The Purpose of Finance

Why Finance Matters:
Building an industry that serves its customers and society

Authors:

David Pitt-Watson
Dr Hari Mann

PENSION INSURANCE CORPORATION

Authors

David Pitt-Watson

David Pitt-Watson is a leading thinker and practitioner in the field of responsible investment and business practice. He is currently Executive Fellow of Finance at London Business School. Until the end of 2012, he was Chair of Hermes Focus Funds, and a former board member of Hermes Fund Managers. As co-founder and former Chief Executive Officer of the Focus Funds and Equity Ownership Service; he built and led the largest responsible investment group of any institutional fund manager in the world.

Throughout his career he has been deeply involved in policy making in the UK, Europe and around the world particularly in the area of corporate governance and financial regulation, and is the author of books on this topic, most recently What They Do with Your Money, published by Yale University Press.

He is a non-executive at KPMG and Treasurer of Oxfam.

Dr Hari Mann

Hari is a Professor of Strategy and Innovation at Ashridge Business School focused on Executive Education. Through his career, he has worked within academia, investment banking, politics and early stage entrepreneurial ventures. In 2010, he was made Director of Tomorrow's Investor, a project run by the Royal Society of Arts focused on how to deliver better pensions in the UK. He holds an MSc (with distinction) and a PhD from the London School of Economics. He is also a Visiting Fellow at CASS Business School, City University.

Hari has worked with David over the past seven years on a series of publication under the Tomorrow's Investor project. These have focused on how to deliver a better pensions architecture in the UK, how to lower investment costs in UK pensions and what can the UK learn from other countries in the world around pension fund management. His other research is focused on the areas of strategy, innovation and entrepreneurialism.

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Introduction

By Tracy Blackwell, CEO, PIC

Why purpose?

The role of finance has perhaps never been more important. As The Economist noted, "Most of the credit [for global poverty reduction]… must go to capitalism and free trade, for they enable economies to grow—and it was growth, principally, that has eased destitution."

An active and flourishing the financial sector has always been a cornerstone of our progress and development. Availability of, and access to, finance has been key to expanding trade and commerce, the development and introduction of new technologies and the improvement of our housing and infrastructure. This is just as true today as it was in the Italian Renaissance and the Industrial Revolution. Despite the fact that our financial sector is crucial to achieving our wider social goals and improving living standards, the reputation of the financial sector today could scarcely be worse.

Whilst the scandal, mismanagement and outright fraud which puncture the history of finance may be no worse than in other industries, the consequences are perceived as much worse because modern finance touches us all. Yet the history of many financial institutions – how and why they were established – suggests things could be very different. In this regard it's instructive to look at a recent paper published by the Bank of England (BOE) on the collapse of the significant financial institution Overend Gurney, more than 150 years ago[1].

According to the BOE's paper, "Gurney & Co, a bank which facilitated investing in London", was set up by a prominent merchant family in East Anglia. The original business was established by, "drawing on [the founding family's] Quaker reputation to attract the savings of the local gentry and tradesmen. The Gurney family had a reputation for trustworthiness and wealth, both particularly important prerequisites for running a bank…" However, acquisition, expansion and restructuring changed its business model to the extent that "poor lending practices and insufficient risk management", led to the failure of Overend Gurney, after it incurred "enormous losses from the bad loans it had extended with little credit risk assessment."

As Mark Twain is reported to have said, "History doesn't repeat itself but it rhymes".

It is not difficult to make the case that between the demise of Overend Gurney and today, in some fundamental parts of the financial system, nothing much seems to have changed at all. Indeed, one study quoted in our paper shows that there has been no productivity improvement in the US financial industry at all in the past 130 years. But the demise of Overend Gurney, rather than being just an interesting echo from financial history, or an obscure case study of interest to academics and central bankers, goes right to the heart of the very issues that we face today: that of whether establishing, measuring and regulating to the "Purpose of Finance" would mean a better, more productive financial sector.

What is purpose?

Muhammad Yunus, of Grameen Bank, won the Nobel Peace Prize for providing capital to the poorest of Bangladesh through micro-finance and helping transform lives for the better. As David Pitt-Watson and Hari Mann, the authors of this paper point out, in theory his business model is the same as that of a loan shark. In practice, however, it is totally different, "One has a clear and positive purpose, the other undertaken with little regard to the welfare of the consumer." Mr Yunus himself was recently quoted as saying: "We looked at what the conventional banks did that served the rich and did the opposite."[2]

But "fit for purpose" does not just mean customer care. Having a purpose goes far beyond merely providing the right products for customers, important though that is. To my mind, the purpose of any organisation dictates the fundamental principles on which that business is based. It is the guiding light for decisions and actions that are taken to achieve business goals. As David and Hari point out, "The purpose of a 'great company' gives it a reason for being, defining its contribution to society."

1 The demise of Overend Gurney, Bank of England Quarterly Bulletin Q2 2016

2 Speaking at the Thomson Reuters Foundation's Trust Women Conference, 1 December 2016

It is therefore a little surprising that regulators have simply never been charged with encouraging the financial industry to fulfil purpose. As David and Hari say, "…to the best of our knowledge, no regulator has tried to define purpose and to measure whether or not it is being fulfilled."

This paper argues that the establishment of "fit for purpose" institutions might well lead to productivity increases and falling consumer costs. It might mean fewer financial crises like the demise of Overend Gurney. And there are real world consequences if we can get this right. For example, a focus on purpose by the providers of services to pension schemes could lead to an increase in the average pension of around 33%, perhaps ending the pensions crisis at a stroke. This would be an equivalent boost to the economy as the contribution of North Sea oil. So this is far from an abstruse academic argument.

Why PIC?

I am sure the question many will ask is "Why is PIC interested in purpose?" swiftly followed by "What's in it for them?"

My colleagues and I have been in financial services for a long time. We carry the scars of the last financial crisis and a few from the ones before that. Clearly, there was a lot of very bad behaviour that led to the 2008 crisis. But there are also hundreds of thousands of people in the UK working in an industry which is vital to our very way of life. Many of these people – admittedly not all – work hard to do the right thing. But doing the right thing can be difficult in an organisation that has itself lost any sense of purpose.

What we have seen instead is that there has been a huge amount of talk about culture in organisations, not just in financial services. Some will have a pretty good idea of what a good culture is. Others won't have spent much time thinking about it. But it is not easy to put your finger on why some organisations have the right culture and others do not. We have worked hard at PIC to ensure we have a strong culture. And when we thought back to why that is the case, it came down to one thing: our strong culture comes from a strong sense of purpose, which is to pay the pensions of our policyholders.

As we discussed the link between culture and purpose, other questions arose. Perhaps one of the reasons women leave the finance industry, or even refrain from joining it, is that they don't see an underlying purpose to these organisations. Perhaps the best and brightest of the new generation entering the workforce may not be attracted to an industry that is not seen as socially responsible, because they don't see any organisational purpose. A younger member of staff even told me that they felt embarrassed telling their friends they worked in the finance industry. Given it is the lifeblood of the modern world, that was a worrying comment.

Talking to colleagues in the industry about purpose, we realised that it touched a nerve. Despite working hard to serve their customers and do the right thing, people in the financial industry are tired of being compared to the bankers who are blamed for causing the crisis. They are weighed down by regulation and would like to find a better accommodation with society.

We at PIC do not have the answers, but we believe that now is the right time to have a wider discussion around the need to refocus on the "Purpose of Finance". This paper, and our proposed follow-up work with a series of partners, is intended to help facilitate this discussion.

We have been delighted to collaborate with David and Hari on this project and I want to thank them for their efforts. They have brought a deep knowledge about these issues and produced a first class paper which really helps to set the scene.

Tracy Blackwell

March 2017

Approach taken by the paper

"Does the finance industry fulfil its purpose well?" This paper aims to ask and address this simple question. It is one which we think is of interest to all citizens who are involved with and affected by the finance industry. That means almost all of us who need bank accounts which keep our money safe; mortgages which allow us to pay for our homes; or pensions which will provide an income in our retirement. It includes every company which seeks to raise money or transact business through the financial system. We argue that a productive finance industry is one which fulfils its purpose effectively and efficiently, bringing benefits to all its customers and supporting economic growth.

In terms of its structure, the first part of this paper looks at the purpose of the finance industry. We start by reflecting on the purpose of commerce and what this might tell us about the role of finance. We review the academic literature and then define the four principle purposes of the industry, against which its output can be measured. These are:

- The safe-keeping of assets
- Providing an effective payment system
- Pooling risk
- Intermediation – matching the users and suppliers of money

This allows us to examine how the industry performs. Our review looks both at the long-term evidence, as well as looking at the events of the past decade, to examine whether and to what degree the industry has succeeded, or failed, in meeting its purpose.

The second part of this paper explores why this may be happening and draws on theory from economics and finance to help with the explanation. We consider the role regulation plays and discuss the size of the opportunity if we were to fix some of these issues within the industry.

The third part considers the pension system, examining what such a system might look like if it were focused on fulfilling its purpose. This provides an example of the relevance and importance of our approach and the benefits that would derive from a system better designed for purpose. We draw conclusions about how a purposeful pension system might be designed, and also offer our thoughts for future discussion and debate about how this approach might be used to improve other financial institutions.

The aim is not to create a new blueprint. Rather it is to establish a new, common sense perspective from which to evaluate performance that can help policymakers and industry participants guide the future development of our financial system.

