

Organization: Haurin, Donald R.; Patric Hendershott; and Dongwook Kim [research paper]
Series name: Local House Price Indexes
Description: Composite indexes for 135 locations estimated using a model based on three house price panel data sets for the period 1982-91.

Organization: Mills, Edwin S. and Ronald Simenauer [research paper]
Series name: Hedonic Estimates of Regional Constant Quality House Prices
Description: Estimates of constant quality house prices for four regions of the country based on data set of 5,581 dwellings sold between 1986 and 1992. The National Association of Realtors compiled the data set.

Organization: Mortgage Analytics, Inc.
Series name: Berkshire/Barnes Multifamily Mortgage Index
Description: The Berkshire/Barnes Multifamily Mortgage Index (BBM) measures the quarterly total return produced by a representative portfolio of institutional-grade multifamily mortgages. The index is constructed on a total return basis, where the changes in portfolio income and portfolio value are taken into account. The BBM is calculated with and without adjustment for credit losses.

Organization: Mortgage Bankers Association of America
Series name: National Delinquency Survey
Description: Delinquency Rates of 1 to 4 unit residential mortgage loans, seasonally adjusted. Broken down by all loans, conventional, Veterans' Administration (VA) and Federal Housing Agency (FHA). National, regional, and state breakdown. Past-due 30, 60 and 90 days or more.

Organization: Mortgage Insurance Companies of America
Series name: Private Mortgage Insurance Activity
Description: Monthly data on mortgage insurance activity including, number of applications, commitments, and certificates, dollar value of primary new insurance written, primary insurance in force, new pool insurance written, pool insurance in force. Also includes data on defaults and cures.

Organization: Mortgage Risk Assessment Corporation (MRAC)
Series name: Home Price Index
Description: MRAC's services are based on a comprehensive database of monthly sales information on 45 million residential properties spread across 450 counties in 42 states. From these data, home price indices are constructed using the repeat sales method. These indices measure changes in the value of an average unit in a particular price range and geographic area (county & zip code). Includes data on loan-to-value ratios, current property values, identifies properties that have gained or lost equity.

Organization: National Association of Home Builders
Series name: Housing Opportunity Index
Description: Index is a measure of housing affordability. It is available for approximately 190 metropolitan areas. The index is calculated by region and is based on median income relative to total housing carrying costs (including interest, principal, taxes, insurance, etc.) It is assumed that a family can afford to spend 28 percent of income on housing. The index measures "the proportion of homes sold in a specific market that a family with median income in that market can afford to buy." Underlying data are from Department of Housing and Urban Development (HUD) and TRW-REDI.

Organization: National Association of Realtors
Series name: Sales Price of Existing Single-Family Homes
Description: Median and average Sales prices of existing single-family homes for the United States and each region; Northeast, Midwest, South, West

Organization: National Association of Realtors
Series name: Housing Affordability Index
Description: Composite Affordability Index for the United States and its four major regions. Index assumes principal and interest should be 25 percent of income.

Organization: National Association of Realtors
Series name: Existing Home Sales

Description: Number of existing home sales in the U.S. and for four major regions.

Organization: TRW-REDI
Series name: Property data
Description: Extensive micro-data on residences. Includes data on sale price, price per square foot, property characteristics.

Organization: U.S. Housing Markets
Series name: Hotness Index
Description: Number of new housing permits per thousand population.

Organization: William Stephens, et. al.
Series name: Agency Repeat Transactions Index
Description: House price index (quarterly) based on repeat sales, based on loans purchased by Freddie Mac and Fannie Mae from 1975 through 1992. Updates are planned. Includes sub-indexes by geographic region: east north central, east south central, middle Atlantic, Mountain, New England, Pacific, south Atlantic, west north central, west south central region. Designed to facilitate comparison of housing activity among markets.

