

The purpose of asset management.



Contents.

 What is the purpose of asset management?
2. Today's asset management industry
2.1. Modern portfolio theory
2.2. How the asset management industry is structured
2.2.1. The structure of the investment management industry
2.2.2. Costs
2.2.3. Product proliferation
2.2.4. Trading
2.3. The portfolio theory paradox
3. A new paradigm for fund management
4. A better way forward
4.1. The nutrition label
4.2. Rethinking portfolio theory
4.3. The fiduciary role
4.4. Incentives
4.5. Stewardship
5. Conclusion





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About Pension Insurance Corporation

The purpose of Pension Insurance Corporation is to pay the pensions of its policyholders. At half year 2017, PIC had insured 145,400 pension fund members and had £24.2 billion in financial investments, accumulated through the provision of tailored pension insurance buyouts and buy-ins to the trustees and sponsors of UK defined benefit pension schemes. Clients include FTSE 100 companies, multinationals and the public sector. PIC is authorised by the Prudential Regulation Authority and regulated by the Financial Conduct Authority and Prudential Regulation Authority (FRN 454345).

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About Jon Lukomnik

Forbes calls Jon Lukomnik "one of the pioneers of modern corporate governance."

He is one of the only people in the world to have run a top ten pension fund (New York City), been a managing director of a top ten hedge fund (CDC), and to have served on the creditor's committee rehabilitating one of the largest frauds and bankruptcies in the world (Worldcom).

The Executive Director of the IRRC Institute and Managing Partner of Sinclair Capital, Mr. Lukomnik is a trustee of the Van Eck mutual funds and UCITs, a member of the Deloitte Audit Quality Advisory Committee, and serves on the Standing Advisory Group to the Public Company Accounting Oversight Board. He has advised leading asset managers on product development and risk management issues, served as investment adviser or trustee for more than \$100 billion in institutional assets and is part of the Funston Advisory team which has reviewed the fiduciary practices of institutional asset owners with aggregate assets exceeding half a trillion dollars.

A co-founder of the International Corporate Governance Network, he is co-author of "What They Do With Your Money: How the Financial System Fails Us and How to Fix it" and "The New Capitalists" (a pick of the year by the Financial Times). He has written more than 200 articles for academic and practitioner journals.

Introduction.

We are delighted to publish this working document, "The Purpose of Asset Management", the second publication in the "Purpose of Finance" series.

PIC has launched this project because more than 10 years on from Northern Rock and the financial crisis, the finance industry, which employs or supports more than two million people in the UK, still needs to rebuild trust with society. Perhaps, by focussing on its core functions and better customer outcomes, the finance industry can provide many more beneficial outcomes, for all stakeholders, than it currently does. Yet few are thinking about the core functions the industry should provide and how its performance might best be judged. Indeed, for many, the finance industry is a black box, understood only by experts.

So we are working with partners in industry, academia and Parliament on the Purpose of Finance project to facilitate a debate, starting with the simple question: "What is the Purpose of Finance"?

This iteration of "The Purpose of Asset Management" is a working document because it is designed to stimulate debate. It is our intention that the asset management industry, and others, engage with the ideas elegantly expressed by the authors, Jon Lukomnik and Jim Hawley. We hope that when we publish the final version of this document in Q1 2018, it will have a final section incorporating comments from the industry and giving room for points of view which agree, disagree or consider other aspects of the asset management industry not considered by this paper.

Your views are very welcome.

They Burner

Tracy Blackwell CEO, PIC

David Nott W_

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Executive summary.

Asset management – the investment industry – is huge. It will invest more than \$111 trillion worldwide by 2020. It already controls £5.7 trillion in the UK today.

How that money is invested matters. Britons rely on the asset management industry for retirement security, for vacation savings, for buying a home, or just to save generally. British industry and commerce rely on it to finance the real economy and to create jobs.

But how well does today's asset management industry work? Are its interests aligned with savers and the real economy? Might it do better?

In this paper, Jim Hawley and Jon Lukomnik examine those issues. They suggest that the combination of how the industry is structured, combined with the dominant investment theory of today, results in a decidedly mixed picture. On the one hand, there is tremendous expertise available to ordinary savers, access to diversified investments either through active managers, tracker funds or, increasingly, what has come to be called factor investing in which certain characteristics of a pool of investments are sought or avoided. On the other hand, there are misalignments between the incentives of the industry and those of the individual (and institutional) investors who are its ultimate clients and should be its ultimate beneficiaries; complexity, a multiplicity of fees (many of which are opaque), and short-termism. Perhaps more importantly, they demonstrate how the limitations of today's investing paradigm ignore systems-level risks to investing, from overarching ones like climate change, to internal financial ones like market distortions caused by popular investment products.

Hawley and Lukomnik suggest a number of incremental fixes, such as a simple fee statement equivalent to the nutrition statements which appear on prepared foods, and a "do-no-harm" Hippocratic Oath for the industry. The key recommendation, however, goes to the heart of how we invest. They suggest that taking systems issues into account would improve the returns for all participants: individual investors, institutional investors, and even the industry itself. Pension Insurance Corporation Group Limited | The purpose of asset management

What is the purpose of asset management?

In the first paper in this series, David Pitt-Watson and Hari Mann pose a fundamental question: What is the purpose of the finance industry? Their answer is that the finance industry is not there to serve itself, but to contribute to the 'real economy'.¹

We focus on an important sub-set of the purpose-of-finance question: What is the purpose of asset management, a core element of today's financial sector. We define asset management as the deployment, oversight and disposition of cash, securities and other financial assets by a third party on behalf of a client. The market is huge and growing. In the UK, the asset management industry controls £5.7 trillion.² Across Europe, that number is EUR 22.8 trillion³ PWC predicts that, worldwide, the asset management industry will comprise some \$111.2 trillion in 2020, just two years from today.⁴

Consistent with Pitt-Watson and Mann's correct identification of finance as a service function to society, asset managers owe a duty to the person or organisation who provided the funds. Specifically, the asset management industry provides risk mitigation/return generation for investors, and provides capital where it is needed by the real economy, which are two of the four societal benefits Pitt-Watson and Mann identify. This immediately negates the common refrain of profit as purpose: "Making money" is not a purpose for the asset management industry, but a necessary condition, much like breathing is required for living, but is not the purpose of life. We do not underestimate the importance of profit. Profit rewards the asset management industry and allows its perpetuation. Absent profit, the industry would cease to exist and the risk mitigation and intermediation, which do serve society, would stop. But we should not confuse an essential input into self-perpetuation for the industry with the industry's societal purpose, which is to serve the provider of the funds it manages.

People choose to use asset managers because they are better able to maximise the trade-off between risk and return than the client would have been able to do acting alone. To fulfill that risk mitigation/return generation purpose – or even to understand it – is not a simple task. Risk is multidimensional, and sometimes minimising one risk can increase another. For example, losing money – what the industry calls permanent loss of capital – is among many people's worst fears. One can easily mitigate that risk by keeping your investments in cash. However, that then subjects you to inflation risk – the possibility that your money will be worth less, in terms of purchasing power, in the future, since whatever meager interest you earn on your cash account will not compensate for inflation.

