

Services and Capabilities

Financial Risk Management



Our team of experts offers an unmatched combination of economic credentials, industry expertise, and testifying experience.

Changes in the regulatory, economic, business, and legal environment around the world have made risk management a critical component in strategic planning, operations, regulatory compliance, and dispute resolution.

For half a century, NERA experts have been central to client success in some of the world's highest-profile cases related to litigation, regulation, and business challenges. With extensive experience in risk analysis and risk management techniques, NERA's financial risk management experts are well versed in evaluating the clients' "risk landscape," and modeling, analyzing, and communicating the effects of combined risks to financial institutions, corporations, and governments. Our experts assist clients in measuring individual risk exposures and aggregating these risks across risk factors and business units, taking into account correlations and diversification effects, to measure their combined effect on performance measures such as earnings-at-risk or cash-flow-at-risk. Clients benefit by having an improved quantification of the risks they face, a better assessment of the impact of their risk transfer activities on their overall risk, more precise contingency planning, and more accurate budgeting and financial planning.

NERA's Financial Risk Management Practice



NERA has developed one of the largest in-house teams of economists in the economic consulting world. The experts in our Financial Risk Management Practice are recognized as thought leaders in the risk management field. Our expert economists have backgrounds in academia, the financial industry, and government entities including the US Federal Reserve, the Commodity Futures Trading Commission, the Securities and Exchange Commission, the Federal Energy Regulatory Commission, the Federal Trade Commission, and the President's Council of Economic Advisers. Our experience and expertise enable us to evaluate and pinpoint the trends that are likely to represent the best practices of tomorrow.

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Areas of Focus



NERA experts' hands-on industry and regulatory experience and unmatched expertise in assessing and managing financial risk are critical to our clients' success. Our risk management work is grounded in a set of core principles that have always guided NERA's efforts on behalf of our clients: focus, independence, defensibility, and clarity. In the field of financial risk management, our areas of focus include:

Valuation of Complex Derivatives and Securities

NERA provides valuation expertise in three general contexts: business valuation, tangible asset valuation, and financial asset valuation. In the context of business and tangible asset valuation, NERA has utilized valuation methodologies based on company comparables and earnings multiples, the values of other assets from the same company or portfolio, financial modeling and estimation of the company's future cash flows, and comparisons to valuations of benchmark assets in the public domain. For financial and quasi-financial assets and derivatives contracts, our valuations techniques leverage generally accepted discounted cash flows and mark-to-market methods, derivatives option models, real options techniques, probability-weighted and dynamic cash flow models, custom simulation models, reference/inference-based comparables approaches, and zero-arbitrage calculation techniques. Our experience in a variety of asset classes allows us to quickly assess market specifics, identify important and potentially unique valuation characteristics of the asset, assess the impact of market economics on market value, and use defensible, industry standard methods to derive a fair valuation. With the ability to combine economics, finance, statistics, and econometrics, NERA's experts can execute valuation methods that go beyond traditional approaches.



Risk Measurement and Management

NERA is a leader in the measurement and management of the full range of financial risk, including market risk, credit risk, liquidity risk, and operational risk.

Organizations need to understand and implement the current risk measurement and management best practices (if they exist) that apply to their business. These practices can vary widely from industry to industry. In financial services, for example, various value-at-risk (VaR) and stress-testing approaches have long been the preferred risk management tools. However, poor model design and choices can—and have—resulted in major, unexpected, and potentially preventable losses. Non-financial companies whose assets are primarily intangible face the same dangers of poor model design and choice, and do not even have a best practices approach to risk management. NERA works with non-financial companies using our f-irm (financially integrated risk model) to better measure and manage cash-flow-at-risk.

NERA's risk experts also play a vital role in keeping clients abreast of best practices as they evolve. Our experts have assisted various industry bodies, such as the Group of Thirty, the International Swaps and Derivatives Association, the Committee of Chief Risk Officers, and the Treasury Management Association in developing risk management principles and evaluating best practices.

Market Risk Measurement and Management

NERA thoroughly analyzes clients' exposure to market price volatility, whether it is driven by fundamental risks or technical factors. We work with the client to identify and measure relevant market risks and help to develop or validate processes and tools necessary to ensure effective risk management on an ongoing basis.

