

EVALUATING COMMERCIAL REAL ESTATE INVESTMENTS USING COSTAR

<https://doi.org/10.5281/zenodo.11521448>

Nuriddin Ikromov, PhD in Real Estate Finance, Professor at
CSU Sacramento (Sacramento, CA, U.S.A.)

Nargiza Esanboyevna Jiyanova, PhD in Economics,
professor at Tashkent State University of Economics
(Tashkent, Uzbekistan)

This paper presents a three-stage property investment evaluation project that integrates the CoStar database into real estate courses. Focusing on market analysis, demand-supply dynamics, real estate pro-forma, IRR estimation, and DCF valuation, the project enhances student understanding of foundational real estate investment knowledge and prepares them for evaluation of real estate investments. Students conduct an in-depth market and submarket analysis, formulate assumptions for their financial model, estimate returns, value the property, conduct sensitivity analyses, and present their findings in a professional investment prospectus. The project's scaffolding design ensures active student engagement with the instructor feedback. Integration of CoStar and a hands-on evaluation of actual property investments deepens understanding of commercial real estate dynamics and KPIs, fosters active learning, and provides students with essential job-ready skills.

I. Introduction and nature of the project.

This paper introduces a class project that has been successfully used in real estate finance and investment classes in a large public university in the United States. The project has been implemented as a full semester-long or half-semester major assignment in both undergraduate real estate investment classes, as well as master's-level real estate finance and investment classes. The main purpose of this project is to allow students apply theoretical concepts learned during the class into a real property in their local real estate market or any market in the United States. The allows students to perfect their quantitative, analytical, and financial modeling skills. Students also have an opportunity to examine real-time, real-world data on commercial and residential real estate. In addition, the professional-level work

students produce can be used as a portfolio to get interviews or obtain full time positions. It should be noted that this paper presents applied or pedagogical research, and not original scholarly research. A detailed description of the project and its requirements are reproduced at the end this paper.

II. Benefits of the present approach

The present project offers a number of benefits. First, it allows students to apply theoretical concepts and course content into the real world, including performing tasks such as real estate market analysis, demand-supply dynamics, creating real estate pro-forma, estimating measures of investment performance, such as IRR and NPV estimation. It also enhances understanding of foundational investment knowledge, as students consider the risk-return relationships. The project helps prepare students for careers in real estate investment.

From a pedagogical point of view, the scaffolding design ensures engagement and response to instructor feedback. Students get training and practice in: in-depth market and submarket analysis, formulate assumptions about their financial model, estimate returns, and present their findings in a professional investment prospectus.

A key component of the project is the integration of CoStar, which allows for evaluation of actual properties: deepens understanding of commercial real estate dynamics and KPIs, fosters active learning, and provides students with essential job-ready skills.

III. Brief overview of the CoStar database

CoStar is one of the largest providers of information, analytics, and marketing services to the commercial property industry. Currently, its database covers the United States, Canada, the United Kingdom, France, Germany, and Spain. The company claims to be the most comprehensive platform for commercial real estate information, analytics and news. The company offers a subscription-based service which allows users to: identify new prospective clients and partners, appraise property values and potential leasing income, understand the underlying financial performance of assets, find off-market investment opportunities, assess market and submarket KPI trends and forecasts, pre-empt tenant moves, lease expirations and

renewals, analyze the details of recent lease and sale transactions, understand the underlying financial performance of assets, and stay up-to-date on the latest industry news. Some of the images below show part of the Costar interface.

IV. Stage 1: Market and submarket analysis

The project is divided into the successive stages. This is done to ensure that students receive sufficient formative feedback throughout the semester, with the purpose of improving the quality of their assignment over time. In the first stage, students typically analyze the local market, although this is not required. The data and information for this stage comes mostly from CoStar, which provides a market report for each major property type (multifamily, office, retail, industrial, hotel, healthcare, etc.). CoStar also provides data on submarkets within each larger market. Student study and summarize demand and supply dynamics, trends in vacancy, rents, expenses, etc. After submitting the initial stage, students receive feedback from the instructor.

V. Stage 2: Property selection

In the second stage of the assignment, depending on their interest and results of market analysis, select a property to analyze. Property could be currently for sale, but doesn't have to be. Students analyze leases, vacancy, rents, expenses, capital expenditures, property taxes, property history and trends. Subsequently, they identify 3-5 comparable properties and relate their performance to the subject property. After submitting the second stage, students receive additional from the instructor.

VI. Stage 3: Financial model and feasibility

The third stage of the project, the financial model and feasibility, is the largest and most important part. This stage starts with formulating assumptions about changes in: rent, tenants, vacancy, expenses, capital expenditures, price appreciation. Next, students formulate assumptions about investor characteristics: the tax situation, financing, and required return.

