

No. 13-317

IN THE
Supreme Court of the United States

HALLIBURTON CO. AND DAVID LESAR,
Petitioners,
v.

ERICA P. JOHN FUND, INC. F/K/A ARCHDIOCESE OF
MILWAUKEE SUPPORTING FUND, INC.,
Respondent.

ON WRIT OF CERTIORARI TO
THE UNITED STATES COURT OF APPEALS
FOR THE FIFTH CIRCUIT

**BRIEF OF FINANCIAL ECONOMISTS
AS *AMICI CURIAE*
IN SUPPORT OF RESPONDENTS**

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Dated: February 5, 2014

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**BRIEF OF FINANCIAL ECONOMISTS AS
AMICI CURIAE SUPPORTING RESPONDENT
INTEREST OF AMICI**

Amici include academic financial economists who teach and write about public securities markets.¹ We file this brief in order to clarify the areas of agreement and disagreement among economists regarding the “Efficient Capital Markets Hypothesis” (“ECMH”). *Amici* include:

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¹ This brief has been filed with the written consent of the parties, which filed blanket consents with the Clerk of Court. Pursuant to Rule 37.6, counsel for *amici* affirms that no counsel for a party authored this brief in whole or in part, nor did any person or entity, other than *amici* or their counsel, make a monetary contribution to the preparation or submission of this brief.

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SUMMARY OF ARGUMENT

There is widespread debate about market efficiency among economists, and the signatories of this brief include participants with varying positions on that debate. It is critical, however, to be clear about what issues are in dispute—and what issues are not. Economists disagree about whether markets *perfectly* process information and how quickly they do so; about whether prices reflect the fundamental value of the underlying stock; about the size and significance of “bubbles” and other pricing anomalies in the market and the extent to which non-informational factors affect prices; and about whether it is possible to “beat the market” by pursuing various investment strategies designed to exploit pricing anomalies. Such disagreements existed when *Basic* was decided in 1988, and they exist today.

But economists do *not* generally disagree about whether market prices respond to new material information. In particular, there is little doubt that the stock price will increase reasonably promptly after favorable news about a company is released and decline after unfavorable news.

Our conclusion that prices generally move reasonably promptly in the predicted direction in response to unexpected material public information (favorable or unfavorable) is perfectly consistent with the view that there are sometimes anomalies in the way markets process information and that bubbles can exist.

ARGUMENT

I. **The Relationship Between The ECMH And The Modest Proposition That Stock Prices Move In Response To Material Information.**

Because economists disagree about the extent to which securities markets are efficient, it is crucial to be clear about the precise economic propositions at issue. The ECMH entails a great deal more than the modest proposition that markets typically respond reasonably promptly to material information. That much is generally viewed as common ground among contemporary economists.

Eugene Fama's seminal work in this area distinguished among three different types of market efficiency:

“Weak-form” efficiency means that historical prices are not predictive of future prices. Excess profits cannot be earned using strategies based on historical prices.

“Semi-strong form” efficiency implies that all public information is reflected in a stock's current market price, and that security prices adjust to new publicly available information so that it is impossible to earn excess returns by trading on that information.

“Strong-form” efficiency implies that all information in the market, whether public or private, is accounted for in the market price. Investors cannot consistently earn excess profits over a

long period of time—even if they have inside information.²

Although all three models are sometimes described as variations of the ECMH, references to that hypothesis in the context of describing how financial markets actually operate typically refer to the “semi-strong” version (SSEMH).³ The SSEMH has been employed in a variety of different contexts for a variety of different purposes. Some claims are more controversial than others among economists.

The key point for present purposes is that while the proposition that market prices respond relatively promptly to material information about a stock is true if the SSEMH is true, it does not depend on the SSEMH being true. The SSEMH entails that the market price instantly (or at least very quickly) and fully incorporates all publicly available information about the stock. It does not tolerate even modest lags or other anomalies.

² Eugene Fama, *Efficient Capital Markets: A Review of Theory and Empirical Work*, 25 J. Fin. 383 (1970). See also *Schleicher v. Wendt*, 618 F.3d 679, 685 (7th Cir. 2010) (Easterbrook, J.) (explaining the difference between these three forms of market efficiency).