Credit Risk Measurement and Management

As the economic environment has changed, credit risk has emerged as a larger factor in the universe of risks faced by financial and other institutions. NERA works with clients to assess their exposure to credit risk, applying risk modeling to loan portfolios, portfolios of derivatives trades and hedges, and other outstanding obligations. Our experts use this analysis to help clients develop processes to assess, communicate, and limit their credit risk exposure. For example, NERA's strong data and modeling expertise as well as understanding of regulatory expectations allows its experts to independently evaluate the appropriateness of a financial firm's Allowance for Loan and Lease Loss.

Liquidity and Funding Risk Measurement and Management

NERA helps companies manage liquidity risk both by assisting clients already facing liquidity crises caused by, for example, margin calls on a trading portfolio, and by working with clients to develop portfolio strategies that minimize potential future exposure to liquidity risk. Our experts apply advanced modeling techniques to existing and/or potential derivatives, hedging, futures, and securities portfolios to simulate market movements and anticipate liquidity risk under a variety of hypothetical future market conditions. Based on these simulations, we can advise clients on potential funding requirements and suggest methods for limiting liquidity risk.

Operational Risk Measurement and Management

NERA's expertise in manipulating and analyzing large data sets helps us examine the full range of operational risks that companies face, and to identify which risks present the most serious potential challenges. This approach allows our experts to "predict" a client's future operational experiences, and help them prepare to manage future risk.

Enterprise Risk Management

As risk management has become a critical part of strategic planning, businesses are recognizing the need to evaluate the risk landscape of their firm in the aggregate, rather than just measuring and managing individual risks one at a time. NERA assists clients including corporations, banks, hedge funds, insurance companies, and government entities in measuring individual risk exposures and aggregating these risks across risk factors and business units. Our experts take into account correlations and diversification effects to measure the combined effect on performance measures such as earnings-at-risk or cash-flow-at-risk. We give our clients an improved quantification of the risks they face, a better assessment of the impact of their risk transfer activities—hedging and insurance—on their overall risk, more precise contingency planning, and more accurate budgeting and financial planning.





Compliance and Regulatory Risk Management

Keeping pace with changing disclosure and other regulatory requirements demands an in-depth knowledge of capital markets, the regulatory bodies that oversee them, and the investment and hedging instruments that exist in each market. NERA's experts have helped develop the regulatory frameworks for derivatives and other financial markets both in the US and in countries around the world. We apply our expertise in market instruments, current trading practices, market rules, and financial regulation to support financial services and other firms in all economic aspects of regulatory policy, including handling market manipulation investigations, defending enforcement action, providing expert testimony, and quantifying regulatory impacts and risks.

NERA has provided economic expertise to clients that are undergoing regulatory investigations and that are the subjects of enforcement actions. In such cases, NERA experts have applied the theories of financial economics in innovative ways. Our approaches to examining regulatory proceedings can use both ex-ante analysis (to help clients think about the regulatory risks facing their organization and the associated costs) and ex-post analysis (to determine the "but-for" scenario had the alleged conduct not taken place and hence the economic cost of the action).

Reviews of Risk Management Policies and Procedures

NERA's risk experts play a key role in helping senior management assess the quality of and company-wide adherence to corporate risk policies. Across market, credit, operational, legal, and business risks, our risk experts can help companies and regulators understand, analyze, improve, and document risk management operations. With extensive experience in financial markets, practical knowledge, and development of cutting-edge risk management techniques, NERA assists clients in tackling a variety of risk issues in order to move them closer to their stated risk management goals and objectives. We are frequently called upon to survey the industry, provide guidance, and make appropriate recommendations to management.

Risk Management Product Design and Evaluation

As markets and the regulatory environment governing them evolve, the design and characteristics of new products must be fully understood to ensure success and compliance within the existing regulatory framework. With expertise in market structure for the trading of derivatives and structured products, from exchange-traded to bespoke over-the-counter markets, NERA assists in the design of products, their risk management characteristics, and their conformity with regulatory and market requirements.

Risk Management Training

NERA's risk experts have designed and conducted training courses for financial institutions, regulators, and other organizations focused on the workings of futures markets; the use and valuation of derivatives such as forwards, futures, swaps, options, and derivative securities (including structured notes and asset-backed securities); and measurement and management of credit risk on a portfolio basis. Our training courses give clients a vital understanding of how changes in the risk management landscape affect their businesses.



Our experience and expertise enable us to evaluate and pinpoint the trends that are likely to represent the best practices of tomorrow.

Case and Project Profiles

NERA's experts bring to bear a passion for finding the right answer. The following case profiles illustrate the breadth of our experience in the area of financial risk management.