Therefore, ideally, to fulfill the service function of asset management would, at a minimum, require an understanding of the desires and needs of the clients so as to make a judgement about what risks to minimise and which to accept (or even maximise) for each investor. To do that, the asset manager should know:

 The aim of the client, in other words for what purpose he or she wanted the money invested. Often, that would involve understanding the particular liability the client might face in the future, such as saving for retirement or for a vacation or to buy a home, all of which imply radically different time frames, levels and types of risk tolerance, needed return, and the liquidity required.

1 David Pitt-Watson and Dr. Hari Mann, "The Purpose of Finance" (Pension Insurance Corporation, London).

2 "Asset Management in the UK. 2015-2016", The Investment Association, London, September 2016.

3 "Asset Management in Europe," European Fund and Management Association, May 2017.

4 "Asset and Wealth Management Insights: Asset Management 2020: Taking Stock". PWC, May 2017.



2. Other aspects of the clients' investment preferences; for example if they held particular religious or other convictions which might sway how the money was to be invested. While some might think that such preferences are solely the province of "socially responsible investors," the reality is that every investor has different preferences. Central banks, for example, typically are averse to credit risk (the potential of not getting paid back), while some defined benefit pension plans seek out illiquidity, since illiquid assets have the potential to return more over time. The fact that they are not able to be spent in the near term without a major risk of loss is less important to these long-term investors.

In reality, such bespoke asset management is the exception, not the rule. Instead, the practical manifestation involves the asset management industry creating products which have, or should have, certain risk profiles. Allocators, whether professionals such as the investment staff at a pension scheme or a financial adviser to an individual, or the savers themselves, then mix and match those products into a blend that approximates the risk/return profile they desire.

In the course of making investments, the asset management industry aggregates yours and mine, and others' capital and then allocates it. If markets are working well, then that aggregated capital will finance the economy, creating real growth. That process, known as "intermediation", is the second key purpose of asset management.⁵



Today's asset management industry.

The question, then, is just how well does today's asset management industry do in fulfilling the twin purposes of providing a reasonable, risk-adjusted return to people saving to offset long-term liabilities, through efficiently allocating capital to improve our economy and society?

The answer is decidedly mixed, and we believe inextricably linked to the interaction of two factors: the business model(s) of the industry, and the intellectual paradigm of Modern Portfolio Theory (MPT). Thanks to the teachings of MPT, thinking about risk at a portfolio level and measuring risk and return relative to an "investment universe" dominate the investing landscape. Beating the market is considered a success in an MPT investment world, as opposed to serving the needs of clients or affecting systemic risk (which affects all clients) or improving the overall economy or efficient and effective intermediation.

2.1 Modern Portfolio Theory

Before the second half of the twentieth century, risk analysis (and therefore risk mitigation) focused on the individual security. Thus, for example, government bonds were (and still are) considered "safe", initial public offerings of small company stocks relying on an unproven business model were (and still should be) considered "risky".

Beginning in the 1950's with the formulation of MPT by Nobel Prize laureate Harry Markowitz, risk analysis was radically transformed by focusing on the portfolio as a whole. The conceptual and practical power of understanding risk as a portfolio phenomenon has made itself felt massively over the decades since Markowitz initially developed the core ideas. Among the theory's most important impacts is the idea that you can diversify "idiosyncratic" risk—that is the risk which relates to an individual security or limited subset of assets. Therefore, a portfolio of multiple "risky" securities is less risky than a singular risky security, since some will zig while others zag. As long as the central tendency for the majority of the securities in the portfolio is positive, the zigs and zags will partially cancel out, reducing the overall risk.⁶ This concept of diversification was and still is hugely important, as it allows for portfolio construction to mix heterogeneous risk factors along a number of dimensions: asset class (stocks/bonds/cash, etc.), size, individual security risk profile, time horizon, etc. Diversification, Markowitz's central tenet, transformed risk mitigation from a qualitative judgment about individual securities to a mathematical calculation based on the nature of the portfolio. Hence the name, Modern Portfolio Theory (MPT).

Indeed, diversification is such a fundamental concept that it even underlies present day law (the US Securities and Exchange Commission, for example, has different rules for "diversified" and "non-diversified" mutual funds.⁷) and dominates the way asset managers structure their investments.

Portfolio theory may be dominant. It may be important. It may be beneficial overall. But it "works" by assuming away some of the central functions which a good investor needs to bear in mind. Here is one example, articulately put by one of the 1950's most famous investors, Philip Fisher.

"No investment principle is more widely acclaimed than diversification... Too few people give sufficient thought to the evils of the other extreme. This is the disadvantage of having the eggs in so many baskets... it is impossible to keep watching over all the baskets after the eggs get put in them."⁸

The manifestation of Fisher's warning can be seen from many analyses of the global financial crisis of 2008-2009. Though that financial system melt-down had many causes, one was the relaxation of underwriting standards by a variety of banks and other credit-creating institutions. Today's bankers often make loans, not to hold on their own books, but to package into securities and sell to investors. The banker may not even know the person taking out the loan or the use of the proceeds. What matters is that investors will buy the resulting securities. In theory, investors should charge more for riskier loans (those with more chance of default). But in the years leading up to the crisis, investors bought almost any loan securities, and did not charge much (in terms of interest rates) even for packages of loans that were later revealed to be very risky indeed. Why? The investors' thinking relied on diversification to mitigate their risk, rather than old-fashioned underwriting. Investors believed that they had mitigated their portfolio risk by diversifying it. After all, they were not holding just one, or even ten or a hundred loans, but portions of thousands. They couldn't all go bad, could they? However, diversification works only when the sources of risk are idiosyncratic—so the risk of one is not related to the risk of the other. In this case the risk was systemic, as reliance on diversification by investors created a negative feedback loop to the financial system, which allowed underwriting standards to be relaxed, which increased systemic risk, leading to the crisis.

Not all such failures are as dramatic. But they may be as destructive in the long run. For example, as we shall see, the way the asset management industry has adopted MPT, combined with the current business models of the industry, has created a tendency for asset managers to develop one of two strategies: 1) active management, which tries to "beat the market" through security selection, or 2) indexation, or tracker funds, which seek to match market risk and return. More recently, the industry has become focussed on "factor" investing, which seeks to enhance or diminish exposure to systemic risk factors such as momentum, value, capitalisation, quality of earnings, etc. For the purpose of this paper, all three approaches suffer from two limitations when judged against the twin purposes of optimising the risk/return profile of investments for the saver, and efficiently intermediating capital for society. From the risk mitigation point of view, all three seek to improve risk mitigation relative to the overall market, not vis-a-vis the needs of investors or in any absolute sense. That creates misalignments both in terms of returns and time frame. As far as intermediation, all three continue to perpetuate the idea that investing is "atomistic"; that is, that investments are affected by the systemic risks of the market place, but do not themselves affect those risks. As we've seen with the example of the global financial crisis, that is just not true. And, as we will see, recognising that fact suggests ways in which the asset management can evolve from Modern Portfolio Theory to a systemsbased theory which could benefit savers and society, even while improving risk-adjusted returns.

