OKLAHOMA
Tax Commission

CAPITALIZATION RATE STUDY

JANUARY 2021

AD VALOREM
PUBLIC SERVICE SECTION

PO Box 269060 Oklahoma City, OK 73126-9060 | 405.319.8200

Executive Summary

The income approach to value converts projected future income or cash flow into an estimate of present value. The accuracy of this approach is no greater than the validity of the assumptions used to estimate the key variables, particularly the capitalization rate variable. The mathematical techniques used in the approach convert those assumptions into an estimate of current market value.

This booklet contains a study of each of the eight state assessed industry groups in Oklahoma. Industry data was gathered by group as identified by the Value Line Investment Survey published from the period of November 2020 through January 2021.

Generally accepted appraisal procedures were used to estimate the cost of capital for debt and equity. The long-term debt cost is the cost for a particular risk class of debt on the lien date. The equity rate reflects the rate of return or compensation that will satisfy the risk that a prospective purchaser would assume by investing in the property.

Authority for Valuation

The Oklahoma Tax Commission Ad Valorem Division is charged with the responsibility for the valuation of railroad, air carrier and public service corporation property in accordance with Title 68, Section 2808 of the Oklahoma Statutes. The term “public service” includes electric companies, fluid or product pipeline companies, gas distribution and transmission companies, telecommunication companies and water companies.

Band of Investment, Capital Structure

A representative capital structure is developed for each industry using the market value of equity and the book value of long-term debt. Using the Value Line Investment Survey, the market value of equity can be calculated by multiplying the number of shares outstanding by the listed stock price, or by utilizing the given market capitalization number already calculated. The debt components are book amounts unless market amounts are readily available and predetermined to be significantly different. Preferred stock was excluded in the calculations for all industry types.

The rates of debt and equity capital are weighted by the respective amounts of such capital deemed most likely to be employed by a prospective buyer. The result is a representative or typical capital structure of an industry group of companies, not that of the present owner.

Cost of Debt

Cost of debt was calculated as the twelve-month bond yield average from Mergent Bond Record for public utility and industrial bonds utilizing that bond rating perceived as typical for each industry.

Executive Summary

Cost of Capital

Equity rate calculations were derived upon review of Discounted Cash Flow, Capital Asset Pricing Model (CAPM) and Earnings Price Ratio.

Discounted Cash Flow, the Gordon Growth Model, allows for the calculation of two rates within its model utilizing the dividend yield, dividend growth rate estimates and earnings growth rate estimates as listed in the Value Line Investment Survey. Cost of capital is being calculated for dividends by adding the dividend yield and the dividend estimate. Similarly the cost of capital for earnings is calculated by adding the dividend yield and the earnings estimate. No calculation is utilized where the resulting yield or growth estimate equity rate is below the chosen cost of debt for each respective industry.

Capital Asset Pricing Model (CAPM) in the application of the CAPM, the most sensitive component affecting the outcome is the estimate of the beta statistic. A choice of time frames and frequencies of measurement in the calculation of the beta can produce significantly different results. Another factor in the use of beta is the choice of whether to use an unadjusted beta or a beta adjusted to reflect the fact that betas revert to the mean over time. For this study the company levered betas as developed and presented in the Value Line Investment Survey for the selected industry groups are used.

Earnings Price Ratios (E/P Ratio) utilizing the Value Line Investment Survey for the selected industry groups, was calculated with the projected earnings divided by the recent price.

Flotation Costs

Flotation costs are those costs associated with the issuance of new securities and include both the underwriting spread and the costs incurred by the issuing company from the offering. Financial theory suggests, and evidence supports that firms do not typically issue new common equity as a matter of common practice. Therefore, in determining a capitalization rate, no adjustment will be made in the capitalization rate or the income stream for hypothetical flotation costs. Flotation costs actually incurred may be accounted for in the income stream.

Utilization of Other Studies and Data

Valuation staff has considered and where appropriate utilized data and capitalization studies submitted by assessed and interested parties in the development of the derived rates.

The capitalization rates published in this study are intended to be applied to the unitary operations of those companies subject to central valuation and assessment by the Oklahoma State Board of Equalization.

2021 Capitalization Rate Study
Airline Industry Notes

- Recognizing the different operational services as provided by this industry group, it was broken out into two segments, cargo and passenger service.