³ See Eugene Fama, *Efficient Capital Markets: II*, 46 J. Fin. 1575, 1575 (1991) (“I take the market efficiency hypothesis to be the simple statement that security prices fully reflect all available information A weaker and economically sensible version of the efficiency hypothesis says that prices reflect information to the point where the marginal benefits of acting on the information (the profits to be made) do not exceed the marginal cost.”). Standard finance textbooks provide similar definitions. See, e.g., Richard Brealey, Stewart Myers & Franklin Allen, *Principles of Corporate Finance* 317-18 (10th ed. 2011); Stephen A. Ross, Randolph W. Westerfield & Jeffrey Jaffe, *Corporate Finance* 430-31 (9th ed. 2010).

Professional economists have debated for decades the extent to which the securities markets actually conform to the SSEMH. Excellent work has been done on both sides of this debate. Indeed, the Nobel Committee awarded last year's prize in Economics to both Eugene Fama, the "father" of the efficient markets hypothesis, and Robert Shiller, one of that hypothesis's leading critics.

The SSEMH is based on two propositions: (1) that most investors rationally invest on the basis of available information; and (2) to the extent that some investors act irrationally, their investments do not affect prices because well-funded, highly sophisticated investors can drive the prices back to fundamentals in a process known as "arbitrage."

Authors writing in the field of behavioral economics disagree with both propositions. First, they argue that investor irrationality is pervasive rather than occasional or limited. Second, they argue that because of the costs and risks of arbitrage—the arbitrageur must typically borrow money in anticipation of the market correcting itself, which may not happen quickly enough—arbitrage does not always drive prices back to fundamentals.⁴ As one critic puts it, "real-world arbitrage is risky and therefore limited," and its effectiveness depends "on the availability of close substitutes for securities

⁴ See, e.g., Andrei Shleifer, *Inefficient Markets: An Introduction to Behavioral Finance* 10-12 (2000) (noting instances of investor irrationality); Daniel Kahneman & Mark Riepe, *Aspects of Investor Psychology*, 24 *J. Portfolio Mgt.* 52 (1998) (same); Fischer Black, *Noise*, 41 *J. Fin.* 529 (1986) (arguing that investors sometimes trade on "noise" rather than information).

whose price is potentially affected by noise trading.”⁵ SSEMH proponents disagree about the magnitude of the limits on arbitrage and argue that any anomalies are quickly eliminated in the market.⁶

The debate has played out through a series of empirical studies. In the 1980s, for example, Robert Shiller published stock market data that in his view showed that stock market prices were considerably more volatile than the SSEMH could account for.⁷ Other scholars found that stock prices tended to overreact to news—good news about a company might cause the price to increase in the short term and then fall in the long term as the market digested the information more carefully.⁸ Other findings include superior performance of small companies and predictability of returns according to market to book ratios.⁹ As Professor Shleifer points out, “this evidence points to excess returns based on stale information, in contrast to semi-strong form market efficiency.”¹⁰ Defenders of the SSEMH, however,

⁵ Shleifer, *Inefficient Markets*, at 13.

⁶ See, e.g., *id.* at 4 (summarizing arguments by Milton Friedman and Eugene Fama that “[t]he process of arbitrage brings security prices in line with their fundamental values even when some investors are not fully rational and their demands are correlated, as long as securities have close substitutes”).

⁷ See Robert J. Shiller, *Do Stock Prices Move Too Much to be Justified by Subsequent Changes in Dividends?* 71 *Am. Econ. Rev.* 421 (1981).

⁸ See Werner F. M. De Bondt & Richard Thaler, *Does the Stock Market Overreact?* 40 *J. Fin.* 793 (1985).

⁹ See Shleifer, *Inefficient Markets*, at 18-19 (collecting sources).

¹⁰ *Id.* at 18.

have argued that the data can be explained on the basis of hidden factors that are consistent with investor rationality.¹¹ Or they argue that the anomalies are trivial, and tend to disappear after they are identified as rational investors take advantage of them.¹²

We have outlined these debates in some detail because it is important to understand what is and is not in dispute. Economists disagree about the ability of arbitrage to compensate for investor irrationality; the possibility of “beating the market” through investment strategies based on either value investing or exploiting irrational tendencies of investors; the importance of non-information-based factors to stock prices; and the speed and completeness of the market’s ability to incorporate material information about a stock.