Acknowledgements

We would like to begin by thanking Pension Insurance Corporation (PIC). Without their support we would have been unable to produce this paper and to explore the issues it raises. PIC has been resolute in wanting to lead the debate about how we can create a better financial services industry. In particular, we would like to thank Tracy Blackwell, Mark Gull and Jeremy Apfel for their guidance and insights in addressing a fundamental question, one that we haven't asked enough in the finance industry. That is "Does the finance industry fulfil its purpose well?" We would also like to thank Emily Williams for her research into the academic review of the purpose of finance.

But our greatest thanks must go to the many thousands of people within the finance industry, from CEO's to call centre operators who genuinely want to be part of an industry that gives the best possible service to its customers. And to those policymakers and regulators who aim to create a system that helps fulfil that same objective. We hope that this paper and the further work that PIC is commissioning will help provide some guidance as to how that important goal might best be achieved.

Contents

1. Executive summary

The finance industry fulfils a role that is so important it is almost impossible to imagine a modern economy surviving without it. Yet, when we review the literature on what is the purpose of finance, we discover that little has been written on the subject. Almost no writer has systematically tried to define the purpose of finance and then measure whether the industry is fulfilling that purpose well.

There is, however, one unique study which looks, over a period of more than a century, at the cost of "intermediation"; that is "taking money from point A in the 'outside world', and investing at point B". Intermediation is a prime purpose of the finance industry. The study finds no productivity improvement whatsoever. This is remarkably poor performance.

We suggest that the reason may lie in what economists call "asymmetric information", where a party to a transaction, usually the supplier, can use their greater knowledge to profit at the other's expense. Asymmetric information exists in many industries, and if markets and institutions are not well designed to cope, it distorts the ability of competitive forces to deliver value. We cite several practical examples of expensive, but low-purpose activities, which take place in the finance industry.

We note that there are many mechanisms used in other industries which prevent asymmetric information being used to undermine the effective operation of markets[3]; but that within finance these have been largely overlooked or abandoned. Thus we should not be surprised if the incentives within the industry and the behaviour of its participants are dysfunctional.

If this issue is to be addressed, we would suggest that we might begin by defining purpose, both for the industry as a whole, and for individual institutions such as banks, pension funds, stock exchanges etc. We should then measure their performance against these purposes.

We reflect on the benefit which might accrue if we were able to create a purposeful system, using private pensions as an example. Potentially the effect could be profound: offering better retirement incomes, encouraging savings and stimulating the economy to create more jobs and prosperity.

But the principle aim of this paper is to lay the foundation for a discussion. If we take the four purposes of finance seriously, it seems clear we could design much better institutions to deliver upon them. In this paper we demonstrate the huge benefits that would accrue from a purposeful pension system. In later papers, other writers will use the same logic to evaluate current practice in other financial institutions. We hope that the finance industry, regulators and policymakers will find that challenge constructive and compelling, and will rise to meet it.

3 There are many responses which can be made to the issue of asymmetric information. These include regulation, transparency, education, branding, oversight, licensing, fiduciary duty, culture, and ethical practice

2. Purpose of commerce

Adam Smith was clear about the purpose of commerce. He noted, in the first chapter of the Wealth of Nations[4], that it is "by treaty, by barter and by purchase that we obtain from one another those mutual good offices in which we stand in need of." The purpose of such trade was clear; that we could better obtain the goods and services we need and desire.

No one is sure of the exact date commerce began (Adam Smith believed it was a defining characteristic of our species). Certainly, signs of trade date back to the Stone Age. As society progressed, from farmers to merchants, from industrialisation to the modern day internet revolution, the principles remain the same. Commerce allowed us to meet our desire for goods and services, and allowed the division of labour, upon which productivity increase was based. For all economists, markets and competition are not ends in themselves, but a way of better meeting customer needs.

It is therefore legitimate to ask the question as to whether any industry is meeting customer needs well. And, as we shall see, it is particularly germane to ask that question in industries where the buyer or seller do not have access to the same information. This situation, known as "asymmetric information" is a particular characteristic of the finance industry, as it is in other industries. It opens the possibility that someone selling a service might not be meeting a customer need. Medicine provides an interesting comparison where information asymmetry can be very high; an extreme example might be that of a doctor who persuades a patient to have an ineffective treatment. We therefore need to be sure, in markets where asymmetric information exists, that purpose is still being served, and not rely blindly on the efficacy of competitive forces.

We note that there is a significant discussion in the field of management studies, where "purpose" is explored from the view of the firm. In general, this discussion notes that short-term profitability is hardly a motivation for the employees, suppliers and customers of large organisations. That a broader purpose is a key to economic success, both for the company and for the society in which it operates. The purpose of a 'great company' gives it a reason for being, defining the contribution it makes to society.

This view is an important one for discussions at the 'firm level', providing organisations, CEOs and boards with a starting point to develop company strategy.[5] Indeed, in many aspects it can be complementary to the perspective taken in this paper. However, the ambition of this paper is more limited—it simply asks whether the finance industry, in aggregate, fulfils its purpose well.

4 Wealth of Nations, Adam Smith. 1776

5 There is a considerable and growing literature which suggests that different aspects of "purposefulness" have created better companies. See Figure 1.2 in The Purposeful Company, Interim Report, The Big Innovation Centre, May 2016

3. Purpose of finance

It is in this context that we pose the question, "What is the purpose of the finance industry?" We are able to address this issue in a straightforward manner for other industries. The motor industry builds machines which transport us from A to B swiftly, efficiently, conveniently, safely and in comfort. We measure its performance by its ability to build better, more efficient cars year-by-year. The healthcare industry serves to cure us when we are ill[6]. Reflection might lead us to conclude that we know the purpose of most industries. Doubtless there can be some debate about precise goals, and how best they are measured. But the overall purpose is clear, and it is against that metric that success can be measured.

But in our experience, if you pose this question of the finance industry, you will likely be given a range of responses. The cynics will say it's for the purpose of paying large salaries, fuelled by endless media stories focusing on remuneration in the sector. The majority of people may tell you they just hadn't asked the question about what finance was for. And since they hadn't asked the question, they hadn't answered it either.

Overview of the literature

As a starting point for our investigation, we wanted to look at what academic work had been done on the "Purpose of Finance". We therefore commissioned a researcher at London Business School to review both the academic and other literature that exist on the subject.[7]

In the Appendix we discuss the approach taken. By no means is this an 'absolute' or 'exhaustive' review of the literature. It does however help to build our hypothesis that there are a scant number of sources, be they from academics or practitioners that systematically discuss this question.

Throughout the literature there is a general agreement that the purpose of finance is to serve the outside world. For example, in his book, Finance and the Good Society, Nobel Prize-winning economist Robert J Shiller states, "Finance is not about making money per se…it exists to support other goals–those of society". It provides "stewardship to protect and preserve the assets needed for the achievement of and maintenance" of individual and societal goals.[8]

Purpose is thus very broadly conceived. Others take a similar approach. Dembinski[9] argues "a healthy financial sector serves both the common good of society, as well as the well-being of individuals who participate in it". Beneich and Biehl[10] that a narrow view of the purpose of finance is "to create and preserve wealth" but that it also has wider functions, "such as the development of the wider economy, social harmony and stability". These broad definitions, while emphasising the influence of the industry, don't help a lot in defining specific, measurable goals.

6 Indeed it is by the guiding star of purpose that medical treatment has been improved; today we no longer approve of bloodletting as a way to cure disease. Yet for many hundreds of years this was common practice, and unquestioned—its most famous victim George Washington, who in the 24 hours before his death had seven pints of blood removed from his body

7 We are grateful to Emily Williams, a PhD student in her fourth year in Finance, for the research which underpins the following paragraphs. Her methodology is discussed further in the Appendix

8 Shiller, R, Finance and the Good Society, Princeton University Press, 2012

9 A summary of this article, and citations are included in the Appendix

10 ibid

Some finance literature is more specific in defining functions. Although language differs somewhat between authors, all have an overlap with the six purposes defined by Nobel Prize-winning economist Robert Merton and later again by Merton and Bodie[11]. Those are to: provide a payments system; pool funds for investment in large indivisible projects; transfer resources through time and across geographies and industries; manage uncertainty and risk; provide information in a decentralized system and manage asymmetric information.

Many introductory textbooks of economics discuss the purpose of finance as the matching of borrowers and savers, or in other words moving funds from people who have a surplus to people who have a shortage, which might fall under Merton's third function[12]. Others, such as Epstein, suggest additional purposes, such as providing liquidity, or developing new processes[13]. Some are more specific in describing the approaches the industry must take in fulfilment of its goals, Naik, for example, notes that risk can be managed only by diversification, or by sharing it.[14]

Kay[15], offers a list of four functions; consistent with, and perhaps more practical than those suggested by Merton: managing a payments system; matching lenders and borrowers; helping us to manage personal finances, and the risks associated with everyday life and economic activity.

We would have two comments to make on the literature. First, there is a danger that it conflates "enabling functions" in finance, such as successful innovation, or the management of asymmetric information, with the ultimate services it provides for the outside world, such as providing a payments system.

Second, and related to that observation, there is a danger that some of the externalities in undertaking the functions of finance, particularly the positive ones, are themselves viewed as purposes. For example, certain forms of intermediation allow price discovery, just as trading vegetables in a market allows price discovery; knowing market prices may have positive (and negative) side effects, but price discovery is not a primary purpose of finance.

The same might be said of "the separation of ownership and management", which intermediation makes possible, and the concomitant requirement to "monitor the management" if such separation is to prove safe. Again, we would not dispute the value of separation, or the necessity of monitoring. But we would view them as enablers of an effective system of intermediation, rather than ends in themselves.

But perhaps our most significant observation is that we have found no studies which, having defined the purpose of finance, have gone on to measure in any systematic way, how well the industry has performed its function. Some, for example Kay, offer examples where the finance industry appears to be less than purposeful. But Merton and most of the textbooks of finance, have a tendency to assume that, once the purpose of finance has been defined, competitive financial markets, "will cause the changes in institutional structure to evolve towards greater efficiency in the performance of the financial system"[16].