6 MPT often measures risk as volatility, which, in theory, is the result of all the risks. So a stock whose price moves around a lot is considered more risky than one with a more stable return pattern. 7 https://www.sec.gov/rules/final/21837.txt

8 Fisher, P Coomon Stocks and Uncommon Profits Wiley 1976, 108



2.2 How the asset management industry is structured

The equity markets Markowitz knew in the 1950s were characterized by individuals owning stocks. Although there were investment and unit trusts, and pension funds were beginning to buy equities, about 90% of equities were in private hands. Beginning in the late 1960's this began to change rapidly, to the point that institutions currently own about 78% of all US equities (by capitalisation).⁹ Today, in the US market, the top five owners (e.g. BlackRock, State Street, Fidelity) often own upwards of 15% of equity, while the top 25 often upwards of 50% of a large cap firm. The actual statistics vary for different markets. In the UK, for example, members of the Investment Association own nearly a third of the listed equity market, and the top ten UK asset management firms control some 56% of all assets invested by IA members.¹⁰ Globally the same basic trends have been manifest virtually everywhere: today's capital markets are dominated by institutional asset managers such as investment management companies and insurance companies which aggregate and intermediate individuals' savings into institutional pools of capital used to fund (hopefully) productive economic activity, and by institutional asset owners such as sovereign wealth funds and pension funds, which often hire those same institutional management companies.

There are benefits to this institutionalisation. Few of us have the expertise, time or desire to manage our own money. Instead, we choose to give our assets to others who we believe to be expert, and who have the full complement of resources –portfolio managers, analysts, risk managers, compliance officers, traders, data feeds, risk analytics, computer-driven trading programs, etc. – necessary to invest our money professionally.

2.2.1 The structure of the investment management industry

The asset management industry has grown contemporaneously with the acceptance of Modern Portfolio Theory. Indeed, in many ways, it has adopted MPT, both consciously and inadvertently.

Active asset managers seek to demonstrate their skill by outperforming others, which is often measured through a peer group ranking of those asset management products which invest, more or less, in the same fashion. Another measure of skill is to see whether or not a product outperforms the universe of securities they invest in. For example, did an asset manager "beat" the FTSE or the S&P?

To try to achieve this outperformance, asset managers buy and sell shares depending on their view of the likely future price movement of those shares. Active fund management requires different skills in different markets. So someone who understands the Chinese share markets is unlikely to be the same person who understands German bonds. So each usually runs a different fund, whose success is measured relative to the market they are investing in, with those measurements usually over a short period of time, such as a quarter or full year.

There is also a group of fund managers who note that for every winner in beating the market indices, there will be a loser, and so they invest passively, in every stock within the index. Finally, as noted above, there is factor investing, which treats various risk components of the marketplace as if they were securities, and tries to mix and match those so as to outperform the overall market, sometimes while matching a factor index (if one exists).

But the measure of success for all three dominant styles of asset management diverge from the purpose of asset management. That was to meet the needs of the client, not to beat other fund managers or "the market" or to match index returns.

To illustrate how fundamental this misalignment can be. assume you have a stock portfolio that is benchmarked against the FTSE or the S&P or any of the other hundreds of indices against which the industry measures performance. Further, let's assume your asset manager, to whom you have entrusted your savings, outperforms the market, while taking a market level of risk. While that may sound like unabated good news, the truth is that if the benchmark is down 10%, but you have "only" lost 8%, that manager has materially outperformed. It has done its job, at least as that job is now defined. But you are still only holding 92 pence of every pound you invested at the beginning of the year. You are further away from your goal - to fund a home, retirement, etc. Judged against purpose, that is a set-back. By contrast, if the benchmark is up 10% and the manager underperforms by 2%, the portfolio manager has had an awful year. But you still have 8% more money than when you started, and have probably made progress towards offsetting those future liabilities. The disconnect between reward system of the asset management industry and the needs of its ultimate clients is stark.

2.2.2 Costs

Whenever a service is delegated, there are "transaction costs". The asset management industry is no different. and there is a panoply of financial intermediaries standing between you and your investment. Given the sophistication of finance, some level of complexity is probably unavoidable. But today's asset management industry features robust complexity and, therefore, robust costs. When we say costs, we do not only mean the fees your asset management company charges as a headline management fee. In the US these fees have been declining, partially from the fee pressure caused by the popularity of low-cost tracker funds. In the UK we may now be witnessing a similar phenomenon, additionally spurred by public debate on this issue. But costs are more than just those fees. Costs are everything that subtract from a hypothetical maximal return were your money to magically intermediate itself, moving from your wallet to an attractive portfolio of investments, and then those investment results, in turn, magically materialise in your bank account with no human intervention. That, of course, is a fantasy. In reality, intermediaries are necessary to intermediate. But that is different from accepting today's complex structure of the asset management industry as optimal. For example, the Transparency Task Force has documented well over 100 different fees UK residents pay on his or her investments.¹¹

Those fees and costs add up. The idea of compounding interest is well known; a web search for "compound interest" returns 2.55 million searches.¹² But a search for compound fees returns fewer than 1,500 hits. Few of us realise just how much fees, which also compound year after year, diminish your returns. As an example, if you were a 25 year old, saving £3,000 each year for a pension and able to get a 5% return on that money, by the time you were 65 you would have £362,500 to buy a pension. But if you pay 1.5% in fees a year, you will have only £253,500. And these fees continue in retirement, such that the seemingly modest 1.5% charge will reduce the pension by a full 38%.

You may not think your investments cost you 1.5% per year. Remember, however, that number includes not just the management fee, but trading costs, auditing costs, compliance costs, exchange fees, proxy advisory fees, bookkeeping fees, custodial fees, administrative fees, etc. Indeed, you will never see most of those costs because they are subtracted from your potential return rather than made explicit. Chris Sier from the Knowledge Transfer Network estimates that the actual costs of asset management are two or three times those that we know about.¹³

 9 SEC Commissioner Luis A. Aguilar, speech to Georgia State University, J. Mack Robinson College of Business, April 19, 2013.:at: https://www.sec.gov/news/ speech/2013-spch041913laahtm; and, Charles McGrath, "80% of equity market cap held by institutions", Pensions and Investments, April 25, 2017.
 10 "Asset Management in the UK. 2015-2016", The Investment Association, London, September 2016. 11 Adam Lusher, "Study claims hidden fees are helping to reduce your pension by more than a third," The Independent, 21 May 2016 12 Web searches performed using Google on 17 September, 2017.

13 Stephen Davis, Jon Lukomnik, David Pitt-Watson, "What They Do With Your Money: How the Financial System Fails Us and How to Fix It" Yale University Press, 2016, pp 53-4.

14 Randy Diamond, "CalSTRS says 85% of Management Fees in 2015 Went to Private Markets, Pensions & Investments, November 10, 2016

The implications of that are frightening; a 3% per year all in fee structure means that costs could eat up two-thirds of your best-case aggregate return over a lifetime of investing. Certainly the fantasy of the magical wallet is not possible, but are all 100+ fees necessary? Reducing the cost by anything would improve the risk mitigation of the asset management industry; reducing it materially could improve the economic welfare of retirees and the population as a whole.