Using the assumptions, students next develop a pro-forma income statement and forecast for 5-10 years. This allows them to calculate key measures of

investment performance, such as IRR and NPV. Ultimately, the financial model allows students to make recommendations to the investor based on KPIs.

After the initial recommendation, students are encouraged to discuss some caveats and perform sensitivity analysis. Part of the assignment is also to create professional-looking investment prospectus. Finally, student or student teams present their findings to the class in form of an oral presentation. Students also receive and a grade from the instructor.

VII. Relevance to the Uzbekistan context

Although this project has been tried and tested in the United State, this type of project could be used in similar courses in universities in Uzbekistan, such as Tashkent University of Economics or potentially other universities that offer courses in business, finance, or real estate. Currently, the big difference is the unfortunate lack of a high-quality database comparable to CoStar. In our opinion, this highlights the need for reliable data. Not just in real estate, but in other business contexts.

The ABC Financial and Investment Group was formed in 2000 and has been advising major real estate investors in California. One of ABC's partners holds a degree from CSUS. She is familiar with the Sacramento metropolitan area and believes it to be a good opportunity for real estate investments. Thus, she proposed that ABC look at the Sacramento area for real estate investments. ABC gave her the go ahead, so she contacted your consulting firm to find an appropriate investment property to present to the ABC investment committee. ABC will consider all major types of income-producing properties, including office, retail, industrial, and multifamily.

Your (firm's) assignment is to find an investment property that is currently for sale or could become available for sale and prepare a detailed analysis of the property with recommendations. You expect that the effort put forth in developing a quality product will pay off handsomely.

Much of the data needed for screening potential properties and analyze the chosen property will come from the CoStar database. The College of Business partners with CoStar Group, which is the largest commercial real estate information

company in the United States. Through this arrangement, students will get access to the database of commercial properties in the Sacramento market as well as other markets in the United States. You will be able to choose a property for the project from the CoStar database.

You are welcome and encouraged to use other sources of research or data, such as The Sacramento Business Review, the Census Bureau, and other relevant and reliable sources.

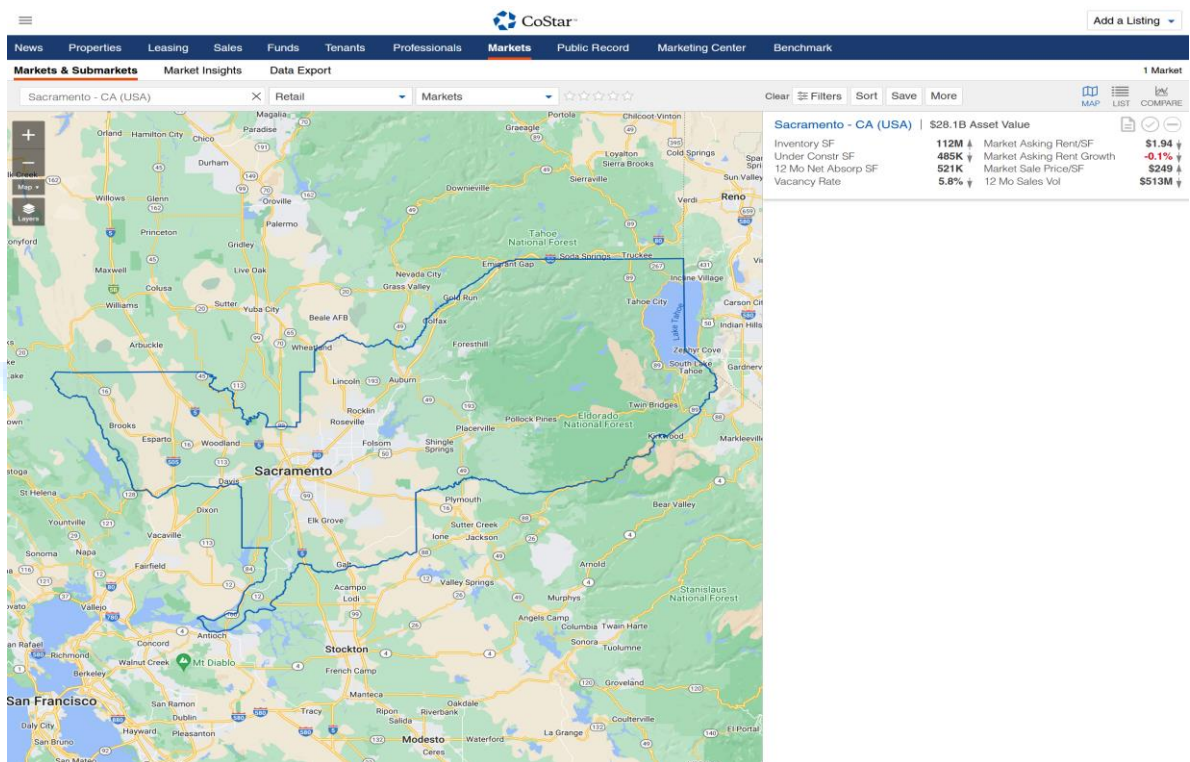
The financial and investment consulting report is the largest and most important assignment in this class. It will take significant amount of time to research, present your preliminary findings to your peers, prepare an initial draft, revise it, and write the final report. To ensure that you make steady progress and receive useful feedback, as well as to break the overall assignment into smaller, more manageable pieces, the assignment will be completed in three stages.