11 ibid

12 A summary of this article, and citations are included in the Appendix

13 ibid

14 ibid

15 A summary of this article, and citations are included in the Appendix

16 Merton and Bodie, 1995

There are studies which have sought to measure efficiency, based on the work of Thomas Philippon[17], to which we will refer later on in this paper. However, with that possible exception, we have not discovered any studies of the efficiency of the finance industry overall which have started by defining the purposes against which efficiency might be measured.

For the reasons given above, and because of the nature of Merton and others' categorisations, the task of measuring the performance of the finance industry is made extremely difficult.

That in turn makes it problematic to assess whether or not finance is fulfilling its functions or working efficiently. This is a huge gap in our knowledge, and one which might be considered a major stumbling block to anyone—for example a regulator—whose aim was to help make the industry perform better.

For that reason, we have suggested our own set of purposes for finance. All of these are functions which directly benefit the outside world. All of them are ones which are, at least to some extent, measurable. We would note that different financial products may require a combination of these functions. For example, a pension which is designed to provide a predictable income in retirement will be required to keep our money safe, to intermediate, and to allow risk sharing, particularly as regards longevity risk. Others will have important enabling functions. Thus while the ultimate purpose of a stock exchange is to assist effective intermediation, it does this by allowing effective price discovery and appropriate levels of liquidity.

We would note that, absent of any measure of how finance is fulfilling its purpose, it is difficult to prescribe what changes to the financial system will be beneficial. For Miller[18], and for previous writers, this problem has just been ignored, or assumed away by positing that competition will always lead towards a more efficient system. However, as we shall see, the evidence suggests that this assumption is unsafe.[19]

17 Philippon, T, Has the US finance industry become less efficient? On the theory and measurement of financial intermediation, American Economic Review, Vol 105, No 4, April 2015. Note there are various versions of this study, and at least one follow on piece of work that uses the same methodology to assess the performance of European financial markets. Bazot, G, Financial Consumption and the Cost of Finance: Measuring Financial Efficiency in Europe (1950-2007)

18 Op Cit

19 (1) For example Mishkin "The Economics of Money Banking and Financial Markets", or Bradfield "Introduction to the Economics of Financial Markets". (2) For example Schafer, Scholtens and Signori "Responsible Investment in Times of Turmoil" (3) For example Mishkin "Policy Remedies for Conflicts of Interest in the Financial System"

4. The purpose of finance: a working hypothesis

In the previous section, we noted the lack of literature that defines the purpose of finance, and then seeks to measure performance against that purpose. One might conclude that this is surprising, given the fact that the financial industry is such an integral part of our everyday lives; one in which we have placed our trust, to look after our money and our futures. One which when things go wrong, can cause a near collapse in the economy which is felt throughout society.

So why do we struggle when we are asked about the purpose of finance? Is it that we haven't given the subject enough thought? Is the answer so complex that it requires us to have the knowledge level of Nobel Prize-winning economists, or is it that we are too scared to admit that perhaps the answer will uncover the gap between the purpose of finance, and what our current reality is?

Let us start to search for the answer by understanding the services that the finance industry provides. Our definitions draw on the history of the finance industry – for example the first services provided by banks – and by observation of the services finance is beginning to provide in the emerging economies of the world.

We see there being four essential services[20]. **The first is the safe-keeping of assets**. We sometimes take for granted that we have institutions, like banks, which we can give our money to, and who will keep it safe. That is an essential service, and it is one that was not available to most people through most of history, and still isn't available to many people in many countries. In Haiti for example, people save amongst themselves, all contributing to a pot from which one can withdraw a lump sum. In Haiti, it's safer and cheaper to trust your friends than to open a bank account. Within the UK, recent estimates suggest that as many as two million adults still do not have a bank account, relying simply on cash and nothing else to transact for their daily needs.[21] And it's not simply banks that we rely on to keep our money safe. We also expect those institutions such as pension and investment funds to hold our financial assets and act as its custodians, albeit on different terms from a bank.

The second service follows on from the first. **It is to provide an effective payment system**. Again, this is a service that we take for granted in the developed world. But without it, modern commerce could not survive. Again we can see its value by looking at situations where the service has been lacking. In Kenya today, migrant workers can transfer their funds back to their families at home using their mobile phones, through which they also receive their payments. In the past this process involved guards taking cash for their salaries, and then a complex process for getting the monies back to their respective villages[22]. Even in inner city London, children can pay for lunch at school using smartcards, creating cashless schools and reducing bullying as a consequence.

The third output of the finance industry is its ability **to allow us to share risk**; to allow us to buy life, car or house insurance, so that if disaster strikes we have something in compensation. To allow us to have a pension that will last us until the day we die. Business also benefits from risk sharing, for example insuring factories, or ships at sea. As a result we can avoid many of the worst consequences of life's catastrophes.

20 We note that our definitions of purpose are quite close to those of John Kay, (see above). But we think our taxonomy may be a little more comprehensive, and more readily measured than that suggested by Kay

21 Improving the financial health of the nation. Financial Inclusion commission. 2015

22 See, for example, Aidan Harley's account as a farmer in Kenya, published in the Montrose Journal, http://www.montroseassociates.biz/article. asp?aid=75

The fourth, and perhaps the most important service provided by the finance industry is that of **intermediation**: matching users and suppliers of money. Put simply, intermediation is about how we "take money from point A where it is, to point B where it is needed"[23].

This process is of enormous value. At its most simple it can be combining savings deposits and helping individuals buy homes or businesses buy assets. It allows economies to grow. It allows social mobility. Before modern banks, assets were simply passed from generation to generation. What social mobility there was amounted to a process of everyone raising themselves by their bootstraps. So intermediation is of profound importance to our global economy and society.

Indeed, these services have been deemed to be so beneficial to society that many of those early entrepreneurs who started finance institutions were known as philanthropists. They sought to address the problems people faced when they couldn't get access to financial services. Examples are littered through history, from the first "people's bank", the Trustee Savings Bank set up by a Scottish minister to serve his flock, to the work of Mohammed Yunus of Grameen Bank providing capital to the poorest of Bangladesh through micro-finance. What Yunus was doing was not, in theory, different from a loan shark. In theory the same, in practice totally different—one has a clear and positive purpose, the other undertaken with little regard to the welfare of the consumer.

Of course the finance industry is not alone in offering products which seem to be of little benefit. Indeed market economies often allow poor products to be introduced. But they do not survive for long because those which fail to meet consumer needs fall by the wayside. It is this process of "creative destruction" as described by Schumpeter[24], which ultimately leads to improvements in quality and lowering of price. And those improvements can be measured.

We can note over time the greater speed, safety and comfort of a car, and its lower cost. We can chart the growing efficacy of drug treatments. In the case of finance, similar improvements should be apparent. We will discuss these in the next section of this paper.

In the meantime we would define the four purposes of the industry:

- Safekeeping
- Facilitating payments
- Risk mitigation
- Intermediation

We would note that, in delivering these services the finance industry takes on other roles; its markets, like all open markets allow price discovery, it has a vital role in corporate governance, it provides liquidity and so on. But these latter activities are simply enabling functions which allow the four central purposes to be delivered. And so we can turn our attention to the question, "How well are these purposes fulfilled?"

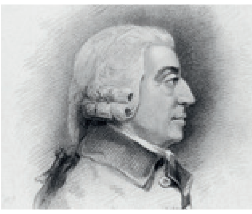
23 Victor Rothschild, Meditations of a Broomstick (Harper Collins 1977), 17

24 Schumpeter, J Capitalism, Socialism and Democracy (1942)

5. How well does the finance industry perform?

If Adam Smith were alive today, he might have two observations on today's financial markets. First, he might note the levels of specialisation, with different people undertaking different roles: from pricing marine insurance, to writing computer code, to ensuring the security of payments. Smith of course famously described a pin factory, which, using specialised labour, was able to manufacture more pins per employee than if each were working alone. Thus the mantra of Smith's economics, that by specialisation and trade we can enjoy huge gains in productivity. There is no doubt that had Adam Smith observed the trading floors or offices of the finance industry, he would see that specialisation in action and expect that customers would benefit from it.

However, Smith might also have had words of caution. He was well aware that, when money is given in trust to others, one needs to be careful that it is well managed. Public companies, which separated ownership and management, created a problem. Here is Smith's famous observation:-



"The directors of such joint-stock companies, however, being the managers rather of other people's money than of their own, it cannot well be expected, that they should watch over it with the same anxious vigilance with which the partners in a private copartnery frequently watch over their own... Negligence and profusion, therefore, must always prevail, more or less, in the management of the affairs of such a company."[25]

So, for Smith there would be a dilemma. Specialisation should allow a big increase in productivity. But by giving our money to others to manage, through a complex system of agents, we should also note that unless the problem of asymmetric information is well handled, poor management, excessive costs and resultant waste can come about. That was the dilemma Adam Smith was posing, and it is still present in the financial world today. Financial innovation, perhaps particularly in the developing world, has brought great benefit. But in recent years, particularly following the 2008 crisis, the financial system has been dogged by a long series of scandals coming to light. Not just the enormous cost of the banks' collapse, but also the revelation of mis-selling, or rate rigging or other abuses have harmed the reputation of the industry, and the pockets of its consumers. In the boxed section, we have listed just a few of these, some of which, we would note, happened before the financial crisis. The point is this: unless it is managed to purpose, the financial system has considerable opportunity to act in ways that are not in the interests of the outside world that it is there to serve. The examples below, are extreme, and often illegal instances. The evidence from Thomas Philippon, which we cite below, suggests that there may also be a more chronic failure in the system.