Those hidden costs are rarely spelled out. Rather, they often are subtracted from your return, so that you never see them. They are so hard to find they can even elude smart, dedicated institutional asset owners. Railpen, the pension scheme for railroad workers, which is generally regarded as one of the UK's most sophisticated asset owners, thought it was paying about £75 million a year in fees. When they did a comprehensive audit - a bespoke, intensive and time-consuming effort – it found that costs were closer to £280 million a year, or four times the initial estimate. Across the Atlantic, the California State Teachers' Retirement System, a \$200+ billion behemoth, found a similar situation, discovering \$320 million in hidden costs, largely attributable to "netted" partnership costs which were never previously made explicit.¹⁴

To be sure, each of those financial intermediaries deserves to be paid for the work that they do. Most of those jobs need to be done. Many require skilled specialists. But it does suggest that the structure of today's asset management industry deteriorates the return available. To the extent we can reduce the number and the cost of the intermediaries, we would receive a better risk adjusted return.

To be clear, the high and hidden costs of asset management are not caused by portfolio theory. They are simply a phenomenon that is likely to arise in any industry where there are high transaction costs—in particular because it is difficult for the principle to monitor whether the agent is doing a good job. (Indeed many principles, trustees of pension funds for example, actually hire specialists to oversee the agents they have commissioned, adding still further to the chain of costs.) But portfolio theory has justified the agency structure we now experience, which increases greatly the number of agents, and the potential cost of the system.

2.2.3 Product proliferation

One phenomenon which increases cost is product proliferation. Today, there are 110,271 open-end funds in the world¹⁵. No one knows the optimal number of collective investment trusts, but everyone is pretty sure it's less than 110,271. So why so many?



They serve important marketing purposes. First, as in the case of breakfast cereal, the sheer number of funds means some are crowded out of the marketplace. In effect, the product proliferation is a battle for "shelf space", either literally as in the case of major distribution networks which will only recommend or even allow investment in a limited number of funds, or practically, as individual investors and advisors cannot sift through the thousands of funds available in any particular jurisdiction. In such situations having multiple "flavours" of funds increases the odds of an asset manager attracting your money into its fund.

There is also a reason linked to portfolio theory and the measurement of relative returns as a measure of success. If the success of a fund is judged by whether or not it has outperformed a benchmark, then it is possible to create such funds simply by creating many of them. And studies do indeed show that people invest in funds that have beaten their benchmarks. (Whether that is a smart investment decision is less clear; there are a number of studies which prove, as regulators around the world insist, that "past performance is no indication of future returns"). Asset management companies have figured out a simple mathematical way to improve the odds that they have a top-performing fund. Say you run an asset management company and want to have an actively-managed fund that consistently beats the FTSE 350. Don't just start one. Start eight. Assuming the returns are random, simple maths suggests that after a year four of them would beat the benchmark, after year two there would be two and after year three there would be one. Then, market that one intensively. After all, three straight years of beating the benchmark makes most people think that the managers of that fund have great skill and are worth the price. They may be, but the track record may also be the result of the statistical tendencies which result from starting many funds.

To be sure, there are always innovations in finance, and many new products are worthwhile. But the hundreds of funds that essentially do the same thing, or the fad products that chase short-term trends destined to reverse (e.g. telecommunications funds in the 1990's and dot com funds in the 2000's) or the variants of funds which are levered one, two or three times are not those. In other words, product proliferation serves an important marketing purpose and benefits the industry. There are powerful incentives for the industry to market: in general, asset managers are paid based on the size of the assets under management, not on how successfully they invest. The more under management, the higher the revenues. This encourages asset gathering through techniques which benefit clients, such as seeking investing knowledge, but also through marketing, as often occurs with product proliferation.But product proliferation also adds costs to the entire system: each fund needs a portfolio manager and analysts (or a computer program), compliance, audit, accounting, account opening documents, transfer agent agreements, custody agreements, listing agreements (if traded on an exchange), etc. In other words, every fund has certain fixed costs which would be less impactful if spread across the larger asset base that fewer funds would create. Product proliferation also proliferates fees and costs thereby denigrating the overall return available to individual savers. Given that risk and return are linked, those costs degrade the financial risk mitigation of the industry.

2.2.4 Trading

Active managers buy and sell shares in an attempt to beat their benchmarks. But trading shares is costly; there are commissions, spreads, and brokerage fees. And it is, of course, a zero sum game, since in aggregate the same shares are being held by the same group of investors. Some will "win" and some will "lose" but they all add together to create the market and the market return. Of course, that is before costs (market benchmarks don't have the costs associated with rapid trading). So, though trading is necessary for price discovery, and though some traders will benefit on a relative basis, in the apprepate, trading shares is a net negative. Moreover, remember, these costs are hidden from the client whose investments are being traded. As we shall see below, trading has become increasingly shorter term, meaning that portfolio turnover is increasingly rapid.

2.3 The portfolio theory paradox

Although trading patterns in themselves are not directly related to MPT's core insights, the dynamics of MPT have contributed to increased short-termism. Perhaps the biggest theoretical failing of MPT is the assumption that the non-diversifiable risk of your investments - the effects of market crises, global warming, political risk and other "systemic" issues - affect yours and my investments, but is unaffected by those same investments.¹⁶

Contrary to theory, investors can and do affect overall market risk and return. Indeed, as we will later argue, they should seek to do so. However, the idea that investing is atomistic - that is, portfolio investment takes place within the context of systemic market risk and return, and is affected by it but is unable to affect it - is ingrained in the asset management industry as it is in MPT itself, in spite of the variety of MPT versions that have evolved since the 1950's.

The irony is that more than 90% of the variation of return an investor will receive is explained by the return from the risk profile of the universe of securities they are invested in and not by the stock selection undertaken by the asset manager.¹⁷ So you would think that affecting the overall risk of the market would be where the asset management industry would focus so as to have the biggest risk mitigation impact. But since the way MPT is implemented postulates that the risk/return of the investment universe is a given and cannot be affected by individual portfolio managers, it follows that investors focus on what they can affect.

15 https://www.statista.com/topics/1441/mutual-funds/ Accessed 17 September, 2017 16 Given the global political debates which took place in the late twentieth century, it is remarkable that this should be so. The issue in contention in the cold war, and indeed even until today was about how the ownership of assets affects the way they, and hence the economy and society are managed. Yet the proximate holders of the ownership rights in the largest companies were working within a mindset that suggested that they could have little or no effect on the companies of which they were the part owner. 17 Gary Brinson, L. Randolf Hood and Gilbert Beebower, 'Determinants of Portfolio Performance', 1995, Jan-Feb, , Financial Analysts Journal, 133-38). 18 Danyelle Guyatt and Jon Lukomnik, "Does Portfolio Turnover Exceed Expectations?," Rotman International Journal of Pension Management, 3 no. 2 (Fall 2010) 19 Martijn Cremers, Ankur Pareek, and Zacahrias Sautner, "Stock Duration, Analysts Recommendations and Misvaluation" 2014. 20 See for example, Jeremy Sorci, "The Rational Investor: What's the cost of high portfolio turnover?" at http://web.premierfinancial.com/blog/bid/74369/the-rational-investor-what-s-the-cost-of-high-portfolio-turnover. (Accessed November 1, 2017)

Hence the emphasis on trading, security selection and portfolio construction (diversification). From this arises what we call the portfolio paradox. MPT encourages a world where the original purpose, to look after someone else's money and achieve an appropriate return, is subordinated to beating other managers, resulting in the suboptimal real-world asset management practices which we touched on earlier.

