ADVANCED ANALYTICAL CONSULTING GROUP

Karthik Padmanabhan, M.B.A., M.S.

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Professional Summary

Mr. Karthik Padmanabhan focuses on financial analysis and valuation, estimation of damages and financial remedies, creating advanced decision models and improving corporate strategies and operations to maximize performance and financial return.

Mr. Padmanabhan has more than 19 years of engineering, financial services and consulting experience in a number of industries including metals, aerospace, healthcare, manufacturing, distribution, chemical and consumer packaged goods.

He has assisted attorneys in litigation on a variety of topics, including patent infringement and copyright issues, antitrust, and securities, among others.

Mr. Padmanabhan has expertise is in the optimization of pricing and profitability for companies in several industries, including manufacturing, distribution, healthcare, chemical, consumer, and packaged goods.

He has also managed numerous client projects to quickly identify savings and improve efficiencies by conducting data-intensive diagnostic assessments to increase revenue, to improve operating margins, and to reduce cost to serve. He has worked with field sales and corporate teams to realize the identified improvements to the business.

Education

- M.B.A., Finance and Decision Technologies, Indiana University, Indiana
- M.S., Industrial Engineering, The Pennsylvania State University, Pennsylvania
- B.S., Mechanical Engineering, Anna University, India

Selected Consulting and Litigation Experience

Litigation Support

- In an ongoing breach of contact matter involving an entity based in South America, Mr. Padmanabhan supported calculation of damages for past and future business performance.
- In a recently completed copyright infringement matter involving computer software, Mr. Padmanabhan is assisting with analysis to demonstrate causal connection to losses suffered by the plaintiff, measure actual damages and compute the infringer's profits attributable to the infringement.
- Mr. Padmanabhan led efforts on two important antitrust related matters LIBOR and Foreign Exchange. He directed and conducted data analysis to detect cooperative behavior and estimate the financial impact of the collusion. He also developed frameworks to calculate and allocate damages to class members.
- In a copyright infringement matter, Mr. Padmanabhan led the effort to estimate potential damages in the absence of comparable damages rates. By using multiple frameworks and scenarios analysis, Mr. Padmanabhan developed a range for potential damages that is being used by counsel in ongoing mediation efforts.
- In two different patent infringement lawsuits, Mr. Padmanabhan led the effort to estimate potential damages by analyzing financial statements, market share reports, regulatory filings and industry benchmarks.
- AACG provided an expert report focusing on a merger of two health insurance companies in the state of Montana. As part of the antitrust evaluation, Mr. Padmanabhan was responsible for analyzing the community impact by evaluating the transaction's impact upon the availability and accessibility of health care, the sufficiency of safeguards to ensure continued access to affordable health care, and the extent to which the transaction is equitable to the public interest of insureds and others.
- In a class action lawsuit against an investment underwriter, the plaintiffs alleged that the
 post-IPO returns of the underwritten stock suffered inordinate losses during the class
 period due to insider trading related misconduct. Mr. Padmanabhan conducted analysis
 to show that the opposing expert's calculation of stock performance was flawed and peer
 benchmarks chosen were inappropriate. Mr. Padmanabhan conducted an industry
 analysis to identify appropriate peers to show that stock performance during the class
 period was comparable and, in fact, better than several peers.
- Mr. Padmanabhan supported an expert in a securities fraud case involving an investment advisory firm. The defendants relied upon a financial model to overstate the value of their investments. Working for the plaintiffs, a government regulatory body, Mr. Padmanabhan's analysis showed that the model's original financial assumptions were no longer valid and that the investments were worth significantly lower than the value stated in the company's periodic filings.
- In a class action lawsuit against a leading insurance company, the plaintiffs alleged that commissions paid to agents affected residual and redemption values of annuity policies.
 Mr. Padmanabhan conducted analysis to show that policies issued on the same date and amount but different commission rates retained similar residual and redemption values.