Stage 1 of this assignment involves:

- a) performing market analysis for the city/metro area and property sector you are interested in,
- b) choosing a property to analyze in detail and make recommendations on, and
- c) a brief description of the area/submarket where said property is located.

Please note that even though the introduction above only mentions Sacramento, you are allowed to analyze other markets in California or even outside California, depending on your interest.

Most of the data/information needed for this stage is readily available in CoStar. The database provides a concise, but detailed reports and analytics for each major property sector in all markets of significant size in the United States. To choose a market/metro area and property sector in it, you would use the “**Markets**” tab in CoStar. Please see the image below for an example.

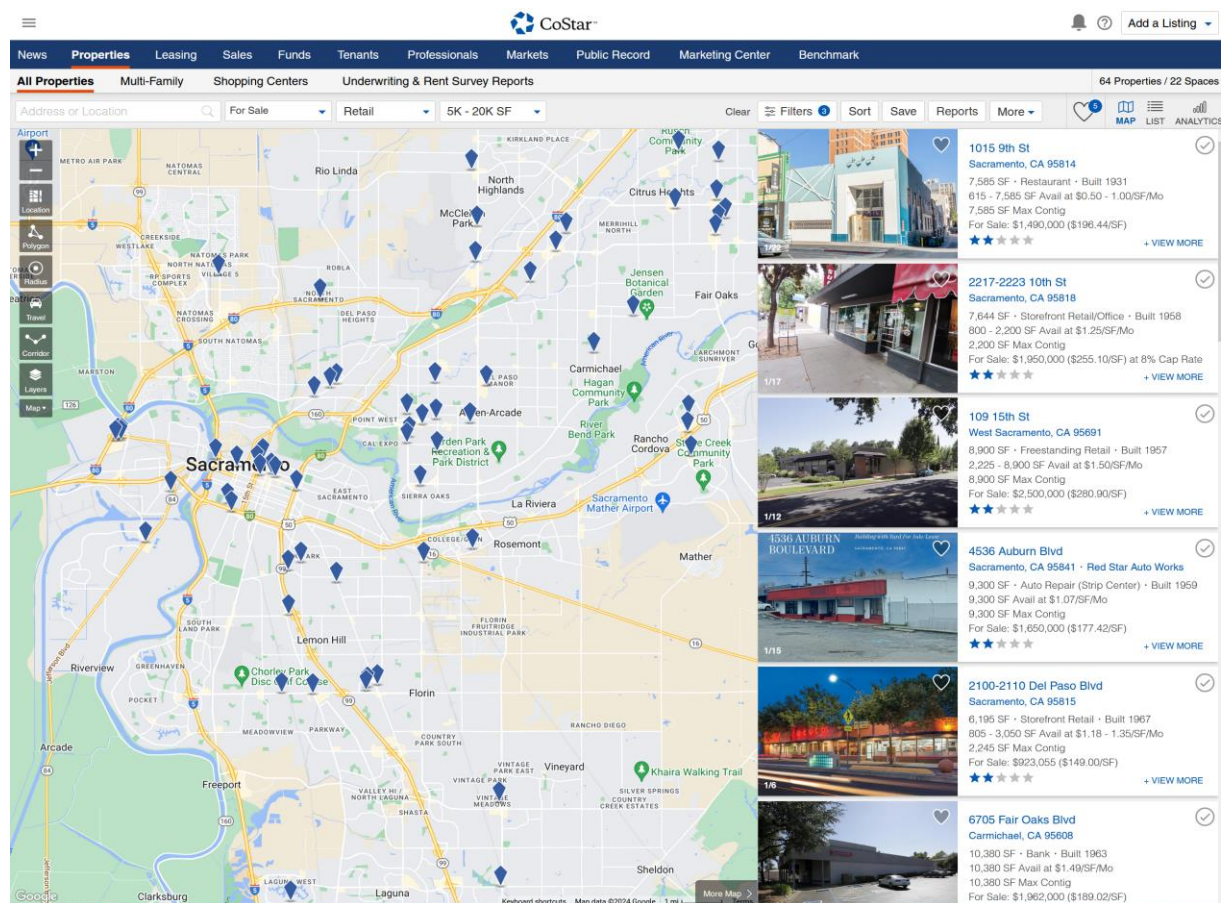


Deliverable 1: Market Analysis, Property Selection, and Location Description

Once you have identified the market and property sector, you would carefully read CoStar's summary for it and carefully examine the analytics provided.

Part a) of this stage is essentially summarizing the CoStar market report and perhaps highlight a few important facts/trends/statistics. The relevant section of the latest issue of The Sacramento Business Review would be another source for this part.

Part b) of this stage involves selecting a specific property to analyze. This is most easily done in the **“Properties”** tab of CoStar. There are many different ways to screen properties in CoStar, such as by property sector, size, submarket, and others. For example, the image below shows a map with retail properties between 5,000 and 20,000 square feet of space that are currently for sale in the Sacramento market, of which there are 64.



Deliverable 2: Oral Presentation of the Consulting Report

Part c) of this stage is a brief description of the submarket or neighborhood where the selected property is located. It is intended to put the selected property in the context of its surroundings: what are neighboring properties, what is the neighborhood like, what are the public transportation options and traffic situation, and so on.

Overall, this first stage should be one or two pages in length. Your goal is to give the reader all of the relevant and important information without overwhelming them with data. This stage of the assignment is **not graded**; rather, it is intended for feedback and to help you make steady progress.

Please submit the electronic version of your market analysis, property selection, and location description to Canvas before the due date.

Deliverable 2: Oral Presentation of the Consulting Report

Stage 2 of the financial and investment consulting report involves an oral presentation of your market and property, your findings and preliminary conclusions.

You will present your findings and conclusions to the rest of the class on the last day of class. Your presentation should be to the point and demonstrate your ability develop a professional business presentation on substantive material you have produced. Creating some kind of visuals (PowerPoint or similar) in preparation for the presentation is expected. The added benefit of the presentation is that it allows you to develop and practice public speaking using visual aids. Thus, this is an effective way for you to enhance your business communication skills.