- From the passenger service segment, WestJet Airlines Ltd. was excluded due to value line information listed in Canadian dollars.

- Staff considered capitalization studies submitted by:

  No Submissions

- Staff relied upon the results of the following models and appraisal judgment in the development of equity rates:

  1. Discounted Cash Flow
  2. Capital Asset Pricing Model, Ex-Post and Ex Ante
  3. Earnings/Price Ratio

2021 Capitalization Rate Study
Electric Industry Notes

- From the electric industry segment, Fortis, Inc. was excluded due to value line information listed in Canadian dollars. Evergy, Inc., a merger between Great Plains Energy and Westar Energy, was also excluded due to the lack of financial information.

- Staff considered capitalization studies submitted by:

  No Submissions

- Staff relied upon the results of the following models and appraisal judgment in the development of equity rates:

  1. Discounted Cash Flows
  2. Capital Asset Pricing Model, Ex-Post and Ex-Ante
  3. Earnings/Price Ratio

2021 Capitalization Rate Study
Fluid Pipeline (Petroleum Integrated) Industry Notes

- From the fluid pipeline (petroleum integrated) industry segment, Petroleo Brasileiro S.A. was excluded. While publicly traded, the Brazilian Government is a majority holder of the common stock. Cenovus Energy Inc., Husky Energy Inc. and Suncor Energy, Inc. were excluded due to value line information listed in Canadian dollars.

- Staff considered capitalization studies submitted by:

  Enterprise Products Partners, L.P. – Liquid Pipeline Industry

- Staff relied upon the results of the following models and appraisal judgment in the development of equity rates:

  1. Discounted Cash Flows
  2. Capital Asset Pricing Model, Ex-Post and Ex-Ante
  3. Earnings/Price Ratio

2021 Capitalization Rate Study
Gas Distribution (Natural Gas Utility) Industry Notes

- From the natural gas utility industry segment, UGI Corp. was excluded as they presented to primarily market propane gas.

- Staff considered capitalization studies submitted by:

  Southern Star Central Gas Pipeline, Inc. – K.E. Andrews & CO.

- Staff relied upon the results of the following models and appraisal judgment in the development of equity rates:

  1. Discounted Cash Flow
  2. Capital Asset Pricing Model, Ex-Post and Ex Ante
  3. Earnings/Price Ratio

2021 Capitalization Rate Study
Gas Transmission (Natural Gas Diversified) Industry Notes

- From the gas transmission industry segment, Antero Resources Corporation, Cabot Oil & Gas, California Resources Corp. (CRC), Callon Petroleum Co., Centennial Resource Development, Inc., Cimarex Energy Co., CNX Resources Corp., Concho Resources, Inc., Devon Energy Corp., Encana Corporation, EOG Resources, Inc., EQT Corporation, PDC Energy, Inc., QEP Resources, Inc. and WPX Energy, Inc. were excluded as they presented to be primarily engaged in the exploration and production of oil and natural gas. Brigham Minerals was excluded as they presented to be engaged in purchasing and operating mineral and royalty interests. Enerplus Corporation and Paramount Resources Lt. were excluded due to value line information listed in Canadian dollars.

- Staff considered capitalization studies submitted by:

  Southern Star Central Gas Pipeline, Inc. – K.E. Andrews & Co.

- Staff relied upon the results of the following models and appraisal judgment in the development of equity rates:

  1. Discounted Cash Flow
  2. Capital Asset Pricing Model, Ex-Post and Ex Ante
  3. Earnings/Price Ratio

2021 Capitalization Rate Study
Oil/Gas Distribution Industry Notes

- From the oil/gas distribution industry, Clean Energy Fuels Corp. was excluded as they develop and operate fueling stations and are presented to be a provider of natural gas for vehicle fleets. Antero Midstream Corporation and Tellurian, Inc. were excluded as value line lacked sufficient financial information to report. Enbridge Inc. and Pembina Pipeline Corp. were excluded due to value line information listed in Canadian dollars. World Fuel Services Corp. was excluded as they presented to be primarily engaged in the marketing and sale of fuel and related products. Tellurian, Inc. was also excluded due to lack of financial information.