25 Smith, A. The Wealth of Nations, Book 5, Chapter 1, Part 3

Libor

The Libor scandal (London Interbank Offered Rate) arose when it was discovered that banks were falsely inflating or deflating their rates so as to profit from trades at their customers' expense. Approximately £350 trillion of trading was based on rates that had been manipulated. The subsequent Wheatley review found the practice was prevalent since 1991.

1989 Junk bond crisis

Following their exponential growth during the 1980s, as a way to finance leveraged buyouts, the junk bond market collapsed in 1990. Defaults rose from 4% to 10% in that year. That collapse was triggered, and was itself a cause of the news coming from Drexel Burnham Lambert, the leading promoter of these bonds. It was discovered that DBL staff had been party to ill practice, and forced to pay what was then a record fine of $650 million for price manipulation.

PPI Scandal

Of all the scandals in the UK, PPI has involved the largest number of people to be affected. Since the 1990s, millions of customers were mis-sold insurance policies to pay off loans or mortgages if they died, became ill or lost their job. However, the majority of these policies would have been of little use to the customer if they had ever needed to make a claim. Banks alone are thought to have paid out around £22bn in compensation. In 2015, the financial ombudsman dealt with 1.25m complaints – not including complaints made directly to banks and credit card companies.

Savings and loans crisis of the 1980s

In the United States, savings and loans institutions had for many years been the backbone of residential mortgage lending. Their business model had been to borrow from depositors, but to lend mortgages on fixed interest. With the high inflation of the 1970's these fixed rate mortgages failed to provide enough income to retain depositors. But rather than admit to insolvency, vast swathes of saving and loans companies invested in speculative high risk investments. Others chose to use accounting gimmicks to make them look solvent. Inevitably many went bankrupt, and the government was left compensating depositors. Some commentators have argued that this taxpayer funded bailout created a moral hazard, acting as encouragement to institutions which subsequently led to the 2007 subprime mortgage crisis in the United States.

Interest rate hedging products

The big four UK high street banks were forced to compensate thousands of small businesses who were mis-sold complex insurance deals described to them as a way of managing the risk of interest rate fluctuations. But in 2013, the Financial Standards Authority said that it found 90 per cent of cases it examined did not comply with regulatory requirements.

Barclays set aside £450m for compensation. HSBC, RBS and Lloyds also incurred costs.

Foreign exchange rate fixing

In 2014, UK and US regulators imposed over £2.6 billion in fines to a wide selection of City and Wall Street institutions who had been found to be colluding to fix the exchange rates for over six years. These rogue traders had been warned, but in the words of the regulator, "normal ethics didn't apply."

Furthermore, while specialisation has benefits, it appears that there are many specialised activities in finance that have no clear value to the outside world. One example would be "High Frequency Trading" (HFT), an activity brought to light in Michael Lewis' book, Flash Boys[26]. HFT often seems to be a trick to take money from those who trade on exchanges, without their realising it has happened.

Despite the poor performance of the industry, it none-the-less contrives to pay salaries to its participants that are well in excess of those working in the outside world. It is therefore all the more important that we are able to assess whether the industry is indeed delivering a good service. If high salaries were being paid for good service, there may be little problem.

As we have noted, there are few studies which have defined and measured the productivity of the finance industry, to determine whether, over the long run, the finance industry has fulfilled its purpose well, or whether in Adam Smith's words, "negligence and profusion" have prevailed.

There is however one notable piece of research undertaken by an academic from New York University which measures the productivity of the finance industry in intermediation, which is one of its principle purposes. His name is Thomas Philippon. He has tried to do a calculation to work out what productivity improvement the finance industry in the US had delivered to the real economy in the past 130 years. He worked out, from GDP statistics, how much the finance industry had cost, and how much had been borrowed from, and then invested in the outside world, (in other words he excluded borrowing and lending from amongst financial institutions themselves). He controlled for how complex the lending was.

Now you might expect that, over the past 130 years in the US there would be very considerable improvements in productivity. After all, on average in that country productivity has grown tenfold, thanks to technology, know-how and so on. What improvement had finance managed? The answer is that there has been no improvement whatsoever. Even when adjusted for the greater complexity of lending today (which Philippon calls "quality adjusted"), compared to 1880, the cost of intermediation has not fallen.

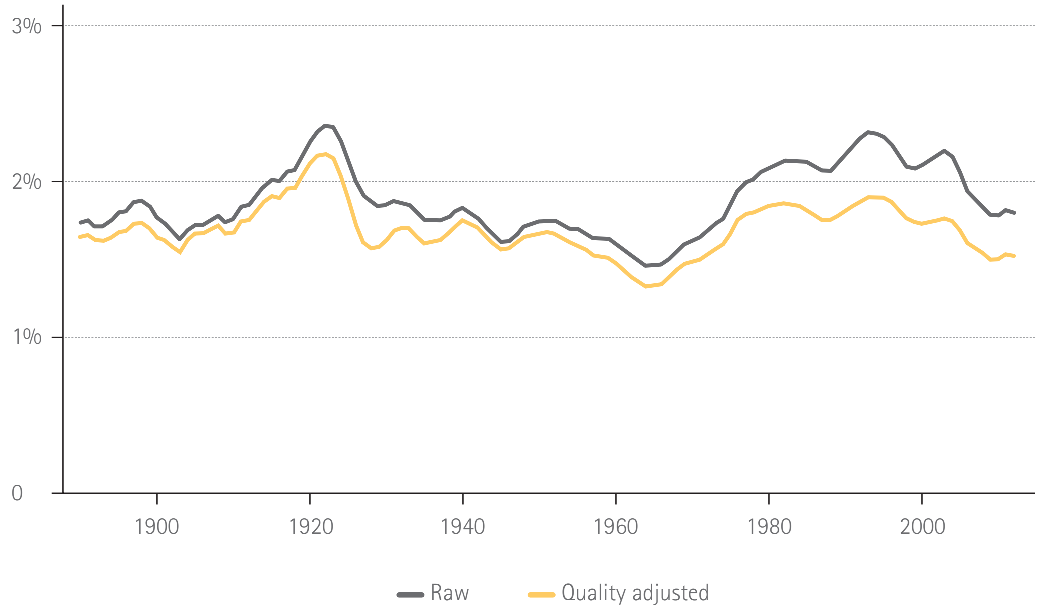
Bart Sadowski / Shutterstock.com

26 Flash Boys: A Wall Street Revolt. Michael Lewis.2014

27 See footnote 17

His conclusion is as clear as it is uncomfortable. Despite the fact we have made huge advances in our understanding of economics, despite the fact that finance has employed some of our smartest people, that some of our most outstanding universities act as a talent factory to the industry, and that technology has moved on immeasurably, in terms of its critical contribution to the outside world, in aggregate the finance industry has achieved no productivity improvement at all. As Philippon put it, the industry that finances the internet is no more efficient than the one which financed the railroads. No efficiency gain. No avoidance of crises. So in a world where smart technology, increased specialisation, and big data have driven down costs in nearly every industry in our economy, finance has bucked the trend. Philippon's work is of the highest academic standing and its methodology clear and simple. For good reasons it focuses only on the US, and it is but one study[27]. There is no research of equal standing which suggests his findings are wrong. We therefore must conclude that on the best evidence available, there has been little or no increase in the productivity of finance for over a century. That is a sobering conclusion for those who work in the industry, and raises the question as to how this could have happened.

Percentage cost of intermediated assets



Source: London Business School

6. Why has the finance industry performed poorly? A different perspective

The financial services industry has considerable specialised expertise which it has discretion to use on our behalf. But it can also use that expertise to benefit itself at our expense, sometimes without our even knowing. Economists refer to this situation as one of "asymmetric information", where the buyer or seller can take advantage of their superior knowledge. Examples of reliance on suppliers who have greater knowledge than the purchaser can be found in many fields, including medicine and law. There are many instances where this imbalance might be abused, for example where a doctor might falsely persuade a patient that they had a dangerous disease, and offer them an expensive treatment, for the non-existent complaint, leaving the doctor richer, and the patient happy that they had been "cured". In finance it is possible for money managers to persuade clients to invest in a certain strategy, and if markets rise, to take hefty fees and persuade the client that it had been their skill which had created the nest egg. Or alternatively, if markets fell, to use that as the excuse for the poor outcome.

The problem of asymmetric information is particularly acute in the finance industry, not just because of the expertise involved and the low level of knowledge of the customer, but also because of the vast number of agents involved in managing the money.

For example if we have money in a pension fund, the trustees will most likely take professional advice in choosing how it is invested. They may give the cash to a fund manager, who might buy a derivative security, lodging it with a custodian, overseen by an auditor. The derivative itself has been constructed through another complex set of agents. Our money passes through all of these agents before it is finally represented by an investment in the outside world. At each stage there is room for the agent to act in their own interest but in a way that is not in the interests of the person who was the original investor. Evaluating the performance of financiers is not easy. Even quite straightforward data, such as the full costs charged for the management of an investment account are often not known to the client. This makes it difficult for customer's to make good choices. Indeed, in a situation of extreme asymmetric information, markets and competition cease to function in a way that acts to the customer's advantage.[28] Anyone who doubts this might reflect on how the medical profession might behave if all doctors felt that it was acceptable to persuade patients to pay for treatments for conditions they did not have.