This misfocus on relative returns results in pressure on active managers to distinguish themselves from their competitors. Actions which might help clients, but which do not distinguish that particular manager, such as trying to systematically improve market returns through active stewardship of companies owned in equity portfolios, therefore receive relatively few resources when compared to sales and marketing; branding exercises which differentiate managers, but don't improve client returns. At the same time, the fact that returns are measured daily, with the industry standard being to compare quarterly and annual returns, means asset management companies try to differentiate themselves quickly and continuously. They try to do this by trading stocks or bonds or other securities. Indeed, one study suggested that they do so despite the fact that "Fund managers themselves recognise the potential negative consequences of short-termism, even while claiming it is unavoidable. Short-termism is part of how the market functions. It places short-term pressure on companies, increases market volatility, potentially demonstrates a lack of discipline in investment processes, and potentially creates a misalignment of interests between fund managers and clients... Excessive trading may be caused by the "don't just sit there, do something" imperative. That imperative states that portfolio managers and traders must do something to justify their existence and compensation, even when doing nothing might be the better choice."18

That pressure to differentiate over periods as short as 90 days or a year has resulted in increasing myopia. The World Bank found that today the average time that a share is held is less than eight months. In 1976, it used to take more than five years for a portfolio to turn over. While there is no doubt that high frequency trading - a controversial, specialised, computerised, strategy – contributes to these figures, various studies which omit those trades confirm that the average investor holds their portfolios for slightly more than a year.¹⁹ This is despite the fact that most investors are saving for a pension or some event many years in the future. And remember, trading incurs costs.²⁰

11

There are, of course, other ways to invest other than trying to beat the market through frequent trading. Passive, index or tracker funds, which today are more popular than ever, simply try to match the risk and return of the market. In general they do so at lower cost than active management. They are, by definition, passive, accepting as a given whatever risks and returns the market will provide. Ironically, however, and most importantly contrary to the assumption of MPT, being passive doesn't mean they don't actively affect the overall risk and return of the market.

For instance, the popularity of tracker funds has created what academic researchers call 'super portfolios', because all such funds tend to behave in the same way.²¹ Trackers are created because they supposedly represent the sum of wisdom in the market - the result of thousands of individual traders making informed decisions. However, over time the index fund itself becomes the justification for the index being efficient, as it attracts index investors, resulting in each co-movement of many of the component stocks or bonds. For example, large cash flows into or out of a FTSE 100 tracker will affect each component stock, even if there is no fundamental reason for that stock to move up or down, and even if the investors causing the cash flows don't even know the names of the stocks in the FTSE. Over time, the unintended result is that the investor moves the index itself, and all the stocks in it. So the core proposition of portfolio theory, that the index is unaffected by investors actions, must be wrong. Indeed a flood of capital to one market will attract more investors potentially creating a bubble. In a sense, this turns the efficient market hypothesis on its head, becoming less and less efficient as indexes are moved not by new information about investee companies but by the movement of super portfolios.

Almost by definition super portfolios can move markets, and not always positively, as another academic study found: "Such trading commonality then gives way to a rise in systematic fluctuations in overall demand, which, in turn, leads to a fundamental impact on the overall market and investors' portfolios. In short, the growth in trading of passively managed equity indices corresponds to a rise in systematic market risk."²²

Indeed, the situation may be worse than just the effect of passive funds buying into one market or another. The trading of active fund managers who are trying to beat a benchmark may have similarly disruptive characteristics. That may seem contrary to received opinion, because economists often think that trading is helpful in creating stable prices, and that stable prices support effective capital markets. So although trading shares is a zero sum game for the participants, trading has a societal benefit. But it may also be possible that the focus on relative performance can create the opposite effect (a phenomenon studied by London School of Economics). If active fund managers are benchmarked to an index, then their behaviour may distort prices.

Imagine an active manager in 1998, before the bubble in technology stocks. Imagine also that this manager is underinvested in tech stocks. Over the coming months, as the tech bubble accelerates, not only do the statistics show that he or she is underperforming on a short-term price basis (even if all the companies in their portfolio are doing well), but he or she will also discover that one measure of risk in the portfolio - tracking error - has increased. This is because tech stocks have become a more significant part of the market, and the lack of exposure to them will be registered as increasing their risk, even though by some fundamental measures, such as valuation, it is the tech-heavy index that has gotten riskier. Still, if the manager cares at all about tracking error – and most care a lot - the only solution is to buy tech stocks. That then pushes their price up, hence contributing to the bubble in a vicious cycle.

Again the conclusion is contrary to lessons of MPT, which assumes that the investor does not affect the overall market, and that the trading of securities will lead to prices being based on the true value of the asset.

In sum, portfolio theory provided the intellectual foundation for today's investment doctrines, but did not consider (and certainly never incorporated any on consideration of) the effect of its own widespread adoption. The domination of MPT on the investment landscape has had systemic effects.

Nor is this some academic argument, or limited to stock market effects. The systemic effects reach directly into the real economy. Being included in an index can change how the companies whose stock is in the index work on a day-to-day basis. For example, academic studies have determined that in turn leads to fundamental corporate governance changes²³ and in changes to research and development budgets.²⁴ So MPT actually affects the way real world companies operate.

That suggests an interesting question. If even passive investment unintentionally can affect the overall market and the behaviour of the constituent companies whose securities trade in the marketplace, can investors intentionally use their portfolio investments to affect the real world. Can the power of investments be harnessed to mitigate systemic risks and therefore reduce the overall "riskiness" of the capital markets in an innovative and powerful way? In other words, could we tune the investment system to be in better harmony with the needs of those whose money it manages by affecting overall market returns, even if that does not differentiate different asset management companies?



21 Wurgler, J. 2010. 'On the economic consequences of index-linked investing', NBER Working Paper No.16376. Issued on September 2010.

22 Rodney N. Sullivan and James X. Xiong "How Index Trading Increases Market Vulnerability," Financial Analysts Journal, Volume 68, Number 2, 2012. Pp. 7-84 23 Appel, Ian; Gormley, Todd; Keim, Donald, 'Passive investors, not passive owners', Journal of Financial Economics, (2016) forthcoming, at: https://papers.ssrn. com/sol3/Papers.cfm?abstract_id=2475150

24 Cremers, Martijin; Pareek, Ankur; Sautner, Zacharias, 'Short-term institutions, analysts recommendation and mispricing', (2017) at: https://papers.ssrn.com/ sol3/papers.cfm?abstract_id=2190437&rec=1&srcabs=2285470&alg=1&pos=8

A new paradigm for fund management.

