

Disruptive Forces in Asset Management: Towards Better Solutions

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Why This Matters?

This paper argues that the combination of market bifurcation and new technology are disrupting the asset management business. We argue that these forces will induce end-investors to focus more on developing long-term investment solutions. And, we argue that the combination of new technology and new research will lead to faster, cheaper and better solutions.

Who Should Read This?

The themes in this paper should be of interest to multi-asset class managers, asset allocators and CIOs.

01. Introduction

A driving feature of capitalism is the demand for faster, cheaper and better products. And, this feature is making its presence felt in investment management. Our belief is that the combination of scientific approaches to investing and modern technology will produce cheaper and better long-run investment solutions.

“Robots Will Strike Asset Management First”

Bloomberg News, May 3, 2016

“NYCERS Pulls the Plug on Hedge Funds”

PIOnline, April 18, 2016

Four forces are driving change in asset management. These are: the bifurcation of investors into a small number of large institutions and a large number of small investors; skepticism about the role of high-fee alpha product; a demand for cost-effective and risk managed solutions to long-term investment problems, and the use technology to automate the investment process.

The next generation of asset management will focus on producing solutions to long-term investment problems. Investment advice and portfolio construction will be automated through the use of modern technology.¹ Investment advice will rely on

modern research that differentiates across investor classes and integrates risk management. Finally, pricing of investment management services will better align interests between investors and their agents. A long-term solutions orientation will benefit alpha production as well, by focusing on the use of new data sources, and the applications of better theories.

¹ New technologies (e.g. block chain technology) are likely to facilitate improved price discovery.

02. Asset Holdings Are Bifurcating

Investment solutions must match the demands of specific investor segments. The demise of moderately-sized US corporate defined benefit² plans is consistent with the bifurcation of the investor base into two segments- a small number of large institutions and a large number of individuals.

The first group includes US Public Defined Benefit plans, large Defined Benefit plans in other countries (e.g. Canada or the Netherlands), Sovereign Wealth funds and Ultra High Net Worth individuals, while the second group includes individuals (DC investments and IRAs). Exhibit 1 shows total pension assets broken down as total DB assets, assets in the top 300 pension funds and DC/IRA assets. The exhibit also shows total sovereign wealth fund assets, and assets with the top 14 funds. The figures in the exhibit make clear the bifurcation between a small number of large funds and a large number of small investors.

Clearly there are investment challenges that are unique to each group, and differences across investors

within each group. Nevertheless, there are elements that are common to structuring investment solutions.

Each group must:

- Incorporate the role of investment horizon into a long-run solution.
- Consider the impact of non-traded assets (e.g. natural resources or sources of labor income) in the development of an investment strategy.
- Manage risk and control cost.
- Consider the role and structure of alpha-production in their solution.

² According to the Investment Company Institute, US corporate pension assets increased from 2.0 trillion USD to 2.8 trillion USD over the period 2000-2016. Over the same period, US state pension assets increased from 3.0 trillion USD to 5.1 trillion USD, while DC assets increased from 3.0 trillion USD to 6.8 trillion USD. Source: ICI.org, Research and Statistics.

Exhibit 1 - Pension and SWF Assets ³

FUND TYPE	AUM (BILLION OF USD)	SOURCE
Total Pension Assets	35,316	Willis Towers Watson
Top 300 Pension Funds	15,221	Willis Towers Watson
DC/IRA Assets	15,638	Willis Towers Watson
Total SWF Assets	7,257	SWF Institute
Top 14 Funds	5,997	SWF Institute
Total Assets	42,573	-

³ Sources: Willis Towers Watson Global Pension Survey, 2016.
<https://www.willistowerswatson.com/en/insights/2016/02/global-pensions-asset-study-2016>



03. Role of Alpha is Challenged

Alpha is generally accepted to be the return provided to investors relative to some benchmark. This return represents what is achievable from an investment manager's unique investment process. So-called "pure" alpha has the benefit of being uncorrelated with benchmark returns. Because alpha can be positive or negative, it represents a risk to the investor. If expected alpha is positive, then allocations to active strategies can have the advantages of increasing total portfolio expected return and (possibly) decreasing total portfolio risk.⁴ Given that the benefits seem so clear, why is the role of alpha being challenged?

There are two reasons to question the role of alpha in a portfolio. First, in the aggregate, expected alpha is

zero- the sum of the returns to all market participants has to give back the return on the market portfolio (less fees). Second, whether a manager has skill or not is only revealed over long horizons. Thus, the expected long-term benefits to alpha must be weighed against the certainty of management fees.

The impact on total portfolio risk of exposure to active strategies can be quite small. Exhibit 2 illustrates this point. The exhibit shows the risk

⁴ If alpha can be separated from the market exposure, and leverage is allowed, then as long as expected alpha is positive, adding alpha exposure can reduce total portfolio risk.