IV. Commercial Real Estate Data

Organization: American Council of Life Insurance
Series name: Mortgage Commitments on Commercial Properties
Description: Survey of mortgage commitments on commercial properties. Reporting companies account for 69 percent of commercial mortgages held by U.S. life insurance companies. Includes detailed breakdowns on volume of commercial mortgage commitments, interest rates, maturity, debt coverage, type of loan by property type, ownership, etc.

Organization: American Hotel and Motel Association
Series name: Lodging Industry Profile
Description: Data on number of properties, rooms, sales, occupancy rate, room rate. Data are available by location (urban, suburban, highway, airport, resort), room rate, and size of property. Also, data on customers.

Organization: Building Owners and Managers Association
Series name: Compensation Trends in Commercial Real Estate
Description: Salary and benefit package information on a regional basis for 18 job positions unique to the commercial real estate industry.

Organization: Building Owners and Managers Association
Series name: The Commercial Real Estate Compendium

Description: Provides performance data for 29 cities. Includes information on market conditions, operating income/expense, and demographic data.

Organization: Building Owners and Managers Association

Series name: BOMA Office Market Review

Description: Published annually in January, this report provides a year-end overview of U.S., Canadian, and International office market conditions.

Organization: Cohen, Andrew; Arthur Coleman; Eric Deering;
Marie Macri [research paper]

Series name: Leading indicators for the Commercial Real Estate Market

Description: A leading index for the commercial real estate market based on variables such as: the construction supply price index, employment in finance insurance, and real estate; unemployment levels in finance and services; initial claims for unemployment insurance; the number of outstanding real estate loans; bond yields; and the index of consumer expectations. These components were incorporated into a principal components modeling system which generated a system of composite indices for the prediction of movements in the return of the Russell-NCREIF index.

Organization: Economic Research Service

Series name: Farm real estate data

Description: Data on farms, Land in farms, Value of Land and Buildings per acre, per farm, and total, Building Value, Farm Real Estate Debt, and Farm Real Estate taxes for the United States and state-by-state.

Organization: Economic Research Service

Series name: Foreign Ownership of U.S. Agricultural Land

Description: The data are presented by state and county. Only those states and counties in which there is foreign investment in agricultural land are listed.

Organization: Energy Information Administration

Series name: Characteristics of Commercial Buildings

Description: Data on types, number, age, size, location and occupancy of commercial buildings. Also, data on energy sources, energy uses, heating and cooling practices, and conservation measures of commercial buildings.

Organization: Equitable Real Estate Investment Management, Inc.

Series name: Value of U.S. income-producing real estate

Description: Estimate of the total value of U.S. income-producing real estate allocated between institutional and non-institutional owners. For institutional real estate, there are estimates of the dollar value of equity by class of equity holders and dollar value of debt by class of creditor.

Organization: F.W. Dodge/DRI Construction and Real Estate Information

Series name: Building stock database.

Description: Provides data on building stock in square feet in specific markets.

Organization: Federal Financial Institutions Examination Council
Series name: Trust Assets of Financial Institutions
Description: Data on assets managed by trust departments of financial institutions. Includes data on mortgages and real estate assets.

Organization: Hillier Parker
Series name: International Commercial Property Data
Description: Data on rents, yields, and returns for office, shop units, industrial in 85 markets in 32 countries. Also, building costs and cost of finance. Other companies participating are International Commercial Property Associates, Landauer, and other real estate research firms.

Organization: Commercial Mortgage Alert
Series name: CMBS (commercial mortgage-backed securities) Monitor
Description: Data on supply and volume of CMBS

Organization: Fisher, Gaffer D., David Geltner, and R. Brian Webb [research paper]
Series name: Historical Value Indices of Commercial Real Estate
Description: Three indices as follows: (1) an index derived from the Russell-NCREIF index, (2) a transactions-driven index derived from an hedonic valuation model estimated using the Russell-NCREIF transactions Database, and (3) a REIT based index obtained by unleveraging the returns on REITs.