The presentation should be prepared with the assumption that its intended audience is ABC's executive board, not the instructor. You will have 15-20 minutes to give the presentation, including time for questions. Therefore, you should focus on the essential elements of your report, *particularly your findings and recommendations*. Do not plan to spend a lot of time discussing the location and market analysis. Preparation and timing will be essential to your success.

Like Stage 1, this stage of the assignment is **not graded**. It is intended for feedback both from the instructor and your peers, as well as help you make steady progress towards the final written report.

Please submit the electronic version of your presentation slides or other visual aids to Canvas before the due date.

Deliverable 3: The Final Written Report

Stage 3 of this assignment is the final written report, which builds on and adds to the previous two stages. Below are the guidelines for the final report.

1) The report is divided into the following sections:

a) Executive summary (optional)

b) Location analysis and property description.

c) Market analysis.

d) Financial feasibility analysis. Tax considerations will be included. You must use a widely used spreadsheet such as Microsoft Excel for this part.

e) Recommendation.

Please see "Appendix A: Variables, Assumptions, and Data to be Included" below for more details that must be included in the report.

2) The report must look, feel, and read as though it is coming from a professional analyst. Note that the intended audience is the ABC board, who is your client, not the instructor.

3) The report will be 8-10 single-spaced pages of concise prose, not including cover sheets, title page, tables, figures, table of contents, list of tables and figures, references, and appendices.

4) The report must include support material, such as photos, maps, tables, figures, etc.

5) While doing research on this project, feel free to use any established and credible sources as appropriate, in addition to the CoStar database. It is your responsibility to collect the appropriate data.

6) Additional style guidelines for the report.

- *Text*: Text should begin at the left margin and be single-spaced, with a space between paragraphs.

- *Headings and sections*: Use bold or italicized text to differentiate headings or subheadings, respectively. Do not use all capital letters, and do not number sections.

- *Spelling*: Make spelling and punctuation consistent throughout.

- *Tables and figures*: For tables and figures: do not use all capital letters; number consecutively and label clearly; fully explain the table or figure so that the reader need not refer to the text.

- *References*: Type referenced works on a separate sheet and place at the end of the article under the heading References. Include both author and date, such as Merrill (1980), for in-text citations.