Though not accounted for by MPT, a review of real world events reveals a myriad of occasions when portfolio decisions and or actions by investors designed to bolster their returns or mitigate risk, on issues varied as political risk to climate change.

For example, in 2002, the US mega pension fund CalPERS (the California Public Employees Retirement System) performed a political risk analysis of a number of emerging markets. It determined that the way Philippine law treated foreign investors created an untenable risk/reward situation. On the day CalPERS announced it was divesting its holdings, the Manila exchange dropped 3.3%. That set off an intense but under-the-radar shuttle diplomacy mission between Manila and Sacramento. The result? The Philippines changed its laws. And, of course, much of the investing universe put pressure on the then-Apartheid government of South Africa in the 1970s and early 1980s, which was part of the impetus for the removal of that racist governmental system.

Yet MPT assumes that the risk (such as political risk) which affects the whole market is a given. MPT even gives that non-diversifiable market risk/return a name: "beta." In theory, beta cannot be affected by the action of an investor. The investor can only change the return on their portfolio by choosing particular shares, or through "activism" that is changing the behaviour of the company they have invested in. Individual skill-based returns of this nature are known as "alpha".²⁵ But that's just not true. The CalPERS case shows that it is possible for large institutional investors, or groups of investors, to change the behaviour in an entire market. Let's call this type of behaviour "beta activism", as it affects the market overall.

Given that market returns have greatest impact on the absolute value of an investment portfolio, it would make a lot of sense if asset managers were encouraged to do more beta activism, as it would benefit all investors.

Here is a topical example. There are increasing numbers of robust studies by academics and practitioners which show that, using a variety of data and methodological approaches, companies which manage environmental and social issues well also perform better financially.²⁶ And that they enjoy a lower cost of raising new money.²⁷ That means that early movers might profit by investing in such companies, which would be generating an "alpha" return, since these factors are not yet widely recognised by the investing universe. However, as these facts become known, share prices will adjust, and all holders of well managed companies will benefit, resulting in a change to "beta". In fact, if it is the case that companies with good environmental and social records are worth more, investors will be likely, to encourage an improvement in performance by companies both individually and collectively. None of this activity is conceived, or arguably is conceivable, viewed through the lens of Modern Portfolio Theory.

And there are scores of examples of "beta activism". For example, the communications by Blackrock (the world's largest investor with \$5 trillion under management) with corporate boards and executives to increase long-term focus,²⁸ or the New York City pension funds' efforts to change the nomination process for corporate directors at US companies.²⁹ Such activism even can come from agents who are not themselves investors, for example the 2 degree investing initiative's efforts to have companies focus on climate change risk,³⁰ or the creation of stewardship codes in jurisdictions around the world, asking that investors use their influence to ensure the good management of the companies in which they invest.³¹

Nor is beta activism a new phenomenon. Jon Lukomnik, one of the authors of this paper, helped then New York City Comptroller Harrison J. Goldin fight against greenmail - a type of blackmail by corporate raiders that was endemic in the US equity markets of the early 1980's. Goldin and others, formed the Council of Institutional Investors to combat greenmail and improve corporate governance in the US. Not only did greenmail stop - resulting in an end to value leakage from the general equity markets - but the Council remains the leading voice for improved corporate governance in the US to this day.

Even certain actions by a single investor, and even if it is directed at a single company can have market wide impact if, as former California Public Employees' Retirement System CEO Dale Hansen once said: it 'moves the herd'. (Cattlemen move the herd by moving the outliers to the centre thereby changing the entire herd's direction).³²

To be an effective beta activist it helps to have significant assets under management. That is why coalitions of some of the largest investors are forming. That helps to minimize the cost of the activity to any individual institution, as well as making the activism more effective. Such banding together even helps in cases of "alpha" activism at individual companies. For example, in the UK the Investor Forum would be one such group, and the activities of Hermes Equity Ownership Service would be another, where big investors pool resources in a cooperative effort to influence specific company behaviour and to influence general corporate governance behaviour.

Despite these efforts and others, many of which have been successful, they often are viewed as one-off situations prompted by specific issues or threats - fixing an unfair law, combatting short-termism, attacking climate change, improving corporate governance. We believe that narrow focus misses a more impactful insight: they are indicative of a fundamental challenge to the dominant investing paradigm that says you either trade securities to outperform an index, or you track-to-index to match it, because you can't affect the index's risk and returns. Obviously, you can. That suggests a better way for asset managers to generate return and manage risk on behalf of their clients: change the systemic risk/return of the market. What makes this so powerful is, as we noted earlier, that the risk and return of the overall market dwarf results achievable through trading.33

26 See for example, https://www.msci.com/www/blog-posts/can-esg-add-alpha-/0182820893, http://www.factset.com/insight/2015/09/can-esg-add-alpha-/0182820893, http://www.factset.com/insight/2015/09/can-esg-add-alpha-/0182820894, http://www.factset.com/insight/2015/09/can-esg-add-alpha-/0182820894, http://www.factset.com/insight/2015/09/can-esg-add-alpha-/0182820894, http://www.factset.com/insight/2015/09/can-esg-add-alpha-/0182820894, http://www.factset.com/insight/2015/09/can-esg-add-alpha-/0182820894, http://www.factset.com/insight/2015/09/can-esg-add-alpha-/0182820894, http://www.factset.com/insight/2015/09/canalpha#.V5pt550DGko.

27 See for example, Khan, Mozaffar N., George Serafeim, and Aaron Yoon. "Corporate Sustainability: First Evidence on Materiality." Harvard Business School Working Paper, No. 15-073, March 2015.; "The Financial and Societal Benefits of ESG Integration: focus on materiality", Calvert Investments, June 2016; and, 'The Role of the Corporation in Society: implications for investors", Calvert Investments, September 2015.

28 http://www.businessinsider.com/blackrock-ceo-larry-fink-letter-to-sp-500-ceos-2016-2. 29 https://comptroller.nyc.gov/services/financial-matters/boardroom-accountability-project/overview/ 30 http://2degrees-investing.org/

31 Q&A on stewardship codes: EY, August, 2017

32 https://blog.insight360.io/is-materiality-in-the-eye-of-the-beholder-part-i-199399441f0#.43w13n4nq; https://blog.insight360.io/is-materiality-in-the-eye-of-the-beholder-part-i-19939441f0#.43w13n4nq; https://blog.insight360.io/is-materiality-in-the-eye-of-the-beholder-part-i-19939441f0#.43w130404000#.44w14000#.44w1400#.44w1400#.44w1400#.44w1400#.44w1400#.44w1400#.44w1400#.44w1400#.44w140#.44w1400#.44w1400#.44w1400#.44w140#.44w140#.44w140#.4 of-the-beholder-part-ii-57ac2843736#.q9tilbl0v; https://blog.insight360.io/esg-materiality-without-comparable-metrics-back-to-the-future-of-financialreporting-fda6d1349c00#.hb43h6cxi: and. https://blog.insight360.io/fiduciary-duty-esg-why-materiality-matters-81fe84d00912#.p9nyn34g1 33 Roger G. Ibbotson, 'The importance of asset allocation', Financial Analysts Journal, 66:2, March/April 2010

This poses problems for today's asset management industry, however. Stewarding the companies they own on our behalf, delivers value for their clients and so directly fulfills purpose. But it may not fit the reward system of today's asset management industry. It may be more difficult for firms to differentiate themselves the way trading does, even though it benefits investors and society as a whole. On the other hand, since such beta activism should increase overall assets under management, and since the industry generally is paid on the basis of how much assets it has under management, it does have some benefits. This may also explain why large asset managers, particularly those who with large index funds such as Blackrock, Vanguard and State Street, have recently put more resources into stewardship. They understand that they are so large, and such permanent investors, that the overall health of the market will affect their revenues more than any minimal differentiation achievable between different index (tracker) products.