Organization: Institutional Property Consultants, Inc. (IPC)
Series name: IPC Portfolio Index
Description: The index is calculated from the performance returns of approximately 170 pooled funds, which in the aggregate contain 2,500 properties with an aggregate value of \$35 billion. The index is presented as a total return, as well as the income and appreciation components of the return, over a range of time periods in their performance monitoring reports. The Index can be presented before and after advisor fees on an equally-weighted, nominal basis and on a dollar-weighted, nominal basis. In addition, the Index can be presented on an inflation-adjusted (real) basis.

Organization: Institutional Real Estate Inc.
Series name: Institutional Real Estate Universe
Description: Database on institutional real estate investors. Provides data on investment activity of real estate investment managers. Includes data on aggregate market size (debt and equity), flows of new capital, debt/equity available to invest.

Organization: Internal Revenue Service, Statistics of Income Division
Series name: Corporation Income Tax Returns
Description: Provides data on corporate profit and loss statements and balance sheets by SIC and firm size. Includes data on real estate industries and data on real estate activities of non-real estate firms.

Organization: International Council of Shopping Centers
Series name: Shopping Center data
Description: Provides data on: number of centers, leasable retail area, number of adult shoppers, construction, construction employment, sales, tax revenues from shopping centers, number of centers by size in square feet, etc. For the U.S. and various metropolitan areas.

Organization: Korpacz, Peter F. & Associates, Inc.
Series name: Real Estate Investor Survey
Description: Reports results of surveys of real estate professionals. Markets reported on include shopping centers, central business district office market, apartments markets and hotel markets, Respondents provide their assessments of rent and expense growth rates, cap rates, free and clear equity IRRs, marketing time, etc.

Organization: Lehman Brothers
Series name: Lehman Bros. Equity REIT Index
Description: REIT price index based on 97 REITS, available daily

Organization: Lehman Brothers
Series name: Commercial Mortgage Backed Securities
Description: Data on commercial mortgage backed securities, including issuance by property type, interest rates, and interest rate spreads by rating and characteristics.

Organization: National Association of Industrial and Office Properties
Series name: Industrial Income and Expense Report
Description: Includes data for the United States, regions, states, and metropolitan areas. Data provided by property type. Data includes number of buildings, rentable square feet, average percent occupancy, building location, height in stories, gross building area, income per square foot, expenses per square foot, Covers 31 metropolitan areas,

Organization: National Association of Industrial and Office Properties
Series name: Compensation Report
Description: A study of the industry's compensation practices, salary levels and perquisites - nationally, regionally and by the size of company. Includes data by size of firm and title. Data on average, median, and 75th percentile on base salary and total compensation.

Organization: Nelson Publications
Series name: Institutional Real Estate Directory
Description: Provides information on the activities of 200 real estate investment managers (investments by sector, assets managed by class, etc.) assets of 1,700 plan sponsor investors in real estate, equity and mortgage assets of 1,000 insurance companies investing in real estate, selected financial data on 200 REITS, and selected data on 2,000 corporate real estate investors.

Organization: Smith Travel Research
Series name: Hotel occupancy
Description: Database includes information on hotel operations, Includes data on income, expenses, and occupancy. Uses database of 40,000 lodging establishments in the United States, Mexico, and the Caribbean.

Organization: Society of Industrial and Office REALTORS
Series name: Comparative Statistics of Industrial and Office Real Estate
Description: An annual report of market Data based on a survey of Society of Industrial and Office Realtors (SIOR) members. Survey results yield a detailed analysis for each of over 120 industrial U.S. markets and 111 U.S. office markets. Includes an analysis of the national scene and each individual market. Data include information on demographics, market characteristics, dollar volume of sales and leases, sales and lease prices, rate of new construction, construction costs, vacancy absorption, expenses, outlook, parking ratios, utility rates, rates of return, etc.

Organization: Torto-Wheaton/CB Commercial
Series name: Commercial Real Estate Vacancy Rates
Description: Monthly data on commercial vacancy rates by geographic region.