Of course there are ways around asymmetric information. One would be to educate the customer. (One might note that our current school curriculum does little to help citizens understand financial products, to understand which are necessary—and which should be avoided—and make a sensible choice.) Another would be for more information to be made available. Customers could get their own independent expert advice. Suppliers or groups of suppliers might get together promising honesty and integrity, branding themselves in such a fashion. Customers may decide that they need to form their own cooperative organisations since suppliers can't be trusted and so on. All of these approaches can be seen within the financial services industry and all to some extent help resolve the problems. But none is a perfect solution and often they involve costs.

But perhaps the most important provision we have for limiting the dangers of abuse is the notion of "fiduciary duty". Fiduciary duty requires that the agent, who has expert knowledge, must use it in the service of the principal. So, for example, a pension trustee owes a duty to the beneficiary, or perhaps to the sponsoring company, and must not profit in other ways from their control of the pension fund. A company director owes duties to shareholders and to stakeholders, defined, in the UK, by Section 172 of the companies Act 2006.

28 The Market for Lemons: Quality Uncertainty and the Market Mechanism" by GA Akerlof

But most fund managers, bankers and insurers owe no duty to their customers beyond that which is strictly defined in contract or in regulation. They can, should they choose to do so, benefit at their customers' expense.

Furthermore, the structures of the finance industry often create exactly the conditions that behavioural economists would suggest are likely to encourage "cheating". Take for example the rigging of the LIBOR rules, described earlier. Those setting the rate performed their task in a rarefied environment, at a great emotional distance from the individuals whose pensions depended on honest brokerage. They enjoyed a macho camaraderie amongst each other. The incentives for them to cheat were very high indeed. And the banks themselves failed properly to oversee the process. All of this is a recipe for encouraging cheating behaviour.[29]

Within the finance industry there seem to be many activities that incur costs, but fail to deliver value for customers. Our hypothesis would be that these, and the scores of other activities whose systemic costs outweigh their value to customers, may give us some clue as to why Philippon discovered that there was no improvement in the productivity of the finance industry.

Instead of markets and competition bringing lower cost and better product, they have instead resulted in customers being offered services which seem to be of value, but in truth yield little or no benefit. Like the greedy doctor, the finance industry is indeed offering expensive cures for conditions that may not even exist.

29 Arielly D, The Honest Truth About Dishonesty, Harper Collins, 2012

The following four examples illustrate practices from the investment industry which encourage high costs for little benefit.

Example 1 – Opacity of fees

For markets to work effectively customers need to know how much they are being charged. Yet in the field of investment, particularly pensions, the scale and significance of management costs are ill understood and often withheld from customers.

First of all there is the charging structure, which is by custom expressed as a percentage of the funds under management and is therefore a low percentage. But these charges compound over the years. This means that if a pension saver sets aside a similar amount of money each year for forty years and then draws it down over the following twenty, paying 2% per annum, about half their potential pension will have disappeared in charges.

We know from surveys that customers are not aware of these effects. Indeed, many assume the annual charge is a one-off.[30] In the UK where nearly half[31] of the population have difficulty with the calculation of basic compound interest, markets will fail to deliver benefit, instead offering the opportunity for suppliers to profit at their customers' expense.

But in fact the costs declared are only a part of the costs borne by the customer. There are many charges, in particular those associated with the trading of securities that are never made known. Nor is there any incentive for a supplier to break ranks on this practice, since it will make their fund look more expensive.

If that were not enough, suppliers have been found to mislead customers about costs. In February 2012, the Royal Society of Arts (RSA) conducted a short survey of the information given to individual, or 'retail' consumers when purchasing, or planning to purchase, a pension. When quizzed about hidden charges, of the 23 pension providers questioned, 21 responded by saying that the annual management charge and the administration costs were the only charges.[32] Of the two that did say there might be other possible charges accrued, they were unable to give a list of them, or their quantum. Yet we know that there are bound to be other costs: for example, for trading or for stock lending.

The reason the industry is able to act in this way is that in financial products, a lack of transparency by institutions has become common practice. Couple this with low levels of financial literacy and it becomes a recipe for high cost with little benefit[33].

30 Seeing Through British Pensions How To Increase Cost Transparency In UK Pension Schemes, 2012 by Pitt-Watson and Mann

31 For example, in a survey by the University of Nottingham, on consumer credit, 45% of respondents struggled with a simple compound interest calculation https://www.nottingham.ac.uk/cfcm/documents/papers/12-01.pdf

32 Seeing Through British Pensions How To Increase Cost Transparency In UK Pension Schemes, 2012 by Pitt-Watson and Mann

33 We would note that behavioural economists would note that where agents are not observed, they are more likely to cheat. (See Arielly, The Honest Truth About Dishonesty)

Example 2 – Paying for good luck

One of the most incisive academic insights into the investment industry's activities is that of Bill Sharpe, the Nobel prizewinning finance professor at Stanford Business School. Sharpe's insight was simple. In a market for fund managers, all of whom are trying to do better than achieve average performance, half will fail, before they have charged any costs. Since the active trading of securities is a costly business, most active fund managers will underperform benchmarks and hence, unless the saver has particular insight into which managers will outperform, active fund management for the purpose of beating a benchmark is unlikely to generate value. Indeed as Sharpe caustically noted, for active management to work in the way some suggest would require "that the laws of arithmetic have been suspended for the convenience of those who choose to pursue careers as active managers"[34].

This might give a clue as to why, in the UK, there are 28,000 funds established, most of which aim to beat benchmark performance. One reason might be that it is known that purchasers of funds often look at historical performance before deciding on a fund manager. One way for the asset management industry to respond is to create a large number of funds. Of course some, indeed most, will not perform well. But a minority will handily beat the average. If they do so, they will become more marketable.

Nor is this an easy problem to solve. There may be some investors who do indeed want the "hope value" which comes from choosing a manager who aims to beat a benchmark. There are others who will favour the style of a particular manager in meeting their needs. But the scale of fund proliferation suggests that many customers are making poor, expensive, and low value choices.

The irony of course is that fund management is quite a fixed cost business. Therefore in aggregate, in order to assist with a false marketing promise, (since historic performance is not a guide to future performance), we have created a more expensive system of fund management. Offering choice may be a good thing, but it is not an end in itself and the way in which choice is offered has had a high cost.

Example 3 – Hedge Funds

One place where this desire to beat averages may be apparent is in the hedge fund industry. By the year 2010, that industry had attracted over $1.6 trillion dollars in assets, on the basis of its historic performance. But in his book, The Hedge Fund Mirage, Simon Lack[35], himself a hedge fund manager, probes whether these returns are a fair assessment of the value delivered to customers. He notes that, in the early years of the hedge fund industry, whether through luck or judgement, the performance was good, and that on the back of that performance it attracted huge additional investment[36].

Thereafter, returns were more modest. Further the declared returns were always given gross of fees. Lack therefore sought to place himself in the position of an average customer who had invested in hedge funds, who would receive returns net of fees. And he calculated returns on a "dollar weighted" basis, meaning that returns made by the industry when customers had committed large sums to it counted for more that when investment levels were small. As a result of those adjustments, he calculated that in aggregate, almost no outperformance was achieved by hedge fund investors; some did well, but others lost out. He is clear in his belief that there are some exceptional hedge fund managers, but ultimately concludes that "hedge funds have been a fabulous business and a lousy investment".

34 https://web.stanford.edu/~wfsharpe/art/active/active.htm

35 The Hedge Fund Mirage: The Illusion of Big Money and Why It's Too Good to Be True. Simon Lack. 2011

36 We would note that hedge funds started as an investment option which provided an alternative return between equities and bonds with some of the risks "hedged" to better match the investor's liability. Today many hedge funds are simply aimed at outperforming one another

Example 4 – High Frequency Trading

Our final example of an activity in financial markets whose cost outweighs the value of its purpose, is high frequency trading. In his book, Flash Boys, Michael Lewis notes that high frequency traders had, at great expense, built a communications channel between stock markets in Chicago and New York. He investigates why this expense has been paid, and notes how the high frequency trader is able to profit.[37]

Before the line was built, someone willing to sell a security in New York for $x, might have to wait a few seconds before being linked up to a buyer in Chicago who was willing to buy the security for $x+y. The price they would settle at would be somewhere between the seller's offer price of $x and the price the buyer was willing to pay, x+y. In other words, seller and buyer would share the value of y, which is the benefit of the trade. However, once the high frequency trader enters, things change. Before the buyer and the seller get in contact with one another, the high frequency trader buys the security for x, and, seconds or even fractions of a second later, sells it for x+y, denying the buyer and the seller the benefit of the trade. On the face of it, this costly activity fulfils no purpose, and is a "tax" paid by the outside world to benefit the people involved in the activity.

In these four examples we have demonstrated that there are activities which take place, and have taken place over many years, whose cost is high but whose value, (in terms of delivering purpose), is disproportionately low. We would note that these have taken place despite the existence of competitive markets that one might have hoped would eliminate them. Our contention would be that the existence of these practices is entirely consistent with the results that Philippon has found. That is that, over time, the finance industry has found itself able to develop and sell products that do not provide benefit to customers. It has, in short, over 130 years been able to extract a constant economic "rent" from its customers, rather than focussing on fulfilling its purpose better and at lower cost.