²⁵ Technically, alpha is a mathematical concept that considers risk and return generated from non-beta factors. However, in practice, "alpha" is used to describe skill-based returns. Alpha can, of course, be either positive or negative

A better way forward.

How, then, can we improve the ability of the finance industry to fulfill purpose? Let's return to some of the problems that we have noted so far so as to figure out how to mitigate them, even while keeping the positives that today's asset management industry provides to clients and society.

4.1 The nutrition label

Today's asset management industry features tremendous expertise. But it is very difficult for its clients to know if the expertise is used in their interest, or to change things if it is not, because asset management often features extensive and perhaps overdone, complexity; a profusion of intermediaries; and hundreds of fees and costs, many of which the ultimate investors and ultimate users of capital have never heard of. Indeed, some are unfamiliar even to the other intermediaries in the intermediation chain. As Pitt-Watson and Mann argue about the financial sector generally, reducing information asymmetry would help. That means making all fees and costs - anything that subtracts from the maximal return generated by that magical wallet - explicit. But transparency in the form of a laundry list of costs is not enough. That would soon devolve into the type of lengthy disclosure one clicks on to upgrade a computer program – pages and pages of incomprehensible jargon delivered as a take-it-or-leave-it statement. Instead of such radical and useless transparency, we endorse the idea of a disclosure that resembles a "nutrition label"³⁴ as part of the return performance statement that every investor receives. That should show the beginning balance, the final balance, the net return and then, list every fee or cost incurred, and should include a single, short description of why the cost was incurred. The numbers should be shown in both GBP and percentages. Such a statement would make the fees, and therefore the theoretical maximal gross return, explicit and comprehensible. Perhaps call this 'nutrition abel' "Fee Elimination or Explanation."35

Nutritional Label	GDP	%
Beginning balance		
Final balance		
Net return		
Management fee Pariorestibus untem. Ore soluptatum di duntio beratempore lab inullore pres magnaturem des mi,		
Trading costs Pariorestibus untem. Ore soluptatum di duntio beratempore lab inullore pres magnaturem des mi,		
Auditing costs Pariorestibus untem. Ore soluptatum di duntio beratempore lab inullore pres magnaturem des mi,		
Compliance costs Pariorestibus untem. Ore soluptatum di duntio beratempore lab inullore pres magnaturem des mi,		
Exchange fees Pariorestibus untem. Ore soluptatum di duntio beratempore lab inullore pres magnaturem des mi,		
Proxy advisory fees Pariorestibus untem. Ore soluptatum di duntio beratempore lab inullore pres magnaturem des mi,		
Administrative fees Pariorestibus untem. Ore soluptatum di duntio beratempore lab inullore pres magnaturem des mi,		
Custodial fees Pariorestibus untem. Ore soluptatum di duntio beratempore lab inullore pres magnaturem des mi,		
Other fees Pariorestibus untem. Ore soluptatum di duntio beratempore lab inullore pres magnaturem des mi,		

34 This builds on an idea suggested by Davis, Lukomnik and Pitt-Watson in "What They Do With Your Money," by Davis, Lukomnik and Pitt-Watson, Yale University Press, 2016. Some of the other ideas in this paper also owe a debt to the work in that book.

35 This is based on British corporate governance standards of 'comply or explain'

36 US Department f Labor, "Fact Sheet: Final Rule to Improve Transparency of Fees and Expenses to Workers in 401(k)-Type Retirement Plans", February 2012.

We can see such a statement potentially being beneficial in several ways. First, our experience is that, as the Railpen and CalPERS situations show, even large, sophisticated organisations just don't know all the fees and costs. Simply listing them is the first step to negotiating them down or eliminating them altogether. Second, of course, our hope is that, particularly for near identical products such as capitalisation-weighted trackers, investors will use the power of the marketplace to select those which allow the investor to keep the most of the theoretical maximal return, rather than just shop via either a name brand or for low headline fees, which may be offset by high hidden fees.

Finally, we anticipate that better informed customers will create a positive process of innovation. We know of no economist who believes markets work best when opaque, but that is exactly the situation we have today, when many fees and costs are unknown. Indeed the power of such a fee and cost statement is hard to overestimate. Here's an amazing statistic: the United States government estimated that better fee transparency would save citizens about \$1.25 billion a year... and that is just from savers not having to search for the data, not from any savings that might result from making better decisions.³⁶

But the overall nutrition label should eliminate products on offer that plainly are too expensive to fulfill their purpose. In one study, for example it was discovered that researchers working for British MP's were being offered funds to underpin their pension savings whose costs would amount to more than two thirds of their potential pension. If such funds are to be sold, then customers should know those costs explicitly.

A financial fee and cost statement might also help in reducing product proliferation without stifling innovation, as investors would see the disproportionate impact of those costs to "me too" products.

Nothing in this recommendation is rocket science. It flows seamlessly from noting that the purpose of asset management is to serve the client. And, clients deserve to know what they are being charged.





4.2 Rethinking portfolio theory

More fundamentally, we suggest that asset management needs to move from modern portfolio theory, which assumes away the effect which investors have on the market, towards one which incorporates the broader impacts which they can have, and relates that back to the clients' needs. Call it "systems theory". A systems theory approach would mean that asset management would have to function at three levels - security (what specific company is being invested in), portfolio (how can the risk/return on all the companies in the portfolio best be managed) and systems (how can the actions taken which have systemic effects best match client needs). In all cases the metric of good management is the degree to which the clients' needs are addressed.

The potential is great. Systems theory would add beta activism to improve the overall risk/return profile of the market. Effectively, MPT taught investors how to diversify idiosyncratic risk; systems theory suggests how to address and manage non-diversifiable risk. That would positively impact both financial and condition of life returns.

Systems theory does not mean abandoning MPT, but building on it to add a third dimension to the security selection and portfolio creation considerations. The key is what The Investment Integration Project (TIIP) calls "intentionality"; an awareness of how portfolio investment and associated activity can create or mitigate systemic risk(s).³⁷ TIIP details ten tools/techniques that asset managers can use, and which a few asset management companies are already using. For example an asset manager can develop investment products designed to impact systemic issues (think clean tech funds to impact climate risk).