This final stage of the assignment is **graded**. You may submit an initial draft of your report to me for evaluation. If you choose to do so, I will provide you with feedback on a timely manner, so you can revise and improve your report. Initial drafts are due on the date shown in the syllabus. Submitting initial drafts of reports is optional and does not affect your grade (other than the potential indirect effect of

improving the quality of your final version).

Regardless of whether you submit an initial draft, the final version of the report is due on the date specified in the syllabus. Please upload your files to Canvas. In addition to the Word or PDF file for the report itself, you also need to upload your Excel spreadsheet to Canvas.

Sample consulting reports submitted by students in previous semesters are available on Canvas. Please note that these samples are not intended to be examples of “good” or “bad” work. They are provided for your reference and to give you a general idea of what a final version of the report might look like. Please note that you WILL NOT be allowed to analyze any of the properties from the sample reports.

Appendix A: Variables, Assumptions, and Data to be Included in the Financial and Investment Consulting Report

1. Location analysis and property description
 - a. You may organize this section as you see fit. The only requirement is that you need to provide at least one visual (such as photos, maps, etc.). I prefer that you create the visual yourself, rather than use something from Costar or the internet.
2. Market analysis
 - a. Regional/city economics, demographics, market trends.
 - b. Office/Retail/Industrial/Multifamily market: rents, vacancies, construction activity, supply-demand interaction.
 - c. Visuals, graphics, and tables as needed.
3. Financial feasibility analysis
 - a. Comparable properties.
 - b. Expected purchase price. This is not necessarily the same as asking price if the property is currently listed for sale. Whether or not the property is currently for sale, you must come with your independent estimate of purchase price. The easiest way to do this is by using the direct capitalization method (see comparable properties above).
 - c. Income statement: Potential gross income, Vacancy allowance, Operating expenses, Net operating income.

d. Explicitly state assumptions about:

- Changes in rent (stable/growth/decline).
- Changes in property's value (stable/higher/lower)
- Changes in vacancy allowance.
- Changes in operating expenses.

e. Financing: Assume financing is available, as long as the lender's requirements are met. Explicitly state:

- Loan amount (LTV).
- Interest rate. You can find average market rates for commercial mortgage rates from: <http://www.realtyrates.com/commercial-mortgage-rates.html> or <https://www.valuepenguin.com/average-commercial-real-estate-loan-rates>

- Term.
- Points, fees, prepayment fees, etc.
- Other conditions that may apply.

f. Before-tax cash flows from operations and from sale.

g. Include the tax considerations: complete the After-tax cash flows from operations and from sale. Explicitly state the following assumptions:

- Investor's income tax rate.
- Depreciable value (value of improvements).
- Use depreciation recapture tax rate: 25%.
- Capital gains tax rate: 15%.
- Holding period: 5 – 15 years.

h. Cap rates and discount rates. Explicitly state the following measures:

- Cap rates ("going-in" and "going-out"): for estimating property value.
- Investor's required rate of return (for NPV calculation and for comparison with IRR).

i. Calculate IRR and NPV.

4. Recommendation

a. Make a recommendation using the NPV and IRR figures found in the financial feasibility section.

b. Discuss two or three caveats or scenarios that would make you change your recommendation. For example, would your recommendation change if rent does not increase as you expected or if interest rates decline significantly over the next year or two?

5. Figures, charts, images, spreadsheets, appendices.

a. The biggest requirement is some kind of spreadsheet or table showing your income and cash flow forecasts. You should also include other supporting materials (visuals, pictures, maps, deeds, charts, etc.) as described above.

List of literature:

1. Law of the Republic of Uzbekistan dated June 8, 2015 No. ZRU-387 “On the securities market”;
2. Law of the Republic of Uzbekistan dated December 25, 2019 No. ZRU-598 “On investments and investment activities”;
3. Decree of the President of the Republic of Uzbekistan dated January 28, 2022 No. UP-60 “On the development strategy of New Uzbekistan for 2022-2026”;
4. Decree of the President of the Republic of Uzbekistan No. UP-5992 dated May 12, 2020 “On the strategy for reforming the banking system of the Republic of Uzbekistan for 2020-2025”
5. Decree of the President of the Republic of Uzbekistan dated January 9, 2018 No. UP-5296 “On measures to radically improve the activities of the Central Bank of the Republic of Uzbekistan”;
6. [Gartner: “Gartner Says Digitalization Will Make Most Heritage Financial Firms Irrelevant by 2030,”](#) October 29, 2018.
7. Жиянова Н. Э. Управление государственными финансами. Учебное пособие. / - Т.: "ИҚТИСОД-МОЛИЯ", 2019. - 384 с