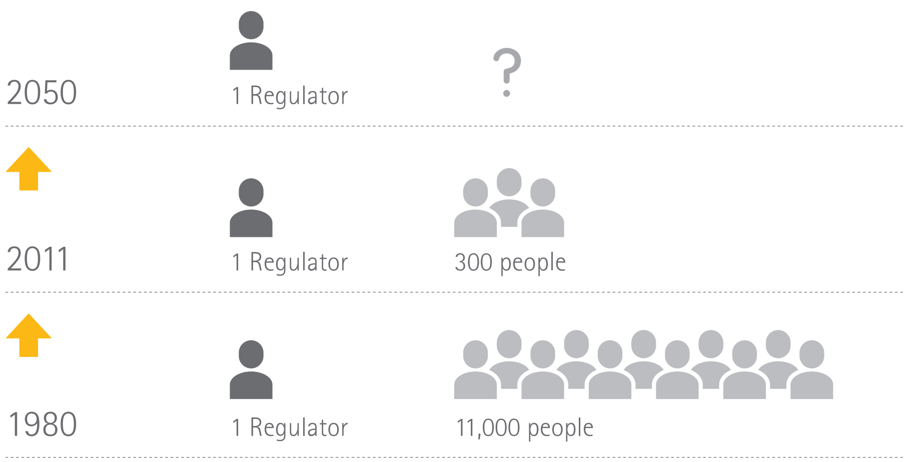
37 Michael Lewis, Flash Boys, Penguin, 2015

7. Role of regulation

One might have thought that regulation would be able to address this problem; after all it is the regulator which is charged with ensuring that markets work as they ought to do, that is, in the consumer interest. Given the evidence presented by Philippon, one might conclude that regulation has failed.

There may be many explanations for this regulatory failure. One would be that regulators have never been charged with encouraging the industry to fulfil its purpose. Indeed, to the best of our knowledge, no regulator has tried to define purpose and to measure whether or not it is being fulfilled. If you only get what you measure, then it is scant wonder that regulators have failed to encourage a purposeful industry. Instead they have focused on micro regulation believing this to be the best way to protect customers.

Contrary to much popular opinion, however, the failure of regulation is not due to inactivity. As Andy Haldane noted, "In 1980, there was one UK regulator for roughly every 11,000 people employed in the UK financial sector. By 2011, there was one regulator for every 300 people employed in finance. It is intriguing to speculate what will happen if such trends continue[38]. Regulators have tried to intervene, but have done so by assuming that, after every failure of financial markets they can solve the problem with further regulation. In fact, what is required is a behavioural change, so that the industry does the right thing in the first place, using its expertise to serve its customers and being rewarded for it. Instead, regulation has banned lots of practices, allowing industry participants, perhaps particularly the less scrupulous ones, to seek ways around the rules, in a costly game of regulatory whack-a-mole.



So, for example, in pensions, rather than design a system which can, at lowest cost provide savers with a predictable income from the day they retire until the day they die, tomes of regulation have been passed, making the whole area a regulatory minefield. In the late 1980s, pensions legislation that could be studied totalled 3,000 pages. A dedicated, young, fresh graduate lawyer could go read through it at a steady pace. Today, pension legislation totals over 100, 000 pages[39]. Can it really be said that the whole system is now better than it was then?

38 Andrew G Haldane: The dog and the Frisbee Speech by Mr Andrew G Haldane, Executive Director, Financial Stability, Bank of England, and Mr Vasileios Madouros, Economist, Bank of England, at the Federal Reserve Bank of Kansas City's 366th economic policy symposium, "The changing policy landscape", Jackson Hole, Wyoming, 31 August 2012

39 Pensions and Chocolate, the state of pensions regulation 2017, Pinsent Masons, 2017

The danger is that the regulator plays a constant game of cat and mouse, in which financial companies are generally one or more steps ahead. And it can continue in this fashion. When unforeseen problems arise, the familiar outcome is yet more regulation, which becomes progressively more complex but less effective.

In the end of the day, industry participants rightly complain about the burden which regulation is placing upon them; that it is contributing to the poor productivity that Philippon identified. Usually these complaints are made privately, since there is little to be gained from having a public spat with the regulator. They are rarely presented as a systemic challenge to the way in which regulation is conducted. Policymakers respond by asking the regulators to desist and so things progress until the next crisis, when the political winds change, and a new wave of regulation is set in train.

This dysfunctional process could be addressed to a considerable extent if the regulator was to start by defining the purpose of the finance industry as a whole, and those of the institutions of which it is comprised. If it was then to go on to encourage the establishment of "fit for purpose" institutions, designed to meet customer needs effectively, it would discover that the need for regulation might reduce, productivity increase, and costs fall.

It might also discover that, by creating a purposeful system, it could allow it to be safer and more flexible. In a search for objectivity, regulators have increasingly decided to adopt approaches from financial economics as ways of regulating the industry and in particular the risks it is taking. So, for example, by using statistical techniques based on "normal distributions", such as "Value at Risk", regulators have focused on ensuring that risk is under control in "normal" times. The problem with that is that risk is rarely a problem in normal times. As one commentator drolly suggested, "financial regulation is like a seatbelt that works when you go over a speed bump, but is designed to fail in a collision".

If regulators take this approach, and if the boards of banks believe their only purpose is to profit, while the regulator has sole responsibility for financial stability, we must anticipate trouble ahead.

Anthony Correia / Shutterstock.com

8. How big is the opportunity if we make the finance industry "fit for purpose?"

In this paper we have shown that the finance industry fulfils vital purposes, but that over generations, it has failed to improve its productivity. This suggests that there could be enormous benefit if we could make the industry fit for purpose, since there is huge room for improvement in a critical industry whose output is of great value.

The degree of improvement and its contribution to economic welfare is difficult to estimate precisely. But we can get some sense of the order of magnitude. Today, Philippon calculates that the cost of intermediation by the finance industry is 2%, and that there has been little improvement to that figure over 130 years. During the same period average productivity in the USA (where the study was done), has increased tenfold[40]. One might have thought that, given its exposure to so many productive enabling technologies, the finance industry should at least have been able to match that performance. Of course, some of the productivity improvement might not have been passed on to consumers. Let us therefore assume, conservatively, that the cost of intermediation should have fallen by just 50%, so that it should be 1% rather than the 2% which Philippon discovered. We can then consider the value that a drop to 1% would have created. We might think about this in two ways. First, what would happen if that 1% had been passed on to borrowers, and second what benefit might it have given to lenders?

Today we live in an era where a reduction in interest rates is seen as a prime stimulus to the economy. These moves in rates are, however, likely to be temporary. If, instead of dropping the base rate, intermediation costs were to fall by 1%, this would be permanent and sustainable. That would seem like a major stimulus to the economy. However, the relationship between interest rates and business investment is much debated by economists. So it is perhaps easier to think about the value of a more efficient finance industry from the point of view of the lender.

Imagine that we were all to receive 1% more on our savings and investment accounts. Again it would create a huge increase in national welfare. Indeed, we could do a back-of-the-envelope calculation for our pensions, imagining how much we would benefit if we were to receive a 1% additional return annually. A typical pension might consist of a regular payment every year for 40 years, followed by a drawdown over (say) twenty years. If a pension saver were to receive an additional return of 1% that would increase their pension by a full 33%. Or alternatively, they could have the same pension for 25% less cost. Today, about 6.5% of GDP is set aside every year on pensions. So, we could save 25% of that cost, and realise a benefit of 1.625% of GDP, just on pension savings alone. (This sum is not far short of the contribution North Sea oil has made to the UK economy.[41]) So the benefits of a purposeful finance system are vast.

There is however one argument which is sometimes made about the losers from reform. Sometimes people suggest that, if it were to reform and become more productive, the City of London and its financial institutions would lose out. But this is a false argument. It is reminiscent of those who, in the 70's felt that inefficient and unreliable British car companies should be protected. In the end what happened was that they were competed out of business. The same could be true for the City. If it buries its head in the sand, others will find ways to compete. But if today, it were to galvanise its extraordinary expertise and focus on providing low cost purposeful financial services, the world would be its oyster. The value of financial services is so great, that a provider who could guarantee they would work to proper purpose would be greatly valued, and would be likely to prosper accordingly.

40 Based on GDP/Capita http://socialdemocracy21stcentury.blogspot. co.uk/2012/09/us-real-per-capita-gdp-from-18702001.html

41 Mining, quarrying and hydrocarbons added £31.4 billion to UK GDP of £1.6 trillion in 2011. https://en.wikipedia.org/wiki/Economy_of_the_United_Kingdom

9. The purpose of financial institutions and products

This paper has argued that, as we think about the financial services industry at a macro level, we need to start by having a view of its overall purpose. Equally, at a micro level, we can ask about purpose, and design institutions and regulations which are likely to promote purposeful products, and encourage them to compete.

Indeed, using this paper as a starting point, Pension Insurance Corporation (PIC) are intending to ask leading practitioners to reflect on purpose, and to suggest what structures would best deliver it. So, for example, we could reflect on the purpose of banks, of stock exchanges and of brokers. We could reflect on the purpose of a pension, a bank account or an insurance policy. We could suggest what structures would best deliver that purpose; whether those we have in place today reflect a similar structure, and if not, why not.

As a start to this process, PIC asked the authors to reflect on the purpose of a pension, and what institutions would be best designed to fulfill that purpose.

The purpose of a pension

Let us begin by defining the purpose of a pension as being "to provide a predictable stream of income from the time an individual retires, until the time they die, and provide thereafter for any dependents". A pension is of value to everyone, but it is of essential importance to those who may retire without many assets, since if they do not have a pension, and if they live for a long time they may run out of money and be unable to support themselves.

Pensions are likely to be expensive, so if people are to be able to afford one, there needs to be an effective system of savings. But the unique feature of a pension is that it will pay out predictably from the time it is triggered until the time of the holder's death. It will be most effectively provided only if people are able to share "longevity risk". In other words it is an insurance product, which, because of its cost, we need to be able to save for.

Typically, a pension is required to meet living costs—so the income provided should be resilient to inflation. Ideally, that income would be very predictable, however, where there is a tradeoff between predictability and return, judgement will need to be exercised.

