

Ariadair Economics Group

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ABOUT THE COMPANY

ARIADAIR Economics Group specializes in the provision of economics expert witness and consulting services in administrative and judicial proceedings. Our firm has provided expert economic witness and consulting services to businesses, law firms (and their clients), government agencies, regulatory commissions, and participants in those proceedings. We have provided expert services in over 100 judicial, administrative, and regulatory proceedings.

Recent engagements have addressed the areas of breach of financial duty, intellectual property, breach of contract, valuation of closely held companies, financial malpractice and related damages, anticompetitive practices, false advertising, misrepresentation, dilution, interference with contractual relationships, interference with business expectations, trade libel,

defamation, and wrongful death/injury damages.

Dr. Thomas Fish is president of the company. He has a Ph.D. in economics and has provided expert witness and consulting services addressing a wide variety of issues. For additional information contact Dr. Fish at our e-mail address or by correspondence or phone to discuss any services we may be able to provide to your organization.

GETTING STARTED

To get started contact Dr. Fish and provide the basic information regarding the case. This would include the issues to be addressed, the time frame involved, the venue, and the parties to the proceeding. Based on the information obtained from this preliminary process we will provide an estimate of the work effort required.

WHAT WE DO

Ariadair Economics Group specializes in the provision of expert witness services in judicial and administrative litigation proceedings and expert consulting services in non-litigation areas. We provide expert witness, litigation support, and consulting services in the areas of economics, finance, managerial and financial accounting, strategic and operational planning, and statistical and quantitative analyses in judicial and administrative litigation proceedings and statistical and quantitative analytical services in other venues. We have a great deal of experience in antitrust, contract damages, market identification, intellectual property, financial malpractice, product liability, wrongful death and injury, asset valuation, insurance defense, and other related areas. We orient our efforts to the provision of evidence in support of the positions taken on the issues in the proceeding. Our firm has provided expert economic witness and consulting services to businesses, law firms (and their clients), and government agencies, regulatory commissions, and participants in judicial and administrative judicial litigation in addition to the provision of consulting services to many private business clients. We have presented expert testimony in over 100 judicial, administrative, and regulatory proceedings. To get started simply contact Dr. Fish of the firm for

identification of issues and an estimate of the cost of our services.

GENERAL AREAS OF EXPERTISE

Ariadair Economics Group provides expert witness and consulting services in the following general areas:

- Acquisition/Merger Analysis
- Anticompetitive Behavior
- Antitrust (DOJ Defense and Private, litigation and acquisition/merger analysis)
- Asset Optimization
- Bank Trust Department Operations
- Bankruptcy/Asset Valuation
- Competition/Market Analysis
- Competitive Structuring
- Condemnation Proceedings
- Contract Damages
- Copyright Violations/damages
- Cost of Capital
- Cost of Service
- Cost Studies/Models
- Decision Prudency/Financial Malpractice
- Demand Analysis
- Deregulation
- Economic Loss
- Environmental Economics
- Financial Analysis
- Financial Reconstruction
- Franchise Interference
- Insurance Defense
- Intellectual Property
- Load Forecasting

- Local Telecommunications Competition
- Market Identification
- Market Structure Analysis
- Patent Violation/Damages
- Product Liability
- Rate Base/Operating Income
- Rate Design/Cost of Service
- Regulatory Alternatives
- Sale/Leaseback-Financial Instrument Analysis
- White Collar Defense
- Wrongful Death/Injury

MARKETS/INDUSTRIES **ANALYZED**

ARIADAIR Economics Group has provided expert witness and consulting services with respect to the following industries and markets:

- Agricultural Distribution
- Agricultural Production
- Agricultural Real Estate/Land Valuation
- Aircraft Production
- Airlines Passenger
- Cable TV
- Commercial Real Estate Development
- Commodities
- Computers/Electronics
- Confectionery
- Construction
- Dimension Stone
- Electric Rate Making
- Electric Distribution
- Electric Production
- Electric Transmission
- Electric Environmental

- Entertainment
- Financial Institutions Banks
- Financial Institutions Non-Banks
- Financial Markets
- Food Service
- Food Distribution
- Investment Banking
- Labor
- Medical/Pharmaceutical
- Mining
- Natural Gas Production
- Natural Gas Transmission
- Natural Gas Distribution
- Parking Facilities
- Pet/Animal Food Production/Distribution
- Petroleum Production
- Publishing
- Ready-Mix Concrete
- Telecommunications MTS/WATS
- Telecommunications CPE
- Telecommunications Rate Making
- Telecommunications Other
- Transportation
- Trucking
- Wholesale Distributors

