MARKET PLATFORM DYNAMICS

OVERVIEW AND
EXPERTISE |
PAYMENTS AND
FINANCIAL SERVICES
REGULATION AND
LITIGATION

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About the Firm

Market Platform Dynamics (MPD) is the consulting firm businesses leaders come to when they want to succeed in platform-based ecosystems like the payments industry. We help businesses design and commercialize platform products and develop strategic responses to life-threatening industry disruptions. MPD often advises CEOs and Boards directly.

MPD delivers transformative results for clients by combining analytical rigor, deep industry expertise, extensive operational experience, and successful entrepreneurship.

MPD Team Members:

Literally wrote the book on platform strategies. MPD founders David Evans and Richard Schmalensee wrote the path breaking books on how to prosper in platform-based ecosystems. Their recent work has focused on proven strategies for igniting platforms and thereby achieving exponential growth through positive feedback effects.

Have deep experience in industries. Most MPD Managing Directors have worked either as high-level executives or as C-suite consultants for platform industries for decades.

Have extensive operational experience. Many MPD Managing Directors have run business large units and have launched products within large organizations, including at banks, payment processors, payment networks, and financial exchanges.

Are experienced and successful entrepreneurs. Many MPD Managing Directors have launched, built, and sold successful businesses often in platform-based ecosystems.

MPD serves clients across the United States from our offices in Atlanta, Boston, Chicago, New York, and San Francisco and worldwide through affiliates in the Asia/Pacific and EMEA regions.

MPD's Payments and Financial Services Regulatory Practice

MPD has one of the world's leading financial services practices focused on regulation and litigation in partnership with Global Economics Group, our sister company. Our team consists of former senior executives with deep industry and operational expertise, leading economic experts, and top legal and regulatory specialists. As a result we offer clients a cohesive blend of skills and experiences that provide integrated efficient, effective, and actionable advice.

We generally work collaboratively on regulatory and litigation matters with the client's legal team, including outside and/or general counsel, the government affairs team, and risk and compliance officers.

We have advised clients in the US, Europe, Latin America, and in the Asia/Pacific Region and are frequently asked to consult on projects that span multiple countries.

What We Are Asked to Do

Clients come to us because we offer a combination of deep subject matter expertise, legal and regulatory acumen, and leading experts on economics, finance, and compliance.

Thought leadership surrounding legislative proposals for regulation or regulatory proceedings concerning the implementation of regulations. To help policymakers to reach the right decision—whether that's passing a law or implementing a new rule—we examine the impact on job creation, consumer welfare, prices, and competition. Our work often leads to white papers, expert reports, or academic articles.

Advisory work related to regulatory strategy for federal and state regulation of financial services. We work with clients on product development, compliance, responding to regulator exams and investigations, and assist on private litigation.

Behavioral-economics-based analysis. MPD's behavioral economics experts help clients design products in light of



possible regulatory examination by the CFPB and assist clients in responding to CFPB investigations and prosecutions. MPD's economists work with several eminent law professors who specialize in the CFPB.

Price Manipulation Early Warning Screening. MPD's experts are world famous for developing methods for detecting whether employees on their own, or in concert with other firms, are attempting to manipulate prices such as interest rates. These methods are also useful for assessing whether benchmark interest rates used in contracts have been manipulated.

Investments, Alliances, and IPOs. MPD's team combines deep regulatory acumen with profound subject matter expertise to evaluate various investment opportunities. Our team also includes former investment bankers who are experienced at evaluating investment opportunities and conducting detail modeling.

Mergers and Acquisitions. Our economists prepare submissions and make presentations to antitrust regulatory authorities in the US and other jurisdictions concerning merger applications. We have experience in filings before many leading authorities including the U.S. Department of Justice, Federal Trade Commission, European Commission, China's MofCom, Brazil's CADE, and the Australian Competition and Consumer Commission.

Expert testimony. MPD team members are called on to provide expert testimony and reports on the financial services industry. MPD has economic and finance experts, with deep knowledge of various segments of the financial services industry as well an experts in products and operations. Our experts have provided testimony in litigation and regulatory proceedings in multiple jurisdictions including the US, EU, Brazil, China, and Australia.

Key Financial Services Industries

The MPD team includes experts who have deep experience in almost all aspects of financial services. In addition academic credentials in these segments, many of our experts have either held senior executive positions or provided business advisory help for C-suites and Boards. Specific areas include:

- Payments including credit, debit, and prepaid card issuing, acquiring, and networks; money transmittal; and the cash ecosystem.
- Consumer lending including credit cards, subprime lending, and mortgages.
- Banking including macro-prudential issues, treasury management, and consumer and small business banking.
- Securities including derivatives, clearing houses, and exchanges.

MPD's Impact

Debit Interchange Fee Regulation

To the dismay of the payments industry the Federal Reserve Board proposed draft rules in December 2010 that would have reduced debit interchange fees from an average of 44 cents to possibly as low as 7 cents per transaction. Shortly after that several large financial institutions asked MPD to conduct research on the impact of these rules on consumer welfare, small businesses, and small financial institutions. MPD's team submitted four major submissions to the Federal Reserve Board that provided the foundations for backing away from the draconian reductions.