People saving for pensions are likely to need to do so over a very long period of time. If a pension is to last 20 years, then it might well take 40 years to save an adequate sum. Levels of return therefore make a big difference. Someone achieving a 4% real return over those sixty years of accumulation and decumulation, will receive a pension one third higher that someone who achieves a return of 3%. Similarly someone who incurs charges of 0.5% will enjoy a similar uplift to someone paying 1.5%.

Implications

Pensions are insurance products. The nature of all insurance is that it is facilitated by the pooling of risk, where the probability of the risk crystalising is more accurately calculable for the population, than for the individual. In other words it is a collective arrangement.

Probabilities can be judged more accurately the greater the number of participants in the collective. Therefore, an effective pension institution is likely to be one which can at low cost, create a collective of adequate scale, which allows accurate actuarial calculations to be made about the level of risk. In addition, this institution needs either to be well capitalized, so that, should downside events occur, the promises which have been made can nonetheless be met, or to allow a degree of flexibility in its promised benefits. The latter, however, requires a high degree of justified trust between the policyholder and the institution providing the pension, to instill confidence that the flexible promise will not be abused.

There are two critical judgments that need to be made in offering a pension. One is to predict death rates. If all policyholders unexpectedly live an extra twenty years, pension expectations will be difficult, indeed impossible, to keep. So pension funds need to be able to predict how long pensions will be paid out for. (It might also follow that, for fairness, the predicted life expectancy of all participants before they enter the pension plan, is broadly similar). The second judgment is the return that will be achieved on the money set aside. Typically subscribers save over many years, and expect that the returns from that saving will substantially augment their pension.

This creates a dilemma. If the pension provider wants to make a promise that is certain, that will constrain them to invest only in "risk-free" assets that give a poor return. On the other hand, if they invest in assets whose value might fall, their policyholders need to understand this, and to trust that the insurer will not use sleight of hand to benefit themselves by taking a disproportionate amount of whatever return is made. This means that building trust into a pension system is critical. If a provider needs to take risk in order to provide a better pension, the saver needs assurance that, at all times, they will act professionally, and only on the saver's behalf.

A purposeful pension

So a purposeful pension institution might have the following characteristics:

1. It will have an effective return seeking savings system into which the saver can put their money
2. It will pool longevity risk effectively
3. It effectively moves capital through the economy, investing in assets, or a series of assets which give a real return long term
4. It has clear and appropriate actuarial information
5. It is, and is felt to be, trustworthy
6. It is able to offer a degree of flexibility in the promise it makes and hence is able to accept a degree of flexibility in its investment returns to allow them to be higher
7. It has low costs, and is likely to be exploiting scale economies
8. It is adequately capitalized and/or flexible in its promises
9. It operates within an effective and appropriate regulatory regime
10. It has fairly aligned the interests of policyholders, with those of shareholders and other stakeholders

As one reflects on the history of the pension industry it is intriguing to note how these characteristics were first achieved. The first pension fund was established, not by a financial institution, but by two Church of Scotland ministers, Wallace and Webster, in the 1740's. The subscribers to the fund were other Church of Scotland clergymen, who presumably had a high degree of trust that, even in this period of low regulation and questionable business ethics, their fellow brethren would not short change them. Their actuarial information put together by statistical studies undertaken by the church, informed by developments in statistical theory, and overseen by the professor of mathematics at Edinburgh University. Trust derived from the fact that both promoter and beneficiary were clergymen. Payouts could be and indeed were varied, (which helps explain why Wallace and Webster were able to take pride in the fact that years later their predictions turned out to be nearly penny perfect).

For most people today it is difficult to secure a retirement pension through a system that, like Wallace and Webster's, is both flexible and efficient. Instead, UK pensions have bifurcated into two systems; Defined Benefit (DB) and Defined Contribution (DC). The former are organized collectively, and still offer a pension; i.e. a stream of income from retirement until death. However, they are only allowed to operate if a third party, usually an employer, is willing to underwrite the pensions which are to be paid. That liability is rigidly defined has become very costly. Private sector companies have thus abandoned DB, and replaced it with DC.

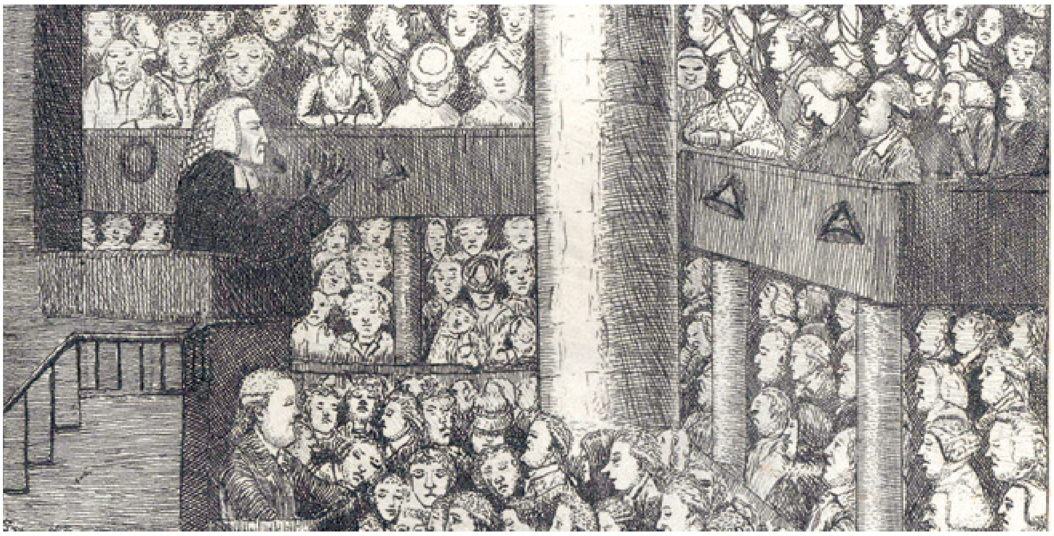
On our definition of purpose, DC is not a pension. Rather it is a savings plan, which can be realized at the point of retirement. The problem is that, at that point there is no sensibly priced pension available to purchase. These DC savers have no vehicle which can fulfil the primary purpose of a pension, since there is no way to share longevity risk, or at least not at a reasonable cost.

The irony is that in other countries, effective, flexible pensions are still available. In Denmark or Holland, pension funds like ATP, ABP or PGGM, come pretty close to the characteristics we have laid out for a purposeful pension fund. They offer pensions, they pool longevity risk, they are managed by trustees, who owe loyalty only to beneficiaries, they are of a scale to minimize costs, and have good regulators, and strong actuarial advice. They are able to invest in a range of relevant investments, including allocations to infrastructure investments at levels impossible for British funds. They are of course able to offer some flexibility in the pensions they pay. So for example, in response to the 2008 crisis, pensions in Holland fell by 2%. One might contrast this with the 50%+ fall in annuity rates over the prior 10 years for those about to retire in Britain.

The system used in Holland and Denmark is known as "Collective Defined Contribution (CDC)", and it is generally recognized as the system that can provide best pension outcomes. Indeed most studies suggest that CDC will give pensions which are about 30-40% higher than the DC system currently becoming the norm in the UK.

Earlier in this paper we noted that 6.5% of our national income is set aside for private pensions. By introducing CDC we could achieve a 30-40% increase in the true productivity of this expenditure[42].

That would be a huge benefit from just one step towards a more purposeful financial system. So CDC is recognized as extremely effective in fulfilling the purpose of a pension. It also illustrates the degree to which the design of our financial system has failed to take purpose into account. In the UK, CDC pensions are effectively illegal, as regulations have been put in over many years, each aimed at some form of consumer protection, which prevent the flexibility needed for such pensions to operate. In establishing these, regulators were doubtless acting in good faith. Sadly they failed to start by thinking about "the purpose of a pension", or the governance necessary to make such a purposeful system work.



Rev. Alexander Webster (pictured) along with Rev. Robert Wallace, established the first pension fund for the widows of their fellow Church of Scotland clergymen in 1743. Similar pensions are now hardly available to new private sector employees in the UK.

42 A review of the literature on CDC pensions is included in a publication by The Royal Society for Arts, (RSA). These studies include work by the Government Actuary, but various academic and actuarial institutions. https://www.thersa.org/discover/publications-and-articles/reports/ collective-pensions-in-the-uk-ii. Since that paper was produced, there has been a further study by the Pension Policy Institute that comes to similar conclusions. http://www.pensionspolicyinstitute.org.uk/publications/reports/ modelling-collective-defined-contribution-schemes

10. Looking into the future?

This critique of industry purpose is made at a time when finance industry is undergoing one of the most pivotal transformations in its history. Technology is affecting its operations, products and the very basis of competition. Properly guided, the potential of these disruptive technologies to create value is immense. But equally, as we have seen, in the past the benefits of innovation have not been passed on to customers, and hence today, the fear is that despite their vast potential, there is no guarantee that the technologies will be used purposefully.

That is the challenge for industry professionals, for policymakers and regulators, and for all who influence the financial "ecosystem". In other publications the authors have suggested policies that might assist. But it is not the goal of PIC to seek advice from only a few sources. Rather it is to facilitate a debate. To encourage every stakeholder to think about purpose, to debate and challenge, and to think about how, together, we can create a more purposeful industry.

Thus this paper is not an end in itself. Rather it is a challenge. The finance industry has a pivotal role in our society ensuring our businesses function and our economy works. Without its services—of safekeeping, transaction facilitation, risk reduction and intermediation—it is impossible to create a prosperous society. However, we currently see an industry which is unproductive in achieving these goals, and where many of its activities fail to achieve the purpose that they could and should be pursuing.