CLIENTS

ARIADAIR Economics Group has provided expert witness and consulting services to many judicial, administrative, and business clients including:

- ADA Racing
- Alston Bird

- American Numismatic Exchange
- Armstrong Teasdale
- Arrow Truck Sales
- Bay Area Teleport
- Bivona & Cohen
- Blackwell Sanders
- Blue Cross Blue Shield
- Bodie Rickett and Associates
- Brotherhood Bank and Trust
- Brown & Bain
- Carlile Patchen Murphy
- Citizens Utilities
- Climaco Climaco Seminatore
- Crouch & Spangler
- Elia & Fallis
- Farmers Insurance
- General Telephone
- Holsum Bakeries
- Hoskins King McGannon
- Kansas City School District
- Law Office of David Browning
- Law Offices of David Melnick
- Law Office of Nick Selby
- Law Offices of Tom Cox
- Maebius & Duncan
- Maine Consumer Advocate
- Marion Merrell Dow, Inc.
- Medallion Insurance
- Nebraska PUC
- Nevada Consumer Advocate
- Ohio Consumer Counsel
- Oklahoma Corporation Commission
- Pennsylvania Consumer Counsel
- Pennsylvania PUC
- Polote Construction Co.
- Popham Conway Sweeney
- Precision Industries
- Rio Airlines
- Rochester Telephone
- Rushfeldt Shelly & Duncan
- Sloan Listrom
- Smith Currie & Hancock
- South Dakota PUC
- Southwestern Bell
- Spencer Fane Britt & Brown
- State Farm Insurance Co.
- Stoup & Associates
- Maebius & Duncan
- Sullivan Cromwell
- Taylor Halliburton Ledbetter
- Telecommunications, Inc.
- Tennessee PSC
- Union Electric
- United Missouri Bank
- Vaught Roofing
- Wruck|Paupore
- Wirkin & King
- Zurich American Insurance

SELECTED RECENT ENGAGEMENTS

Following is a sample of summaries of recent engagements of **ARIADAIR Economics Group**. The sample is selected to highlight the significant issues we addressed in these engagements.

- Alternative Regulation
- Analysis of Valuation of Community Bank Stocks
- Analysis of Trends in Community Bank Control Sales
- Antitrust-Essential Facilities Doctrine
- Antitrust-Horizontal Restraints

- Antitrust-Price Discrimination
- Antitrust-Resale Price Maintenance
- Antitrust-Department of Justice Defense
- Asset Valuation
- Bank Trust Department Operations
- Condemnation Proceedings
- Construction Financing Damages
- Construction of Simulation Models
- Contract Damages
- Copyright Violations
- Customer Class Risk Analysis
- Decision Prudency Damages
- Determination of Market Characters Commercial Jet Manufacturing
- Determination of Optimal Refinancing and Capital Structure-Acquisitions/Mergers
- Economic Impact Studies
- Economic Loss (Wrongful Death/Injury)
- Environmental Cost Analysis
- Financial Misconduct
- High-Speed Transmission Competition
- Impact of Capital Structure on Operations
- Insurance Defense
- Lease/Conditional Sale Analysis
- Patent Violation
- Preparation of Bank Charter Application
- Price Elasticity (Own and Cross) of Demand
- Rate Design Telephone Usage Characteristics

- Valuation of Closely Held Companies
- White Collar Defense

Alternative Regulation. In this proceeding we were retained to evaluate a regulated telephone Company's proposal for alternative regulatory treatment. We used industrial organization techniques to evaluate market structure and company performance with respect to current regulatory rules and the proposed rules. As a result of our analysis we found that the Company's proposal would most likely stifle the development of competition, result in higher than necessary rates for the Company's customers, and result in an unnecessary drag on the economy of the state.

Analysis of Asset Valuation. In this engagement we determined the value of the assets of a large insurance company in a bankruptcy. As part of the analysis we conducted special case. As part of the analysis we conducted special studies to calculate market value of the Company's remaining assets using DCF techniques and comparative analysis.

Analysis of the Valuation of Community Bank Stocks. In this engagement we were retained to determine the appropriate market value of the capital stock of community banks. As part of the analysis we conducted an

investigation of recent sales prices of community bank stock in the Federal Reserve Bank region.

