

Where Have Thirty Years Gone?

A trap for logicians?

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All well-behaved papers in finance begin with the statement of a hypothesis or an assertion about theory. Most articles then go on to present some historical background on the subject matter and, at greater length, empirical data to substantiate the author's arguments. On this occasion of the thirtieth anniversary of *The Journal of Portfolio Management*, I take the liberty of reversing the standard sequence.

EMPIRICS

Arithmetic was my first thought when I sat down to draft this essay. Four issues a year averaging eleven articles per issue over thirty years works out to 1,320 articles. The articles on average use about six pieces of paper, each nine inches long. Stretched end-to-end, the nearly 8,000 pages printed over thirty years of *The Journal of Portfolio Management* would reach 5,940 feet, all the way from 42nd street to 64th Street in New York.

A staggering number of people made this record possible. Through Spring of 2004, we have carried contributions by 1,858 different authors; many of them had coauthors, but 411 of them appeared more than once. Martin Leibowitz wins the prize for the most contributions; nineteen entries stretching from Spring 1975 through Spring 2004. Mark Kritzman and Meir Statman are tied for second place behind Marty at fifteen articles each.

To give you a sense of where professional fixed-income investors stood in Spring 1975, here is what Marty's article then was about: "The three sources of bond returns are coupon income, interest-on-interest, and capital gains. Here is a systematic framework for explicitly cranking each into the bond swap decision, with particular attention to their impact on volatility of returns." And then, in what would turn out to be typically wide-ranging Leibowitzian thinking, he adds, "and some intriguing implications for growth stock investing."

Thirty-five contributions came from eight different winners of the Nobel Prize in Finance—Daniel Kahneman (one article), Harry Markowitz (six articles), Merton Miller (two arti-

cles), Franco Modigliani (one article), Paul Samuelson (six articles), William Sharpe (eight articles), James Tobin (one article), if we include the ten marvelous articles contributed by Fischer Black, in the high confidence that he would have become a laureate if his life had not been cut short before option pricing theory won the award. Black and Samuelson both appeared in our maiden issue in the fall of 1974.

What has all that massive accumulated effort by authors, editors, referees, copy editors, printers, proofreaders, and the staff at *Institutional Investor* added to the stock of human knowledge? We have every reason to believe the Journal has added a great deal, judging by the frequency of citations in other publications and by the continuing high quality of both authors and their contributions.

That is a necessary condition of success, but it may not be sufficient. What kind of story does the Journal have to tell? And what does that story tell us about the shape of future contributions? I attempt to answer these questions first by drawing on our experience in the past, and then venturing a forecast based on what that experience reveals.

HISTORY

Thirty years ago, the only serious publication designed specifically for professionals in investment was the *Financial Analysts Journal*. For many years up to that time, the *FAJ* was dry stuff and often irrelevant for practitioners hoping to accomplish more for their clients than just picking stocks or bonds. An index of articles in the *FAJ* for 1945–1966 gives precisely one entry for "portfolio management," and even that is qualified by: "See Investing, Investment Management, and Various Institutions." Markowitz's seminal paper, "Portfolio Selection," which had appeared in the *Journal of Finance* in 1952, had provoked fewer than twelve articles in the *FAJ* by 1966, compared to four pages of listings for "security analysis," forty-one articles on growth stocks, and twenty-four articles on gold.*

By the early 1970s, and with the rapidly changing investment landscape, Jack Treynor had become editor of the *Financial Analysts Journal*, and it was beginning to address some of

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the material from modern portfolio theory. I read the *EJ* carefully then, even though wide swaths of it were beyond my understanding. I was convinced there would be an important market for comprehensible articles on these subjects. If the authors could write in a style that people would enjoy (or if the editor could manage to do a good job of translation), practitioners might actually *read* the articles.

I approached Gilbert Kaplan, founder of *Institutional Investor*, with whom I had worked closely when he launched his sparkling publication. I told him he was ignoring important work on investing, material his readers should be learning, but he laughed me off, claiming that theories of portfolio management and market behavior had no place in *Institutional Investor*.