But economists generally do *not* disagree about whether markets respond to material

¹¹ See, e.g., Eugene F. Fama & Kenneth R. French, *Multifactor Explanations of Asset Pricing Anomalies*, 51 J. Fin. 55 (1996); Eugene F. Fama & Kenneth R. French, *Common Risk Factors in the Returns on Bonds and Stocks*, 33 J. Fin. Econ. 3 (1993); see generally Sanjai Bhagat & Roberta Romano, *Empirical Studies of Corporate Law*, in 2 *Handbook of Law and Economics* 948 n.1 (Polinsky & Shavell, eds. 2007) (collecting studies).

¹² See, e.g., Burton G. Malkiel, *A Random Walk Down Wall Street* 267-300 (10th ed. 2011); Ray Ball, *The Global Financial Crisis and the Efficient Market Hypothesis: What Have We Learned?* 21 J. Applied Corp. Fin. 8, 15 (2009) (noting that funds established to take advantage of behavioral economics strategies have failed to outperform the market); William Schwert, *Anomalies and Market Efficiency*, in *Handbook of Economics and Finance* 940 (2003) (finding that anomalies identified by critiques tend “to disappear, reverse, or attenuate”).

information. As Professor Shiller recently wrote in explaining the extent of his disagreement with Professor Fama, “Of course, prices reflect available information.”¹³

II. Current Disagreements Among Economists Over The Efficiency Of Securities Markets Do Not Undermine The Modest Assumption That Securities Prices Generally Respond To Information Reasonably Promptly, In A Predictable Direction.

Economists’ debates about the efficiency of securities markets are interesting and important, and they have significant implications for government regulatory policy as well as strategies that investors should pursue. But it is important to be clear that economists generally agree that stock prices respond to material information in a predictable direction.

A. Disagreement Among Economists Concerning The Extent To Which Stock Prices Reflect Underlying Values Is Not The Same As A Disagreement Over Whether Prices Respond To Information.

The SSEMH, as stated by Professor Fama and other proponents of efficient markets, does not simply say that stock prices move in response to information; rather, it holds that the market

¹³ Robert J. Shiller, *Sharing Nobel Honors, and Agreeing to Disagree*, N.Y. Times, Oct. 26, 2013, available at http://www.nytimes.com/2013/10/27/business/sharing-nobel-honors-and-agreeing-to-disagree.html?_r=0.

completely digests all public information about the stock, so that security prices fully reflect all available information (or at least that prices reflect information to the point where the marginal benefits of acting on information do not exceed the marginal costs of doing so) and that prices are a function *only* of that relevant information.

Critics of SSEM, on the other hand, insist that this dynamic is not the whole story. Sometimes markets incorporate information slowly or incompletely, and sometimes stock prices display volatility that *cannot* be explained by changes in the available information about stocks.¹⁴

The focus of these debates is on whether stock prices reflect fundamental value—that is, the actual value of the company—*not* on whether stock prices can be counted on to move up or down in response to information. That is why so much of the literature criticizing the SSEM refers to fundamental value and fundamental efficiency.¹⁵ That literature goes far beyond the question of whether markets respond in a predictable direction and reasonably promptly to material information.

¹⁴ See, e.g., Robert J. Shiller, *From Efficient Markets Theory to Behavioral Finance*, 17 J. Econ. Perspectives 83, 84 (2003).

¹⁵ See, e.g., Baruch Lev & Meiring de Villiers, *Stock Price Crashes and 10b-5 Damages: A Legal, Economic and Policy Analysis*, 47 Stan. L. Rev. 7, 20 (1994) (cited *Petrs. Br.* 16 for the proposition that “capital markets are not fundamentally efficient”); William O. Fisher, *Does the Efficient Market Theory Help Us Do Justice in a Time of Madness?* 54 Emory L. J. 843, 898 (2005) (cited *Petrs. Br.* 18 for the proposition that, during the 1998-2001 technology bubble, “stock prices [were] far away from fundamental values”).