Analysis of Trends in Prices of Community Bank Control Sales. We were directed to conduct a statistical analysis of the trend in prices of the capital stock of community banks in a Federal Reserve geographic area. As part of the analysis we developed a statistical procedure for tracking and forecasting prices of community bank capital stock sales. In addition, we were directed to determine the impact of the acquisition of community bank capital stock upon the performance of those banks. As part of this project we conducted a study which measured bank profitability prior to and after an acquisition.

Antitrust Essential Facilities Doctrine. The essential facilities doctrine was a major issue in several of our recent antitrust engagements. Our approach to this issue is to first identify the relevant product and geographic market in which a violation of this doctrine is alleged to have occurred. Next, revenue flows that are expected to result from a price change are calculated to determine own-price elasticity of demand. We then determine if the facility in question is an essential facility within the relevant product and geographic market. An essential facility is a facility, which, if not available, creates a bottleneck in the provision of a product by a rival(s). Control of an essential facility provides the

potential for the facility owner to monopolize the relevant market. We evaluate the availability and effectiveness of alternative facilities because if they are available for use by a rival then the essential facilities doctrine probably has not been violated. Finally, even if the facility is essential, the doctrine is not violated if the facility is made available to rivals on fair and nondiscriminatory terms. A fair and nondiscriminatory price allows an efficient rival to set a price for its product, which, over the long term, would recover all costs of production. We use product pricing theory and asset valuation procedures to determine the fair and nondiscriminatory price. Comparing the upper fair and nondiscriminatory price limit with that charged for use of the facility completes the analysis.

Antitrust Horizontal Restraints. In a recent engagement we were directed to determine if market characteristics supported allegations of the existence of horizontal restraints. We utilized several economic and statistical procedures to analyze this issue. Econometric techniques were used to identify market characteristics in the specific geographic region prior and subsequent to the alleged restraints. A similar analysis was then conducted for a geographic region where horizontal restraints were known not to exist. Sampling procedures and classic hypothesis testing techniques were used to statistically test hypotheses concerning the differences between the two regions.

Additionally, we made similar tests of hypotheses concerning the national market. As a result we were able to draw conclusions, with a high degree of statistical and economic certainty, regarding the allegations.

Antitrust Price Discrimination. In a recent case we were directed to analyze the pricing policy of a multi-location company to determine if it had engaged in predatory price discrimination prices. As part of our investigation we developed an economic model to identify fixed and variable costs and to compare those costs with prices charged by the company to different customers and in different geographic locations at the same point in time. In addition, we identified the relevant product and geographic markets in which the product was marketed.

Antitrust Resale Price Maintenance. In a recent engagement we were directed to investigate the issue of resale price maintenance (RPM). A manufacturer was alleged to have engaged in RPM. As a result, distributors claimed to have suffered a reduction in the value of their distribution routes.

Antitrust Department of Justice Defense. We were retained to analyze the economic basis of the DOJ's charges against a contractor. Our analysis consisted of a determination of the factors necessary for cartelization of this market and an evaluation of market performance to

determine if these factors were present. We were able to conclude that the DOJ had no economic basis for its charges.

Bank Trust Department Operations.

We were directed to analyze the performance of a trust account for the trust department of a major regional bank holding company. The trust consisted of extensive real estate holdings and the problem was identified as the valuation and disposal of real estate held by the trust. We utilized comparative sales and DCF procedures in valuing the property and comparative investment alternatives in determining the alternative that would maximize the value of the trust.

Condemnation Proceedings. We were engaged to establish the market value of various types of property in a condemnation proceeding. Our approach to this project was to value the various properties on both a comparable sales and a capitalization basis. By using both approaches to the valuation process we were able to determine a range wherein the actual value could be expected to occur. This information enabled our client to go forward with the condemnation process.

Construction Financing Damages. In a recent case we were directed to identify economic damages to a construction firm that occurred as a result of a bank violation of the terms of its loan agreement with the

construction firm. We determined that the improper behavior of the bank resulted in significant damages to the Construction Company. As a result of our analysis a fair settlement was reached with the bank.

Construction of Simulation Models.

In several recent engagements we were directed to develop mathematical and statistical models to simulate business activity, to identify relevant markets, and to estimate price elasticity of demand and demand levels. The specification and development of these models was based upon econometric and linear programming techniques so that optimal solutions could be identified.