By early 1974, as inflation and the go-go years were colliding in what would be a tremendous smash in both bond and stock markets, Gil changed his tune. This time it was he who came to me, proposing a new publication to deal with the subject matter I had been pressing him about. He selected the title of *The Journal of Portfolio Management*, and told me I had complete freedom over the content and the selection of authors, without any interference from any other part of his company.

I had to scurry around to have everything set for an October publication date, including a panic of proof-reading galleys while on an August vacation at Montauk, Long Island. I had invited all the contributors to that issue, and some of the names resonate today, such as Keith Ambachtsheer, Fischer Black, Dean LeBaron, Stephen Rogers, Paul Samuelson, James Vertin, Wayne Wagner, and Arthur Zeikel.

Much of the 1974 issue would have relevance to the investment world of 2004. Vertin bemoaned the recent disasters in portfolio management that led “customers [to be] increasingly suspicious, hesitant, and downright skeptical that professional investment management can consistently provide benefits that justify the cost.” Samuelson and Black came on strong in support of portfolio theory, market efficiency, the random walk, the difficulty of identifying superior managers, and the deadweight costs of trading. Peter Williamson of the Tuck School explained the concept of total return for endowment fund managers, with some models for the critical decision of whether, when, and by how much to spend in excess of income. Wagner’s ten myths about beta represented the first of a long series of basic articles to explain in relatively simple terms what modern portfolio theory was all about and how to put it into practice; beta is still being refined and refurbished.

Evidence of the stimulus we had provided was soon in coming. All but three articles in Volume II, Number 1, came in over the transom. One big name I solicited back then was James Lorie at the University of Chicago, famous for the Lorie-Fisher study of market returns. Lorie took a dim view of the Journal’s future, predicting we would be able to recruit marquee names no more than once at best. Like many forecasts in this area, Lorie’s was wrong, as my earlier analysis demonstrates.

In many ways, the more interesting development for me was the arrival of papers from unknown young people like Rob Arnott and Mark Kritzman, of whom nobody had ever heard when we published them but who had important contributions to bring our way. One young man who especially impressed me was named Frank Fabozzi; his first contribution appeared in Fall 1978.

In those days, I was editor, copy editor, and referee as well. Except for a few times I turned to a more knowledgeable friend for advice, I selected all the articles on my own—although I was still on the learning curve even though increasingly educated by the first-class contributions that came along. But I saw the Journal’s mission as more than creating an arena where practitioners and academicians could meet and begin to understand each other. I was determined to create a publication people would read.

Most contributors had no idea how to write with clarity and grace, forcing me to spend many hours rewriting articles. I also produced all the abstracts in the table of contents, and provided snappy subtitles for each article.

In time, I grudgingly gave up most of the copy-editing and persuaded Kaplan to let me hire a professional in the field. Thanks to our long-time copy editor Patricia Peat and her excellent predecessors, I think we have been able to preserve the literary quality and the intelligibility I sought at the outset.

That was the easy part. The content finally got ahead of me in novelty and complexity. In 1984, I invited Frank Fabozzi to join me as managing editor. Frank had contributed three articles by that time, and I was well aware of his intellectual talents. But I also believed he would be committed and cooperative, and I put high value on his broad contacts throughout the field, in both academe and the Wall Street community. Frank exceeded my highest expectations. In 1989, we switched roles, as he became editor and I took on less responsibility as consulting editor.

CONTENT

Modern portfolio theory is an extraordinary body of thought. Although some of its creators drew on earlier work, such as Louis Bachelier or Alfred Cowles, the core of what we all consider to be modern portfolio theory today took shape in the brief period of two decades, from Harry Markowitz's "Portfolio Selection" in 1952 to Fischer Black and Myron Scholes's "The Pricing of Options and Corporate Liabilities" in 1973. Those dates embrace Paul Samuelson and Eugene Fama's random walk and efficient market theories, Tobin's separation theorem to distinguish between the Markowitz process of selecting risky securities and the asset allocation choices between risky and riskless securities, Franco Modigliani and Merton Miller's theories of corporate finance and the power of arbitrage, and the Sharpe-Treynor-Lintner-Mossin capital asset pricing model.