So how do we go about creating a solution to this situation? We would suggest that we might begin by defining purpose, both for the industry as a whole, and for individual institutions such as banks, pension funds, stock exchanges etc. We should then measure their performance against these purposes with the aim of building a culture within the industry that helps to hold others to account, rather than relying on the regulator to police the industry.

We all need to be prepared to take some initiative, similar to the work commissioned here by PIC to facilitate a debate. If we take the four purposes of finance seriously, it is clear we could design better institutions and therefore much better products to deliver upon them. It's a challenge, but one where the prize is significant enough to justify the effort. We hope that the finance industry, regulators and policymakers will rise to meet it.

As mentioned earlier, this paper is just the beginning of a debate. In future publications, PIC intends to explore these issues further. One way will be to ask leading thinkers and practitioners to consider the purpose of the various institutions that comprise the finance industry and how far current practice is able to deliver to that purpose.

For example, we noted that no regulator has been asked explicitly to regulate the industry to make it "fit for purpose", but rather they have been charged with secondary goals, such as promoting competition. One might ask whether this approach has created problems, whether different approaches have been taken in different jurisdictions, and which of these have proved most successful.

Equally one might look at other institutions. Historians might note that the original purpose of a stock exchange was to help companies raise money, while allowing investors to sell their shares, so that the company could continue long term, even as its owners changed. In other words it was an institution that supported long term investment. That seems a distance from what we have today, where many complain that the practices of the stock exchange promote short termism. Similar observations might be made about much of the banking system. Its purpose might be defined as keeping our money safe, helping us transact and intermediating between providers and users of capital. Against these parameters, how well does our current banking system measure up? If it has drifted away from its proper purpose, how might it be reformed in a more positive direction?

But the debate we are opening up should also make us reflect on how we might better measure performance. Might we build on Philippon's work, to look at the UK financial system and its various components? For example could we find metrics to judge the productivity of the banking, the investment, or the insurance industries? In that context, if we are measuring productivity without reference to purpose, we might want to reflect on whether this is an adequate compass to steer the economy.

For some of these topics, PIC will commission particular papers. But this is not a debate that should be limited only to a few participants. Rather we hope it will create a new discussion. We hope that this paper, and those which follow, will offer guidance and stimulate a different and practical approach to addressing and resolving the issues which confront our industry. That writers, thinkers and policymakers may find it a fruitful perspective. And that, above all, it can help catalyse action by the many thousands of people within finance who want our industry to fulfil its purpose.

It is to those people that this paper is dedicated.

(Pictured left, the London Stock Exchange in the 18th Century) Stock Exchanges for the trading of securities in public companies were originally conceived as institutions that supported long-term investment.

(Pictured, right © KarimPhoto / Shutterstock.com) SOUTH RUPSHI, BANGLADESH: Alomgir and Sultana, brother and sister, work together on a white sari with golden decorations. The Grameen Bank provides loans to entrepreneurs too poor to qualify for traditional bank loans.

Literature review on the purpose of finance

Methodology

Our aim was to examine the literature on the purpose of finance. We wanted to investigate both academic sources, and also to examine the work of practitioners and others. In this section we describe our methodology and give an overview of the literature.

Approach

We decided to take the following terms and search academic databases, internet search engines, (primarily Google and Google Scholar) to uncover articles which provided a view on the question of the purpose offinance. The search terms were as follows:

- The purpose of finance
- The function of financial markets
- The existence of financial intermediaries
- The purpose of banks, insurers, and pensions

There is a clear body around "purpose". Much of it centres on the purpose of an institution, such as a bank, or a financial product such as insurance. There is also a considerable body of literature about the purpose of the company. While these are interesting, they do not directly address the question we pose about the purpose of the finance industry.

A selection of those that do are summarised below. We note that, despite its importance there is very limited literature on the topic. It is unclear why this should be the case. Perhaps it is because of an unwillingness by economists to define purpose beyond some notion of "What a customer will voluntarily buy".

However, the work of Philippon, and the cutting critique of John Kay suggest that that may be inadequate; that despite specialisation and enabling technology, productivity has not improved, and that seemingly "purposeless" services are pursued.

How to make finance work. R Greenwood D Scharfstein 2012

The authors discuss whether or not finance has served its purpose in the last 3 decades. The article does discuss explicitly the economic purpose of finance. The authors say "the financial sectorexists to serve the needs of U.S. households and firms and by this standard its performance has been mixed". The article also outlines three failures of the financial system (1) financial instability (2) housing finance and (3) investment costs. They conclude with the statement "In the end, the financial sector should be judged not only on its profitability and size, but on how well it promotes a healthy, more competitive economy over the long term".

Regulatory reactions to the global credit crisis: analyzing a community under stress.
Eleni Tsingou 2009

This paper discusses the link between finance and the real economy and the "special role of the financial sector". This is primarily a paper on governance and discusses the regulatory/policy response to the financial crisis. But in doing so it highlights the function of finance in the economy. The paper discusses how post financial crisis the policy community is adjusting its "economic ideas" i.e. in the wake of the financial crisis, policy makers are asking themselves what the link between finance and the real economy should actually be.

The unholy alliance of business and science. R Buchholz S Rosenthal, 2007

This is not an article about finance per se – but a discussion of the study of business – highlighting the factthatbusiness is nota science. The article debates whether or not management can be considered a profession like law or medicine and the authors state that the answer to this question has important implications for the purpose of business in society...

Responsible investment in times of turmoil. H Schafer B Scholtens S Signori, 2011

The author states that "we should welcome this opportunity offered us by the authors to seriously consider the purpose and significance of investment and finance". "We have somehow forgotten that the purpose of finance ought to be to provide resources for productive investments. Throughout the book, each chapter discusses the role of responsible investment in some sector of the finance industry.

Finance: servant or deceiver? P Dembinski Palgrave McMillan, 2009

The foreword states "It is vital to understand what is happening and what issues are at stake." This book highlights the difference between relationships and transactions - the key to a proper understanding of finance." The book discusses as a key theme that a healthy financial sector serves both the common good ofsociety as well as the well-being ofindividuals who participate in it. When it functions well, it ensures a reasonable stability in money and prices, it frees up wealth (liquidity) and matches productive capabilities (investment) and it diminishes and manages a variety of risks. When it functions poorly it becomes a faithless servant and at its worst a merciless master.

Conference paper for the societal function of investment asset classes: implications for responsible investment. N Beinisch, C Bieh, 2012

This paper discusses the Principles for Responsible Investment (PRI)Section 3 of the paper is on the debates about the social function of finance. Section 3 starts "One ofthe problems with the conceptofthe social function of finance is that there is not a coherent view of what it means. Broadly speaking, the purpose of finance is to create and preserve wealth (Lounsbury and Crumley 2007).

Towards the reform of the international financial and monetary systems in the context of global political authority: an appraisal. M .G Hayes 2012

This paper discusses a note from religious leaders to world leaders reflecting views on the recent financial crisis. The note this paper references discusses how human institutions need to develop if they are to foster human dignity and the common good. The paper aims to analyse the note from an economic perspective and states how the church is concerned with the common good and therefore about the material resources needed to achieve it. This paper and the note are primarily concerned with the question of understanding the moral purpose of finance.

A functional perspective of financial intermediation. Robert Merton, 1995

The paper states how there are two ways you can analyse financial intermediation (1) take as given the existing structure and analyse how public policy can help the institutions currently in place to survive and flourish (this is labelled the institutional perspective) or (2) take as given the functions performed by financial intermediaries and ask what is the best institutional framework to perform those functions (this is labelled the functional perspective). Merton focuses on the functional perspective and justifies this by stating thatfinancial functions are more stable than financial institutions i.e. functions change less over time and vary less by geographical region. The paper discusses the idea ofbuilding a financial system from scratch and in order to do that, we must define its central role. Merton then goes on to list 6 main functions of a financial system as (1) a payments system (2) a mechanism of pooling funds to undertake large scale projects (3) a way to transfer economic resources through time, geographic regions and industries (4) a way to manage uncertainty and risk (5) a system to transfer information to coordinate decision in a decentralized economy (6) a way to deal with asymmetric information and incentive problems.

Introduction to the economics of financial markets. James Bradfield, 2007

This is included to show that in textbooks, authors do broadly address the question of "what is the function of financial markets?". For example in chapter 3 the book states "in this chapter we develop the fundamental aspects of economies that explain the existence and operation of financial markets".

Financial markets rates and flows. James C Van Horne

This is similar to the above book.

Policy remedies for conflicts of interest in the financial system. Frederic Mishkin 2003

This paper is primarily about remedying conflicts of interest in the financial sector. The paper mainly discusses financial institutions role in financial markets in the context of information issues such as adverse selection and information asymmetries. i.e. Mishkin is focusing on the role of financial institution as overcoming information problems in the economy.

Social knowledge for financial markets. G Mikl Horke, 2010

This paper discusses the role of financial markets as social institutions and the sociological perspective of financial markets. The paper discusses the idea of making financial markets more responsive to societal concerns so inherently addresses the question of what is the role of financial markets

An overview of the financial system. Frederic Mishkin

The theme of this book is "financial markets and financial intermediaries have the basic function of getting people to move funds from those who have a surplus to those who have a shortage" and it says "well-functioning financial markets are crucial to economic health".

Lecture notes on money banking and financial markets. Peter Ireland

This is a short lecture note that starts out by discussing "the function of financial markets and financial intermediaries".

Creation of financial markets in (previously) centrally planned economies. Daniele Checchi, 1992

This is an interesting paper as it discusses the emergence of previously centrally planned economies and the creation of financial markets from scratch. It shows in an economic model, the impact on welfare of the introduction of financial markets.

PENSION INSURANCE
CORPORATION