Contract Damages. In several recent engagements we were directed to determine economic damages resulting from breach of contract. Our approach in these proceedings is first to determine the value of the contract had the alleged breach not occurred and then determine the value of the contract if a breach did occur. The difference between these two values can be considered economic loss (or economic gain). These cases typically require financial analyses of the contract terms and market analyses of the relevant industries.

Copyright Violation. We were engaged to determine the economic facts and circumstances associated with an alleged copyright violation. As a result of our investigation, we determined that the actions taken were

anti-competitive and that economic loss had occurred as a result of the anti-competitive actions.

Customer Class Risk Analysis. We were engaged to determine if risk differences existed between customer classes for an Electric company and, if so, to quantify the magnitude of the risk differences. We determined that unanticipated changes in consumption represented risk. The Company's sales could be expected to vary over time to some extent due to long-term growth and to seasonal and cyclical variation. To the extent that those changes in sales were regular, recurring, and predictable, they did not represent risk. Other factors such as changes in the number of customers, changes in the economic climate, and changes in appliance efficiency would result in unanticipated changes in consumption of electricity and, therefore, contribute to risk. The procedure utilized in the project was time series analysis in conjunction with an analysis of relative coefficients of variation. We determined that various customer classes did have different levels of risk. We also determined that rates designed to reflect customer risk were consistent with the concept of incentive pricing. To the extent that promotional pricing did not result in one customer class being subsidized by other customer classes, promotional pricing would be effective. We found that incentive rates below cost without load control most likely would result in

subsidization and in high future price increases. Incentive rates above short-run marginal cost without load control most likely would not result in subsidization, but most likely would result in high future price increases. Incentive rates above short-run marginal cost with load control most likely would not result in subsidization or high future price increases.

Financial Misconduct/Decision Prudency Damages. We were engaged to provide economic assistance in a series of cases involving improper conduct by financial institution officers. The cases involved defaulted loans and the allegations were that the officers should not have authorized the loans in the first place. Our investigation in this type of case consists, first, of a financial analysis of the borrower and an evaluation of the use of the loan proceeds. This analysis is conducted in order to determine the borrower's credit worthiness and ability to pay at the time the loan was authorized. Then a market analysis of the relevant industry is conducted in order to determine the cause of the default.

Determination of market Characteristics and Parameters for Commercial Jet Aircraft manufacturing. In this engagement we were directed by the marketing department of a major private jet aircraft manufacturing company to aid in developing a procedure for identification of potential customers.

As part of the analysis we investigated customer characteristics of previous sales and aided in specifying and designing a marketing database to be used in the Company's sales efforts.

Determination of optimal Refinancing and Capital Structuring for Acquisitions and Mergers. In a recent engagement we developed an econometric model to determine the range of viable capital structures required to support acquisition and merger activity. As part of the project we investigated asset and liability management goals and objectives required to insure financial viability.

Economic Impact. We were retained to identify the economic impact on a state of implementing the proposed rate structure of a gas distribution company. As part of the analysis we analyzed various public utility regulatory policies and the impact of those policies on the economic welfare of the individuals, and society, affected. In addition, we determined the impact of those regulatory policies on resource flows and wealth creation. As a result of the analysis it was determined that a pricing policy utilizing full cost per customer class would have a minimal negative impact upon the economy. It was also determined that marginal cost pricing was the economically most efficient pricing policy with respect to the economic impact upon the state.

Economic Loss (Wrongful injury/death). In a series of engagements we identified the economic loss suffered as a result of wrongful injury or death. An approach in these cases is to determine the actual dollar loss that had been incurred up to the time of the analysis. Then determining the difference between income that would have occurred absent the death or injury and income that can be expected after the injury identifies future economic loss.

Environmental Cost. We were retained by an Electric Company to analyze the regulatory Commission Staff proposals concerning implementation of environmental safeguards. As a result of our analysis we determined that the Staff had failed to conduct a cost/benefit analysis of their proposals and that such an analysis indicated that the cost of the proposals greatly exceeded the benefits of the proposals. In addition, we determined that the Staff's proposals were fatally flawed because inconsistent and undefined criteria were used as the foundation for their proposals.