The most fascinating feature of portfolio theory since the publication of Black-Scholes thirty years ago is the absence of any theoretical advance that can match the overarching importance of the group listed here. The only possible exceptions are isolated propositions like Richard Roll and Stephen Ross's arbitrage pricing theory, which is no longer a controlling model like the others, and John Burr Williams's much earlier articulation of the dividend discount model.

Variations on the themes of the creators of MPT are endless, and advances in computerization, statistics theory, and risk management applications have vastly improved the functions of portfolio management and security selection. Yet all the advances since 1973 derive from the work of no more than a dozen writers over a period of twenty years.

Their influence has reached deeply into the world of fixed-income investing as well as in the area of equities. The risk-reward trade-off remains paramount and infuses investment decision-making. Markowitzian diversification in many formats is a central control in institutional portfolio management. Markowitz's identification of risk as volatility provides the foundation for contemporary forms of risk management and the valuation of risky assets. The efficient markets hypothesis drives index funds and exchange-traded funds for both bonds and stocks. M&M's use of arbitrage and strategies based on derivatives permeate portfolio management, from hedge funds to hedging all kinds of unwanted risk exposures. The capital asset pricing model and Tobin's concepts rule portfolio performance measurement and prompted Sharpe's introduction of style boxes. Combined with Black-Scholes-Merton, CAPM and Tobin led to many asset allocation decisions as well. Barr Rosenberg introduced

the notion of risk factors in place of the monolithic market risk represented by CAPM's beta.

That is not all. These theories have also spawned brilliant new practical innovations like portable alpha, risk budgeting, and the hedge fund phenomenon itself.

AN EXCEPTION TO ODDLY PROVE THE RULE

You may be impatient by now because I have provided no credit to behavioral finance for its widespread influence on theoretical exploration and the practical aspects of portfolio management and security selection. No one could deny the enormous impact of the pioneering work of Amos Tversky and Daniel Kahneman and their followers in illuminating how often, and in how many different situations, investors defy the teachings of modern portfolio theory. Instead, investors go their own way and follow a more instinctive but also more comforting approach to choices and decision-making. As decisions within the framework of MPT require large amounts of complex and completely accurate information, the use of the heuristics described by behavioral finance may be more rational in some circumstances than a religious adherence to investment theories.

Is behavioral finance a new theory? Or is it a variation on the old? These questions are not easy to answer. My own position is that behavioral finance is neither new theory nor a variation of MPT. To use today's cliché, behavioral finance is a spin-off. Behavioral finance begins with MPT, because it has to set up a model against which to measure its own propositions. Without a body of thought rooted in rational and normative behavior, defining forms of positive behavior as irrational would be difficult, if not impossible. I take nothing away from the validity and usefulness of behavioral finance if I argue that it derives meaning only because it has MPT as the foil.

I could put this more strongly. Could there be such a thing as Keynesian economic theory without what we call classical economic theory—the collection of works spanning the years from Adam Smith, David Ricardo, and John Stuart Mill, to Karl Marx and Alfred Marshall? What would Einstein have accomplished without Euclid and Copernicus? Or Picasso without Leonardo? In the same way, could there be such a thing as behavioral finance without what we call modern portfolio theory? It is significant that there was no theory of behavioral finance before there was MPT. Indeed, before 1952 there was barely any kind of organized thinking about investment that we could classify as theory—which is, perhaps, MPT's most impressive attribute.