Valuing a Terminated Portfolio of Energy Derivatives

A large energy trader asked NERA to provide advice on liquidity considerations and give a reasonable settlement valuation for a portfolio of energy derivatives under an early termination process. The parties were largely in agreement on the "mid-market" valuation for the portfolio, but varied greatly with respect to the width of the market "bid/ask" and the financial impact of execution costs to liquidate the portfolio in the market. NERA examined various liquidity measurements, including "price reversal" methods and relevant dealer price quotations, to aid the parties in settling on a net termination payment. We also provided advice on the appropriate treatment of the portfolio's risk positions and the relevancy of the market quotations gathered by the parties to value the portfolio's risks under the terms of the agreement.

Benchmarking Credit Risk Management Practices

An international bank commissioned a global industry benchmarking project on the application of credit risk management to hedge fund counterparties by major commercial and investment banking competitors. The bank wanted to identify industry best practices and areas to improve within its own procedures. NERA reviewed resource commitments to credit risk management, efficiency of different systems, and management reporting arrangements. The project assessed potential future exposure methods with inputs such as confidence limits, stress testing, data series, portfolio vs. sum of trades, and dynamic vs. static calculations.





Conducting an Enterprise-wide Risk Management Review

NERA conducted an enterprise-wide risk management review for the North American and international subsidiaries of a Fortune 100 company involved in the food processing and distribution business. Our experts interviewed senior management to identify major risk-related concerns and potential risk exposures. The company's exposure to a wide range of commodity and currency risks was identified and quantified on a standalone (or silo) and a portfolio basis. The company's hedging strategy and practices were reviewed and critiqued, and our team made recommendations for improvement. NERA worked with actuaries from our sister company, Marsh, Inc., in developing an innovative integrated risk model that combined both commodity and hazard risks, and advised on the design and pricing of alternative risk transfer structures.

Screening for Regulatory and Compliance Issues

A major oil and gas trading firm was under regulatory scrutiny related to certain trading activities, and for specific market manipulation issues in some of its products. The firm's management needed to understand if any additional regulatory/compliance risks were present in any of its other products and in other time periods. NERA designed a set of "screening" analyses to identify statistically unusual price formations across the markets of interest. Our team delivered the screening methodology and a set of additional potential instances where the company may have additional regulatory risks related to its trading based on the results of the screening.

The experts in our Financial Risk Management Practice are recognized as thought leaders in the risk management field.

Benchmarking Best Practices in Capital and Risk Management among International Financial Institutions

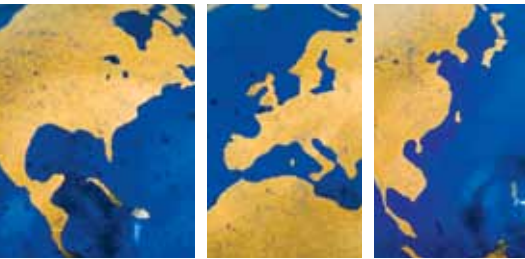
An international financial institution commissioned NERA to assess best practices in capital adequacy and risk management among four multilateral development institutions: IBRD, IDA, IFC, and EBRD. NERA assessed the methodologies used to set capital requirements on the basis of risk in the context of the overall risk management framework at each institution. We then drew together a best practice benchmark, which enabled our client to develop risk-based capital adequacy and risk management policies and practices.

Reviewing Auction Protocols for the Settlement of Credit Default Swap Contracts

As an advisor to a derivatives trade association, NERA analyzed the underlying economics of auction procedures used to determine the final price for the settlement of credit default swaps (CDS) after a credit event. We analyzed the function and efficiency of the auction methodology, its ability to clear excess supply or demand for deliverable obligations, and its susceptibility to manipulation. We also analyzed and explained the economic implications of the auction protocol, and the potential costs and benefits of procedures and constraints built into the auction. We prepared memoranda and made presentations explaining our analysis and findings for the staff, participating firms, and regulatory authorities. Later, we were asked to evaluate the implications for pricing, liquidity, and efficiency as the auction became accepted and as various indices and contract markets sought to reference the auction final price. Using simulation and other empirical methods, we performed a preliminary analysis of CDS prices, bond prices, and related markets leading up to and following a default, and evaluated the pricing and efficiency characteristics.