"...[MPD's Evans]...helped to shape rules taking effect next month that will have an enormous effect on the bottom lines of banks and merchants alike."

~Congress Daily (9/22/11)

Consumer Financial Protection

MPD experts were retained by the American Bankers Association in 2009 to assess the impact of the proposed Consumer Financial Protection Act. This work lead to several highly influential papers by MPD Founder David S. Evans and Joshua Wright. Although the CFPA was passed as part of the Dodd-Frank Act, the U.S. Department of the Treasury and House Democrats agreed to eliminate some of the more extreme portions of the proposed legislation including the ability of the CFPB to design plain vanilla products. Evans has continued to play a leading role in the debate over the direction and possible reform of the CFPB including testimony before the House Oversight Committee.



MPD's Team

MPD's Payments and Financial Services Regulation and Litigation Practice is headed by David S. Evans and Brian Smith

David S. Evans is an economist with broad expertise in financial regulation including payments, securities, and consumer financial protection. In addition to testifying in court and regulatory proceedings in the US and EU, he has testified before several Congressional committees and worked with the House Finance Committee on some educational initiatives for its members during the financial crisis. He has worked on most of the key regulatory and litigation matters involving the payment card industry over the last quarter century. He has served as a business advisor, usually at the C-Suite or Board level, to many major financial services companies as well as to several startups. Dr. Evans, who teaches at the University of Chicago Law School part time, has published extensively on the economics of the financial services industry. His book Paying with Plastic, coauthored with Richard Schmalensee, has been called the "definitive book on the business of bank cards."

Brian W. Smith is a recognized expert in the laws and regulations applying to banks and other financial services firms and in payments systems and products. considerable experience includes policy development, strategy formulation and execution, business operations and, of course, legal affairs across a wide range of geographies with particular attention to: Financial Services, Bank Regulation, Payment Systems and Products, eCommerce and Financial Services Technology. He has been an active participant in most of the major developments in financial services over his professional life. He has been the SVP General Counsel and Corporate Secretary of MasterCard International where he was a member of the Office of the President; as Chief Counsel and Member of the Policy Group of the Office of the Comptroller of the Currency and, as a senior partner in several multinational law firms - most recently Latham & Watkins, LLP where he headed those firms' financial regulatory practices.

Other Team Members Include:

Rosa Abrantes-Metz has experience working in consulting and banking, as well as in government. Her main areas of specialization are econometrics, monetary and financial economics, and applied industrial organization. She is one of the world's pioneers in developing screening methods for detecting price manipulation. He innovative methods, which have been adopted by several competition authorities, provided early detection of problems with the LIBOR. She is an adjunct associate professor at Leonard N. Stern School of Business, New York University, where she has taught money and banking, financial institutions, and industrial economics, and currently teaches empirical business strategies. She has worked as a staff economist at the Federal Trade Commission, and continues to serve as a consultant for special projects with the Commission's Bureau of Economics and is also a consultant for the World.

Chad Coffman has substantial expertise in platform economics, payment systems, and financial markets more broadly. He was intimately involved in the merchant class action interchange fee litigation in the US. He has been responsible for performing and managing detailed economic analysis of how multiple listing of options affected market microstructure. Mr. Coffman has been engaged numerous times as a valuation expert both within and outside the litigation context. With 15 years experience advising clients regarding complex economic and valuation issues, he is the CFO of Market Platform Dynamics.

Gloria Colgan is a recognized leader on emerging payment solutions, with over 20 years experience with financial institutions and retail partners. She has advised global providers of contactless payment, digital wallets, mobile, and prepaid card products on product development and management, pricing and merchant acceptance capabilities, branding and communications, and EMV specifications. She has also negotiated some of the top contracts and joint ventures in the emerging payment space. She was a Senior Vice President at Discover, most recently for Emerging Payments for Discover Network and previously for Marketing & Strategy. Before joining Discover she was Senior



Vice President, Commercial Card Services for JPMorgan Chase developing new solutions in the purchasing, corporate and prepaid space.

Frank Jones is a Professor in the Accounting and Finance Department in the College of Business at San Jose State University. He is highly experienced in financial exchanges, investments, and company valuation. He joined San Jose State after a twenty-three year career as a financial executive on Wall Street. During his last thirteen years before retiring, Dr. Iones was Executive Vice President and Chief Investment Officer of Guardian Life Insurance Company where he was responsible for up to \$30 billion investments in stocks, bonds and real estate for Guardian's general account, mutual funds and pension fund. Prior to Guardian, Dr. Jones has also been Director of Global Fixed Income Research and Economics. Merrill Lynch; Director and Member of the Board of Directors, Barclays De Zoete World; Government Securities, Inc.; Managing Director, Kidder Peabody & Co.; Senior Vice President, New York Stock Exchange; and Executive Vice President and Chief Operating Office, New York Futures Exchange. From 2000 to 2010, Dr. Jones was also on the Board of the International Securities Exchange (ISE), the first electronic options exchange, which was merged into Deutsche Borse of Frankfurt, Germany in 2007.