As interest in behavioral finance has grown, the urgent

search for anomalies in MPT has led a large number of portfolio managers and theorists to believe they have finally found the holy grail and how to beat the market. Consultants have joined in the chase, because they would have no role to play if markets were truly efficient. Even staunch believers in the efficient markets hypothesis, including Eugene Fama and Kenneth French, have contributed to the hunt for anomalies. Like behavioral finance, these investment opportunities were discovered only because MPT was there first, to provide a model against which anomalies could be illuminated and a structure for analyzing the nature of the investment problem. And as MPT predicts, most anomalies vanish rapidly after their discovery or provide average excess returns smaller than the transaction costs of executing them.

THE LOOK OF THE FUTURE

Like any decision-making activity based on unknown future outcomes, investing is maddening, exhausting, frightening, and frustrating. It is also endlessly fascinating, challenging, and irresistible. Few who touch it ever leave. It even lures many people from other disciplines to take up new residence in the investment world. This attribute explains why some of the names appearing in this issue are unfamiliar to investment academicians and practitioners. They are scientists, mathematicians, and engineers who could not resist the temptation to try their skills in our discipline.

Their views of the future of investing, like the views of the investment authorities who have also contributed to this issue, continue to tie to the basic teachings of MPT. It is my prediction that the theoretical foundations and benchmarks of the works I have mentioned above are so integral to the whole process that they will continue to shape investment thinking into the indefinite future.

All of us are caught up by G. K. Chesterton's wonderful observation about life and logicity, which Frederick R. Macaulay uses as a frontispiece for his massive 1938 work on bonds:

The real trouble with this world of ours is not that it is an unreasonable world, nor even that it is a reasonable one. The commonest kind of trouble is that it is nearly reasonable, but not quite. Life is not an illogicality; yet it is a trap for logicians. It looks just a little more mathematical and regular than it is; its exactitude is obvious, but its inexactitude is hidden; its wildness lies in wait.

As "the real trouble with this world of ours" is not likely to disappear, I am confident that future issues of this publication will be just as lively, just as challenging, and just as enlightening as anything we have published in the past thirty years.

ENDNOTE

**Financial Analysts Journal*, 1967. *Index, 1945 through 1966*, cited in Bernstein [1992, p. 33-34].

REFERENCES

- Bernstein, Peter L. *Capital Ideas*. New York: The Free Press, 1992.
- Black, Fischer, and Myron S. Scholes. "The Pricing of Options and Corporate Liabilities." *Journal of Political Economy*, Vol. 81 (May-June 1973), pp. 637-654.
- Fama, Eugene F. "The Behavior of Stock Prices." *Journal of Business*, Vol. 37, No. 1 (January 1965), pp. 34-105.
- Lintner, John. "The Valuation of Risk Assets and the Selection of Risky Investments in Stock Portfolios and Capital Budgets." *Review of Economic Statistics*, February 1965, pp. 13-37.
- Markowitz, Harry. "Portfolio Selection." *Journal of Finance*, Vol. VII, No. 1 (March 1952), pp. 77-91.
- Modigliani, Franco, and Merton H. Miller. "The Cost of Capital, Corporation Finance, and the Theory of Investment." *American Economic Review*, Vol. 48, No. 3 (June 1958), pp. 655-669.
- Mossin, Jan. "Equilibrium in a Capital Asset Market." *Econometrica*, Vol. 34 (October 1966), pp. 768-783.
- Samuelson, Paul A. "Proof That Properly Anticipated Stock Prices Fluctuate Randomly." *Industrial Management Review*, Spring 1965, pp. 41-50.
- Sharpe, William F. "Capital Asset Prices: A Theory of Market Equilibrium under Conditions of Risk." *Journal of Finance*, Vol. XIX, No. 3 (September 1964), pp. 425-442.
- Tobin, James. "Liquidity Preference as Behavior Toward Risk." *Review of Economic Studies*, Vol. 67 (February 1958), pp. 65-86.
- Treynor, Jack L. "Toward a Theory of Market Value of Risky Assets." Unpublished manuscript.