Exhibit 2 - Portfolio Risk and Risk Contributions, In Percent

	PASSIVE	ACTIVE RISK: 150 BP	ACTIVE RISK: 250 BP
Equity	97.2	95.3	92.1
Bonds	2.8	2.7	2.6
Active Risk	0.0	2.0	5.3
Total Portfolio Risk	10.5	10.7	10.8

characteristics (total portfolio risk and contribution to risk in percentage) of three portfolios, each with 65% allocated to equities and 35% allocated to bonds.⁵ The first portfolio is passively managed, while the second and third have total active risk levels of 150 and 250 basis points respectively. As the exhibit makes clear, active risk at these levels contributes little to total portfolio risk.

The risk decompositions in the exhibit provide a backdrop for assessing allocations to alpha. At these levels of active risk, the implied alphas are quite low.⁶ However, even these low levels of “target alphas” may be affected by the bifurcation in asset holdings.

Alpha production is predicated on manager-specific skill. To preserve the ability to generate alpha, each manager has an incentive to constrain capacity. From the perspective of a large institution, the implication is that for them to achieve the target active risk levels, they will need to increase the number of managers. But, as the number of managers in the alpha portfolio increases, the odds of achieving alpha targets goes down. And, this tension is exacerbated as the number of large institutions decreases while the AUM per institution increases.

For individual investors, the trade-off between alpha production and cost management is starker. First, individual investors typically pay higher fees for investment products than do institutions. Second, individual investors have fewer opportunities to build diversified portfolios of active managers. Finally, individual managers may also pay fees for financial advisors.

What should investors focus on, if not the selection of alpha-producing managers? Our belief is that investor focus should shift towards designing portfolios to achieve their long-run objectives; managing risk relative to those long-run objectives, and controlling the cost of producing investment returns.

⁵ For illustration, the calculations assume equity volatility of 16%, bond volatility of 5%, and that bonds, equities and active risk are uncorrelated. Changes in the correlation assumptions will change the total portfolio risk and the risk decompositions.

⁶ Implied alphas can be found by simply “reverse optimizing” the portfolio (finding the returns that make the portfolio weights optimal), conditioned on an equity return assumption.



04. Demand for Long-Term Solutions Is Increasing...

Central to a long-term investment solution is the definition of a long-term objective. As investor classes vary by investment horizon and sources of income, objectives are likely to vary by investor class as well. Developing a long-term solution, then, relies on portfolio construction, risk management and efficient implementation, skills that can be evaluated over multiple horizons. Thus, a long-term solutions orientation carries with it a shift towards measurable skills.

Evidence of an increase in demand for long-term solutions can be seen most directly where assets under management are increasing, i.e. the types of strategies that investors actually follow. As an example, consider assets invested in Target Date

Funds. As of March, 2016, over \$790 billion in assets have been invested in Target Date Funds.⁷ This figure represents an increase of 64% since 2012.⁸

The foundation of a long-term solutions orientation is research and technology. Research provides the basis for developing risk-managed investment policy. Technology provides the basis for automation and cost reduction.

⁷ Target date funds are designed to automatically decrease the equity allocation as the investor approaches their retirement date. The rules for decreasing the equity allocation are found through the application of asset allocation models.

⁸ Investment Company Institute, www.ici.org, quarterly retirement market data.

05. ...Aided By New Technologies and Research

Better solutions to long-term investment problems should be based on quantitative financial economics. Recent research suggests that the principal long-term risk investors face is exposure to negative shocks to trend economic growth- that is, investors should incorporate the potential for prolonged periods of below trend economic growth in their investment decisions. Doing so helps account for observed levels of the equity premium, generates time-varying expected risk and return, and provides a foundation for better long-term investment solutions.⁹

Long-term investment solutions should respect differences across investor classes. Investor classes can differ from one another in terms of investment horizon and underlying economic risk (e.g. source of labor income). Consequently, a well-designed investment solution is a portfolio that

- explicitly incorporates underlying sources of economic risk;
- dynamically rebalances between risky and risk-free assets, and
- considers factor exposures relative to the investor's long-term objective.

Delivery of investment solutions is enabled by the use of modern technology. With modern technology, it is feasible to move seamlessly from bursts of new information to proposed changes in portfolio weights. New information (say new macroeconomic data) can be efficiently incorporated into expected risk and return calculations. From there, updated factor exposures can be determined, and then used to identify changes in portfolio weights. Automating the investment process in this way has the benefit of reducing the cost of investment management.

Automating the investment process also has implications for the nature of investment advice. More efficient investment processes means that advisors can focus on quantifiable investment themes that add value. These include the identification of new data sets; the application of new theories, and the development of priors about long-term growth rates.

⁹ The transmission mechanism from shocks to growth to portfolio weights is via expected returns. Long term expected returns depend on long-term economic growth. Thus, a persistent negative shock to economic growth translates into lower expected returns and a change in portfolio weights.

06. Conclusions

The competitive pressure in every industry is to build better, faster and cheaper solutions. That pressure is now evident in the investment management industry, brought about in part by the bifurcation of the investor pool, and aided by the development of better research techniques and better technology.

In particular, it is likely that the investment management industry will focus on the development

and management of better solutions to long-term investment problems. Those solutions will respect differences across investor classes, and will lead to a greater emphasis on risk-management as part of a dynamic investment process. Technology will enable cost reduction, in part through its ability to facilitate automated investment processes.

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