High-Speed Transmission Competition. We were directed to investigate the impact of deregulating high speed service offerings by a Regional Bell Operating Company. An analysis of the existing and proposed rate designs indicated that certain components of the high speed service offerings constituted

"essential facilities" by the RBOC and deregulation of these components would need to be made in such a manner as not to create barriers to entry.

Impact of Financial Operating Strategies of the Capital Structure of Financial Institutions. In this engagement we developed a procedure for analyzing alternative strategic plans and selecting the optimal strategy. As part of our investigation we developed a mathematical model for simulating alternative strategies and calculating the cost and return of these strategies, and for selecting the optimal, or least-cost, strategy.

Insurance Defense. In a series of engagements we were directed to determine economic loss associated with various industries and entities. Our approach in these cases is to conduct a financial and industry analysis in order to determine the revenue and profit variations had the alleged actions occurred or not occurred. The difference between these amounts is a measure of economic loss (or economic gain).

Lease/Conditional Sale Analysis. In a recent engagement we were directed to determine if a financial transaction was a lease or a conditional sale. The factors we analyzed with respect to this determination included the residual value of the product at the end of the initial lease term, the life of the product, and the economic

justification of the renewal rent amount.

Patent Violation. In this engagement we were directed to investigate and determine if a patent had been violated. We utilized market surveys, production process investigations, and market structure analyses to reach our determination. The patent on the product at issue had expired, however related patents on the production process of the product had not expired and, therefore, a patent violation had occurred. As a result, our client was able to recover significant economic damages from the entities that had violated the production process patents

Preparation of Bank Charter Application and Supporting Demographic Analyses. In this engagement we prepared the application for a new bank and conducted all the associated economic and demographic analyses. In addition, we provided expert testimony in the hearing before the state banking commissioner.

Price Elasticity of Demand. We performed economic and statistical analyses of a Local Exchange Company's methods of determining price elasticity of demand and estimating the resulting curtailment or stimulation to its various customer classes. These analyses were conducted for a multitude of service offerings and resulted in the identification of revenue reduction or

revenue increases which could be expected to occur as a result of changes in the price of the services investigated. As part of the analysis we reviewed the Company's statistical and mathematical procedures for accuracy and logical validity.

Rate Design. We were directed to evaluate and analyze an Electric Company's proposed tariffs. The evaluation and analysis was conducted on the basis that the proposed tariffs should result in recovery of the Company's revenue requirement, should be efficient, and should be equitable. As part of the project we reviewed the cost of service basis of the proposed rates, reviewed the magnitude of rate changes by customer class and service category, and calculated the return proposed per customer class and service territory. As a result of the analysis, rates were proposed that were simple and easy to understand and would minimize revenue fluctuations, were efficient in the sense that wasteful production and consumption practices would be discouraged, and were not discriminatory.

Telephone Usage Characteristics. An analysis was conducted of the service area of a Regional Bell Operating Company targeting residential and business telephone usage characteristics. Survey information was obtained concerning customer usage patterns by economic and

demographic characteristics. The demand for various telephone services was identified as well as those services which were potentially vulnerable to competition

Closely Held Company Valuation. In several recent engagements we were directed to determine economic damages resulting from bad actions of outside parties. To determine these damages we determined the value of the company prior to the bad actions and then determined the value of the company after the bad actions. After eliminating other possible causes of the differences in valuation we were able to determine the economic damages resulting from the bad actions with a high degree of economic certainty.

White Collar Defense. In several recent engagements we were directed to provide economic defense in criminal proceedings. In these engagements we first analyzed the economic environment that existed at the time the incident occurred. We then looked at the specific economic factors that impacted the incident in order to determine the economic logic of the incident. Next, we analyzed economic conditions subsequent to the incident to identify changes that had occurred which could provide evidence of unforeseen and unforeseeable events which would explain the alleged consequences of the original action. Typically, this type of economic investigation

provided evidence that did not support the criminal allegations.

PROFESSIONAL STAFF

Horizon Economics Consultants' professional personnel have a great deal of academic and real-world experience in providing services to our clients and all have advanced academic degrees. Dr. Thomas Fish is president of the company. He has a PhD in economics and is a forensic specialist in economics, finance, managerial and financial accounting, economic loss and damages, and human resource management. Dr. Fish has participated in numerous judicial, administrative, and regulatory proceedings and directed numerous major research/investigative engagements. For additional information contact Dr. Fish at our e-mail address or by correspondence or phone to discuss any services we may be able to provide to your organization.