Business Consulting

- One of the best-known brands in the US, suffering from yearly revenue declines, wanted to implement targeted price increases that minimized additional volume decline. Mr. Padmanabhan provided project management expertise and was responsible for using optimization techniques to determine price changes at the store level.
- Mr. Padmanabhan assisted efforts related to the analysis of large group health plans, selffunded health plans and defined benefit pension plans in the US. As part of his analysis, Mr. Padmanabhan conducted analysis to identify characteristics of health plans, determined the level and reasons for pension underfunding, and presented findings that were used by the Department of Labor in its report to Congress.
- The board of directors at a distribution client wished to quickly realize price increase opportunities identified by a recently completed pricing analysis project. Mr. Padmanabhan designed and conducted workshops for the client's 300+ sales representatives in North America. At the workshops, sales representatives were provided with specific pricing improvement opportunities at the account and product level. In addition, Mr. Padmanabhan identified goals, actions, and tactics that sales representatives could take to ensure that price increase and margin enhancement actions were implemented with their customers. Sustainable margin improvements worth over \$5 million were realized over a three-month period.
- A leading distributor of life science and laboratory equipment wanted to improve operating margin by identifying and addressing unprofitable products, customers, and transactions. Mr. Padmanabhan led and managed a seven- member team, which refined and built a price waterfall to identify a series of price-setting and price-leakage opportunities. Recommendations yielded over \$20 million in increased profit at the product, segment, customer, and transaction levels.
- A division of a global specialty chemicals manufacturer was seeking to combat increased competition and to reverse a trend of declining profit margins. Mr. Padmanabhan managed a pricing execution engagement to design a process to extract, cleanse, and load transactional data for the division's global business. The data were analyzed to identify pricing improvement opportunities and various customer and product segmentation schemes that helped sales representative focus on the most profitable products and customers. Due to the changing competitive situation for this business, several additional opportunities were identified that focused on maximizing margin improvement through actions other than pricing. Total pre-tax income improvements of approximately \$40 million were identified.
- A commercial division of an HVAC manufacturer decided to increase its analytical and execution capabilities in the area of pricing in order to further secure its superior market positioning and to proactively address anticipated market and regulatory changes. Mr. Padmanabhan managed the project to determine the different elements of the pricing waterfall, data sources, and allocation strategies for each of the waterfall elements, encompassing over 25 different revenue and leakage elements.
- At a diversified manufacturing client, Mr. Padmanabhan supported a process assessment and high-level design approach that focused on determining the pricing process gaps, organizational requirements, opportunities for process improvements, and high-level functional requirements for pricing technology. In addition, he analyzed key sets of pricing and related data to determine short-term, medium-term, and long-term opportunities exceeding \$30 million and worked with client teams to prioritize these opportunities.

 A leading consumer packaged goods company wanted to track and understand the risk, issues, and timelines involved an ongoing global initiative to reduce costs. Mr. Padmanabhan was part of the team that designed and implemented a program management office to track twelve corporate initiatives worth \$1 billion. He developed and deployed a Microsoft Excel®-based tool to gather, consolidate, report, and track each initiative's details, financials, timelines, risks, and issues.

Professional Experience

- Principal/Senior Manager, Advanced Analytical Consulting Group Inc., Chicago, IL, 2009
 – current
- Director, GenXL LLC, San Francisco, CA, 2007 2009
- Manager/Senior Consultant, Deloitte Consulting LLP, Strategy and Operations, 2005 2007
- Business Analyst, Capital One Auto Finance, 2003 2005
- Product Engineer, Alcoa Corporation, 1998 2001

Papers and Publications

- Padmanabhan, K., C. Panis, and T. Tardiff. "The Ability of Investors to Time Purchases and Sales of Mutual Funds". 2017. Report for the U.S. Department of Labor, Employee Benefits Security Administration (DOL-EBSA). https://www.sec.gov/comments/s7-07-18/s70718-5366987-184108.pdf.
- Padmanabhan, K., C. Panis, and T. Tardiff. "Review of Selected Studies and Comments in Response to the Department of Labor's Conflict of Interest 2015 Proposed Rule and Exemptions" 2016. Report for DOL-EBSA. <u>https://www.dol.gov/sites/dolgov/files/EBSA/researchers/analysis/retirement/review-of-selected-studies-and-comments-in-response-to-the-dol-coi-2015-proposed-ruleand-exemptions.pdf.
 </u>
- Padmanabhan, K., C. Panis, and T. Tardiff. "Rates of Return of Broker-Sold and Direct-Sold Mutual Funds". 2016. Report for DOL-EBSA. <u>https://www.dol.gov/sites/dolgov/files/EBSA/researchers/analysis/retirement/rates-of-return-of-broker-sold-and-direct-sold-mutual-funds.pdf</u>.
- Daniel Levy, Audrius Girnius, Karthik Padmanabhan, Timothy Tardiff, Tim Weithers and Megan Yeretsian. "Is LIBOR Still Being Manipulated?: Identifying Colluders with Methods of Detecting LIBOR Tampering", 2016. <u>https://ssrn.com/abstract=2884953</u>
- Michael J. Brien, Constantijn W.A. Panis, and Karthik Padmanabhan. "Volatility Metrics for Mutual Funds", 2010. <u>https://www.dol.gov/sites/dolgov/files/EBSA/researchers/analysis/retirement/volatility-metrics-for-mutual-funds.pdf</u>.
- Padmanabhan K., R. Voigt, V. Okhuysen. "Dimensional Control of Investment Castings." *Proceedings of the 46th Annual Technical Meeting, Investment Casting Institute*, Orlando, Florida: Investment Casting Institute, October 1998.
- Okhuysen V., K. Padmanabhan, and R. Voigt. "Tooling Allowance Practices in the Investment Casting Industry." *Proceedings of the 46th Annual Technical Meeting*,

Investment Casting Institute, Orlando, Florida: Investment Casting Institute, October 1998.

• Karve A., K. Padmanabhan, and R. Voigt. "Factors Influencing the Dimensional Variability of Investment Castings." *Proceedings of the 45th Annual Technical Meeting, Investment Casting Institute*, Atlanta, Georgia: Investment Casting Institute, September 1997.