Ronald Mann is an Albert E. Cinelli Enterprise Professor of Law, Co-Director Charles E. Gerber Program in Transactional Studies at Columbia Law School. A nationally recognized scholar and teacher in the fields of commercial law and electronic commerce he has authored dozens of law review articles in leading law reviews, as well as pathbreaking casebooks on Payment Systems and Electronic Commerce. He is a member of the American Law Institute, a conferee of the National Bankruptcy Conference, and a frequent visiting scholar at Federal Reserve Banks.

<u>Charles Rosenblatt</u> is a leading expert in the fields of payments, loyalty, and offers. Mr. Rosenblatt has built and managed loyalty programs for three Top 10 financial institutions and led multiple business development teams at these banks, as well as at the leading provider of card-linked offers. Mr. Rosenblatt also ran emerging technology groups

and product development for both Capital One and Washington Mutual. Mr. Rosenblatt has advised global providers of loyalty services, leading offer/deal providers, the credit/debit card associations and major airlines on product development and management, pricing, interchange, and sales strategy, multi-billion dollar contract negotiation, and corporate strategic planning. He provides insight at the intersection of payments, loyalty, offers, and emerging technologies and is a leader in the consulting space having held executive positions at both financial institutions in these areas, as well as the leading vendors providing these services.

Richard Schmalensee is a professor of economics at MIT in addition to working with MPD where he is the Chairman. He led MIT's Sloan School of Management for a decade and was a member of the President's Council of Economic Advisors. He is one of the world's leading authorities on industrial economics with deep expertise in the payment card industry. He was a board member of the International Securities Exchange, one of the world's pioneering options exchanges, before its sale to Deutsche Borse, and has worked on various antitrust matters involving the securities industry. He is the co-author, with David Evans, of Paying with Plastic.

James Shanahan is a payment innovation executive with a solid track record of creating, developing, implementing and managing new products as well as new companies in the payment industry as an employee, as an entrepreneur and as a consultant. He has worked for industry leaders American Express, JPMorgan Chase, MasterCard, Bank of America. As a Managing Partner of boutique payment consulting company serving over 100 clients in 15 countries. He is the CEO and Founder of two payment start-ups, the most recent one was acquired by Fiserv.

Karen Webster is the CEO of MPD and is one of the industry's most significant thought leaders, practitioners and advisors to CEOs and their Boards. She has worked extensively with some of the leading players in the payments, B2B and technology sectors to architect, ignite and commercialize innovation. She also serves as a member of the



board for several emerging companies in the payments, mobile and technology sectors. Her work recent work has focused on developing strategic and operational ignition strategies for large multi-sided platform players, specifically focused on devising the product, pricing/incentive and go to market plans to achieving critical mass associated with the introduction of new products in a very competitive marketplace.

Margaret Weichert was a top executive at Bank of America and First Data Corporation and an acknowledged industry leader in payments industry innovation. Weichert began her career as a development economist, and is able to combine her economics background with extensive practical experience in retail banking and payments to assist clients with complex payment strategies. A holder of ten financial innovation patents, Ms. Weichert has a proven track record of commercializing new technologies in small startups, and large multi-national corporations. Ms. Weichert has worked closely with legal and compliance teams on dozens of new product launches, to ensure all relevant legal and IP issues are appropriately addressed. In addition, Ms. Weichert has run a number of corporate business development functions that required close cooperation with legal and finance teams on M&A and strategic investment activity. An entrepreneur who has started two of her own companies and sold one to First Data, she led all aspects of product innovation, including launch of mobile banking and eCommerce capabilities, commercial cash management solutions, Internet Check and Checks by Phone products, fraud and risk management solutions, new point of sale technologies and many other payments, risk management and financial services solutions.

"Invisible Engines describes the economics of operating systems, those fiendishly complex pieces of software that provide the nervous system for computers, cell phones, game consoles, and a host of other devices. It is a must-read for anyone who wants to understand the economic forces that drive high-tech industries."

~Hal Varian, Chief Economist, Google.

Invisible Engines took top honors in the Business, Management & Accounting category in the 2006 Professional/ Scholarly Publishing Annual Awards Competition presented by the Association of American Publishers, Inc.

Catalyst Code is "...an important book for anyone interested in understanding how breakthrough businesses can be built in today s economy."

~Bill Gates

"Paying with Plastic examines a quiet revolution in the U.S. economy, the steady transition from checks and cash to credit, debit, and charge cards.... This book has become an immensely valuable source on an important subject."

~Robert Pitofsky, former Chairman, Federal Trade Commission

MPD Wrote the Book

Members of the MPD team literally wrote the book on platform businesses. MPD's David S. Evans and Richard Schmalensee authored <u>Catalyst Code</u> (Harvard Business School Press, 2007), the seminal book on multisided strategies. They've applied their analysis to two major ecosystems in other writings including <u>Paying with Plastic: The Digital Revolution in Buying and Borrowing</u> and the prizewinning <u>Invisible Engines: How Software Platforms Drive Innovation and Transform Industries</u>.



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