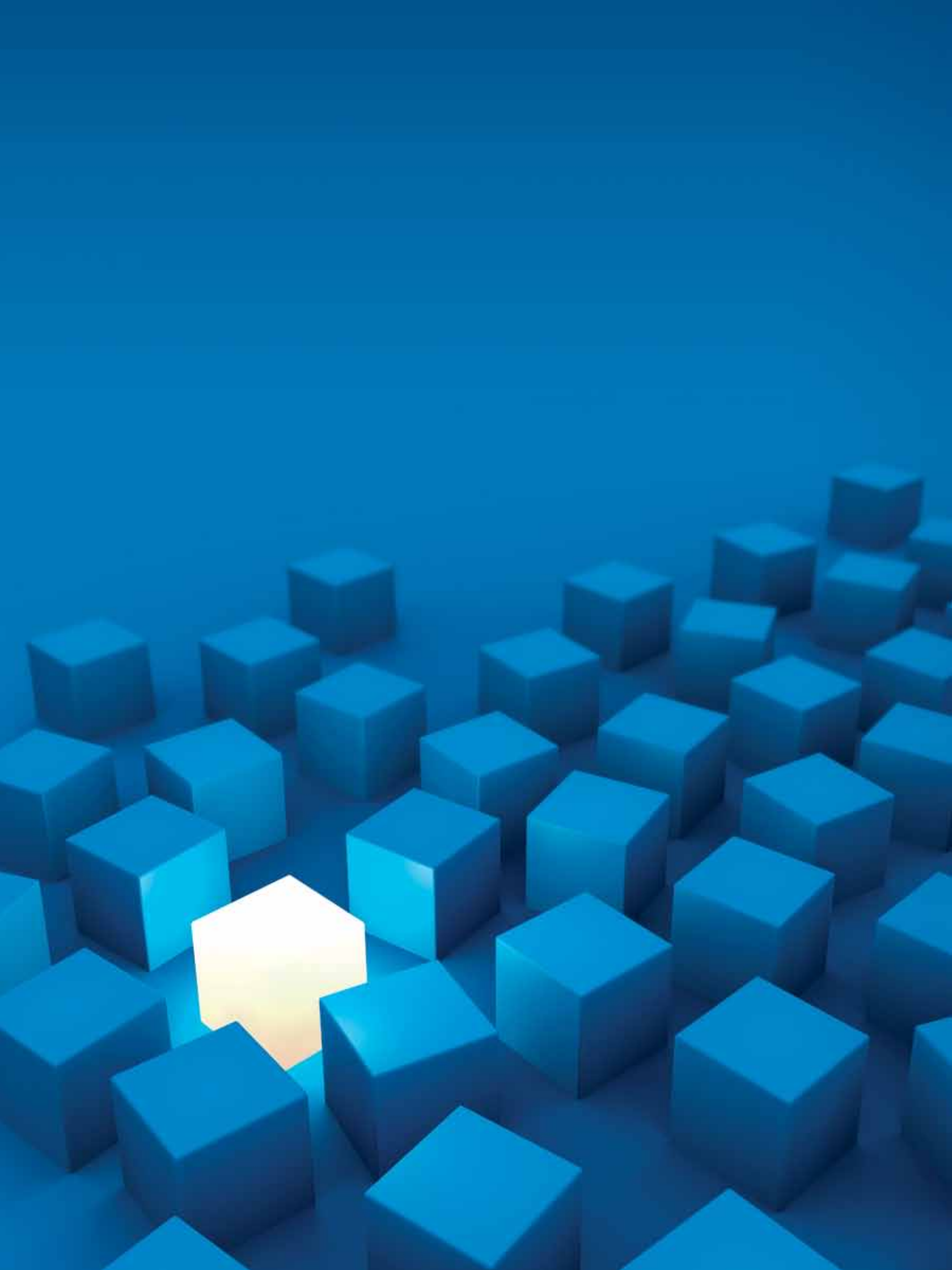
About NERA



NERA Economic Consulting (www.nera.com) is a global firm of experts dedicated to applying economic, finance, and quantitative principles to complex business and legal challenges. For half a century, NERA's economists have been creating strategies, studies, reports, expert testimony, and policy recommendations for government authorities and the world's leading law firms and corporations. We bring academic rigor, objectivity, and real world industry experience to bear on issues arising from competition, regulation, public policy, strategy, finance, and litigation.

NERA's clients value our ability to apply and communicate state-of-the-art approaches clearly and convincingly, our commitment to deliver unbiased findings, and our reputation for quality and independence. Our clients rely on the integrity and skills of our unparalleled team of economists and other experts backed by the resources and reliability of one of the world's largest economic consultancies. With its main office in New York City, NERA serves clients from more than 20 offices across North America, Europe, and Asia Pacific.

For more information on NERA's Transfer Pricing practice, please visit www.nera.com/finrisk.





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