Economists have tested the SSEMH empirically primarily by testing whether it is, in fact, possible to earn excess returns through particular trading strategy. The results are disputed; Andrei Schleifer and Lawrence Summers, for example, have argued that it *is* possible to make excess returns—that is, to “beat the market”—under certain circumstances.¹⁶

The critical point, however, is that this debate about excess returns has little to do with the modest assumption that prices move reasonably promptly in a predictable direction in response to favorable or unfavorable public information. The excess returns debate goes to whether stock prices are fundamentally *accurate*, not whether they move in response to information. Moreover, behavioral economists do not dispute that market prices generally remain the best available indicia of share value, and their advice to investors generally dovetails with that offered by proponents of the SSEMH. Professor Shiller, for example, has acknowledged that it is “unlikely that the average amateur investor can get rich quickly by trading in the markets based on publicly available information I personally believe this, and in my own investing I have avoided trading too much, and have a high level of skepticism about investing tips.”¹⁷

The supporters and critics of the SSEMH also debate the extent of any need for regulation of the market. But there is a general consensus that fraudulent misrepresentations harm market

¹⁶ See, e.g., Andrei Shleifer & Lawrence H. Summers, *The Noise Trader Approach to Finance*, J. Fin. Econ. Persp. 19 (Spring 1990).

¹⁷ Shiller, *Sharing Nobel Honors*.

participants and should not be condoned; the SSEMH, after all, depends on the availability of public and *truthful* information to drive prices. Nor do skeptics of market efficiency dispute that information *affects* prices—they simply assert that other things affect prices, too. Because the market responds to public statements, there is a substantial public interest in ensuring that those statements are truthful.

The economic proposition that prices move reasonably promptly in a predictable direction in response to favorable or unfavorable public information does not require that markets be anywhere near perfectly efficient. Nor does it require that one take any position on whether particular trading strategies might “beat the market” or whether government regulation is appropriate.

B. Economists Broadly Agree That Stock Prices In Developed Markets Generally Do Respond To Information.

The recognition of a relationship between information and stock prices is considerably older than the ECMH and related ideas developed by Professor Fama and others in the 1960s.¹⁸ William O. Douglas, who was intimately involved in drafting

¹⁸ Courts and commentators have recognized that stock markets respond to and reflect material information—including false information—for at least two centuries. *See, e.g., Rex v. De Berenger*, 3 M.& S. 67, 105 Eng. Rep. 536 (K.B. 1814); *see also* Barbara Black, *Fraud on the Market: A Criticism of Dispensing with Reliance Requirements in Certain Open Market Transactions*, 62 N.C. L. Rev. 435, 456 (1984).

the Securities Act, articulated this understanding in 1934:

[E]ven though an investor has neither the time, money, nor intelligence to assimilate the mass of information in the registration statement, there will be those who can and who will do so, whenever there is a broad market. The judgment of those experts will be reflected in the market price.¹⁹

Douglas's formulation did *not* assert that the price perfectly reflected all available information or the stock's fundamental value, and he did not deny that other factors, including various forms of irrationality, might also affect prices. His point was simply that stock prices respond to material public information. Both proponents and critics of the SSEMH can agree that Douglas was correct on this point.

It is not accurate to say there is a "consensus" among economists rejecting the SSEMH. It is accurate to say that the SSEMH is controversial, but that controversy simply does not extend to rejecting the relationship between information and price movement. As one journalist who has written an intellectual history of the economic debate concluded, "[behavioral economists] still believe that markets work pretty well and that trying to outguess the collective wisdom of millions of investors is usually futile."²⁰ Most important, economists

¹⁹ William O. Douglas, *Protecting the Investor*, 23 Yale L.J. 522, 524 (1934).

²⁰ Justin Fox, *Is The Market Rational? No, say the experts. But neither are you – so don't go thinking you can outsmart it*, *Fortune* (Dec. 9, 2002), available at

generally agree that material information—whether truthful or fraudulent—will generally affect the price of a stock and that the effect will be in a predictable direction.

CONCLUSION

The judgment below should be affirmed.

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February 5, 2014

http://money.cnn.com/magazines/fortune/fortune_archive/2002/12/09/333473/index.htm?; see also Justin Fox, *The Myth of the Rational Market: A History of Risk, Reward, and Delusion on Wall Street* (2009).