- Staff considered capitalization studies submitted by:

  Southern Star Central Gas Pipeline, Inc. – K.E. Andrews & Co.

- Staff relied upon the results of the following models and appraisal judgment in the development of equity rates:

  1. Discounted Cash Flow
  2. Capital Asset Pricing Model, Ex-Post and Ex Ante
  3. Earnings/Price Ratio

2021 Capitalization Rate Study
Pipeline MLPs Industry Notes

- From the pipeline MLPs industry segment, Suburban Propane Partners, L.P. were excluded due to being primarily involved in the marketing and distribution of propane gas. Rattler Midstream LP was excluded due to lack of financial information.

- Staff considered capitalization studies submitted by:

  Enterprise Products Partners, L.P. – MLP Pipelines Industry
  Southern Star Central Gas Pipeline, Inc. – K.E. Andrews & Co.

- Staff relied upon the results of the following models and appraisal judgment in the development of equity rates:

  1. Discounted Cash Flows
  2. Capital Asset Pricing Model, Ex-Post and Ex-Ante
  3. Earnings/Price Ratio

2021 Capitalization Rate Study
Railroad Industry Notes

- For the railroad industry segment, Wabtec was excluded as it provides equipment and services to the rail industry. Trinity Industries was excluded as they design and manufacture railcars and component parts. GATX Corp. was excluded as they specialize in tank, freight car and locomotive leasing. Greenbrier Companies, Inc. was excluded as they design, manufacture, repair and market railroad freight cars and related equipment.

- Staff considered capitalization studies submitted by:

  National Association of Railroad Property Tax Representatives submitted by The Kansas City Southern Railway Company Union Pacific Railroad Company

- Staff relied upon the results of the following models and appraisal judgment in the development of equity rates:

  1. Discounted Cash Flow
  2. Capital Asset Pricing Model, Ex-Post and Ex Ante
  3. Earnings/Price Ratio

2021 Capitalization Rate Study
Telecommunication Services Industry Notes

- From the telecommunication services segment, America Movil, TELUS Corporation, Liberty Latin America Ltd., China Mobile Ltd., Intelsat S.A., Millicom International Celullar S.A. and Vodafone Group PLC were excluded as being principally and primarily involved in non-domestic operations. Dycom, Inc. was excluded as the company is principally engaged in the telecommunications and electrical services business providing engineering, construction, maintenance and installation to telecommunication providers. Gogo Inc. was excluded as they offer wireless services to airlines. J2 Global Communications and Bandwidth Inc. were excluded as they principally offer value-added and tandem interconnection services. Zoom Video Communications, Inc. was excluded due to lack of financial information.

- Staff considered capitalization studies submitted by:

  Duff & Phelps – Communications Wireline Carriers on behalf of Windstream Companies,
  Cox Oklahoma Telecom, LLC
  CenturyLink Communications, LLC

- Staff relied upon the results of the following models and appraisal judgment in the development of equity rates:

  1. Discounted Cash Flow
  2. Capital Asset Pricing Model, Ex-Post and Ex Ante
  3. Earnings/Price Ratio

2021 Capitalization Rate Study
Telecommunications Utility Industry Notes

- From the telecommunication utility segment, BCE Inc., Deutsche Telecom AG and Telefonica, S.A. were excluded as being principally and primarily involved in non-domestic operations.

- Staff considered capitalization studies submitted by:

  Duff & Phelps – Communications Wireline Carriers on behalf of Windstream Companies,
  Cox Oklahoma Telecom, LLC
  CenturyLink Communications, LLC

- Staff relied upon the results of the following models and appraisal judgment in the development of equity rates:

  1. Discounted Cash Flow
  2. Capital Asset Pricing Model, Ex-Post and Ex-Ante
  3. Earnings/Price Ratio

2021 Capitalization Rate Study
Water Industry Notes

- From the water industry segment, Consolidated Water Company Ltd. was excluded as being primarily involved in non-domestic operations.

- Staff considered capitalization studies submitted by:

  No Submissions

- Staff relied upon the results of the following models and appraisal judgment in the development of equity rates:

  1. Discounted Cash Flow
  2. Capital Asset Pricing Model, Ex-Post and Ex Ante
  3. Earnings/Price Ratio