It can use its voice to guide public policy around issues of systemic risk (the asset management industry supported, en masse, the negotiations which led to the Paris climate accords). It can help set standards as is done with the UK's stewardship code and with listing standards around the world. The overarching purpose is to create what might be termed a "better beta".

Since the return on the market has much more effect on return and risk than any trading strategy, systems theory has at least as much potential to improve asset management as did MPT in the mid-twentieth century.

Of course, trying to impact systems creates its own risk mitigation challenges. Systems are complex and unintended consequences can be severe. In such situations, traditional portfolio level risk management, based on history and scenario testing, is helpful, but limited and inadequate. Richard Bookstaber, the best-selling author³⁸ whose day job is as Chief Risk Officer for the University of California's \$100 billion endowment and pension funds, has begun to examine what happens in crises, when systems seize up. He notes that there are limits to top down mathematical models in the real world, when real world people and institutions must make decisions based on what is good for them at any particular time, and that those decisions then affect other market actors and changes the context in which those decisions are made, which..., and so on ad infinitum. He has developed methodologies to model such complex, interactive behaviours. Bookstaber analogises his thinking to what traffic engineers do when modeling traffic flow; think about what happens if one driver changes lanes? What do other drivers do and then how do others react to those reactions, and on and on.

This sort of thinking is purpose-built to be incorporated into an asset management firm seeking to understand the feedback loops between its portfolio investment and the systems in which the investments and portfolio companies operate. It has the potential to be a tool to be added to the risk management/systemic risk mitigation toolbox.

4.3 The fiduciary role

The context in which these tools are deployed matters. Asset managers and asset owners need to acknowledge that they are acting as intermediaries, not principles for their own accounts. They are, or should be, fiduciaries for those who entrust money to them. But they are only the entry point to the chain of intermediaries. Fiduciary duty - that is acting in good faith only in the interests of the beneficiary - must therefore extend throughout the investment chain to the other intermediaries hired by the asset managers. Similarly, given that we have seen how asset management can impact the environmental, social and financial systems, then asset managers and intermediaries should, at a minimum, understand how they affect those systems and, ideally, also be stewards for systemic health.

In establishing this fiduciary role, there are many reforms which could be made, not least to the law. However, one thing we know from psychology is that reminding people to do the right thing actually affects behaviour. Therefore, while it may seem like an obvious and therefore unnecessary statement, we suggest that employees of asset managers and asset owners must annually sign explicit acknowledgements of their fiduciary obligation. Additionally, it might be considered to apply such reminders as new investment products are created.

4.4 Incentives

Moving to systems investing will affect the business model of the asset management industry, because the benefits, while greater overall than those of trading based strategies. will tend to accrue to all investors and all managers. If the industry were to be successful in building a better beta, then that would benefit the asset management industry as a whole - there would be more assets under management, which is the base off of which the industry charges fees but not contribute to relative return differentials, and so not create differentiation amongst managers in terms of return profiles.

But we believe the asset management industry can adapt and still be very profitable. In fact, if the asset management industry evolves to be more fit-for-purpose in the direction we have described, it will mean that managers can differentiate themselves in multiple ways: active managers can still seek relative return outperformance, and all managers, whether active or passive or factor-based, could compete on how much of the potential total return an investor gets to keep, or on better understanding the goals for which the investor is saving and creating products to match the time frame and level of risk appropriate to that investor, or on the systemic impacts it provides.

³⁷ William Burkart, Steve Lydenberg, Jessica Zeigler, "Tipping Points 2016: Summary of 50 Asset Owners' and Managers' Approaches to Investing Global Systems", IRRC Institute, 2016

4.5 Stewardship

Central to all the ideas we have explored is the notion of stewardship. That fund managers have the duty to look after client assets, which includes the stewardship of the companies they invest in and the systems on which those investments depend. But how can we promote stewardship? Again, let us start with transparency. Investors now receive performance reports on the financial performance of their portfolios. We suggest adding reporting on the non-financial impacts of the deployment of that capital. Elements of such impact reporting are already being developed. Some asset managers and asset owners are mapping the greenhouse gas emissions (or the reductions therein) that their capital enables. Others, particularly "impact" investors, look at such discrete indicators as housing created or pollution ameliorated. And the International Corporate Governance Network, representing investors with some \$26 trillion in assets from 45 countries has adopted transparency around stewardship as a key policy: "Investors should publicly disclose their stewardship policies and activities and report to clients on how they have been implemented so as to be fully accountable for the effective delivery of their duty."

The problem is that the indicators of impact are myriad and granular. The industry needs to set guidelines for portfolio impact reporting so that such reports are comprehensible to citizen/savers, much the way our proposed financial nutrition statement would be. Fortunately, a number of groups are endeavouring to do exactly that. The OECD and the Global Reporting Initiative, are two who have embarked on what constitutes good stewardship and how it might be measured. The Centre for Sustainable Finance at Cambridge's Institute for Sustainability Leadership is spearheading a multi-disciplinary approach to understand what type of non-financial reporting would be most comprehensible and therefore most useful to individual citizen/savers. The aforementioned TIIP is trying to take that one step further and attempting to pioneer systems impact reporting. The quality, assurance and comparability of the data and the reports examining impact, whether or not they focus on the systemic issues, is uneven, but standards are definitely evolving.

As with risk mitigation, periodic reminders of what constitute good behaviour can nudge industry culture towards being careful about the systemic impacts of its intermediation. We suggest the industry adopt the investment equivalent of a doctor's Hippocratic Oath, in this case a pledge to do no harm to the systems on which the capital markets depend, and that all appropriate employees reaffirm annually (perhaps in conjunction with the acknowledgement of fiduciary duty). Here is one possible wording:

Asset Management Hippocratic Oath.



We commit that we will understand the nature of the return which our customers need



We will invest their money with that goal in mind and we will make that goal explicit so that investors can judge how well our investment products match their needs



We will seek to improve the absolute value of their savings, not just our own relative performance



We will minimize costs, and report diligently on them



We will not invest in ways which encourage returns which accrue to our portfolio, but which result in other costs to our clients



We aim to ensure our impact avoids negative impacts on the environmental, social and financial systems, and, preferably, promotes positive impact as well as private financial reward for clients



The asset management industry fulfills two of the four purposes of finance that Pitt-Watson and Mann postulate. It mitigates risk (and therefore delivers return) and it intermediates capital to move it from disperse savings accounts to where it is needed by the real economy.

By some limited standards it achieves these functions adequately. But looked at through the lens of purpose from a client and societal perspective there is room for improvement. As our discussion has described, the asset management industry has taken Modern Portfolio Theory to heart. In the process, it has brought us such benefits as diversification and lower-cost tracker funds. However, it has also caused the industry to focus on short-term relative returns rather than longer-term absolute returns and to not focus at all on mitigating systemic risks. As a result the industry spends much of its effort competing with itself, not serving its customers.

Adding systems level considerations to security selection and portfolio construction – moving from modern portfolio theory to modern systems theory – could turbocharge those portfolio-level returns, even while extending the industry's ability to mitigate risk and to intermediate capital so as to benefit the environment, society and the financial systems. That surely would begin to meet the purpose of fund management that we described in Section 1 of this paper.

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