Andrew G Haldane: The age of asset management?

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It is a great pleasure to be speaking at this London Business School conference on asset management. Given the topic and my area of responsibility, I thought I would discuss the links between asset management and financial stability.

This issue is not new. But it has become topical recently as the asset management industry has grown and changed shape. Partly in response, regulators globally have begun to explore the risks to the financial system that might be posed by non-banks of various stripes, including asset managers. I want to discuss those risks and their potential policy implications.

I want also, however, to discuss some of the opportunities asset management offers. The industry is a key bridge between end-savers and end-borrowers, between the financial and real parts of the economy. As the banking system continues to de-risk, strengthening that bridge could well strengthen both the financial system and wider economy.

The evolution in asset management

Let me start with some facts on the evolution of the industry. Asset management is, of course, an agency activity. Assets are managed on behalf of end-investors, whether institutional (such as pension funds and life insurance companies) or retail, the former typically through Separately Managed Accounts, the latter through Collective Investment Schemes.

The industry's Assets Under Management (AUM) are currently estimated at around $87 trillion globally (TheCityUK (2013)).[1] This is large. It is equal to around one year's global GDP or around three quarters of the assets of the global banking industry. It has also grown fairly rapidly, with AUM roughly doubling over the past decade in dollar terms.

The longer-term picture is more striking still. In the United States, AUM have risen almost fivefold relative to GDP since 1946, from around 50% of GDP to around 240% of GDP (Chart 1). In the United Kingdom this pattern has been replicated, but over a much shorter time period since around 1980 (Chart 2). Across most OECD countries, the patterns are similar. The asset management industry has, it appears, come of age.

The drivers of this growth are reasonably well-understood. The pool of prospective global savers has become *larger*, *older* and *richer*, each of which tends to be a boon for the asset management industry. Since 1950, average life expectancy has risen by nearly 50%, world population has risen by a factor of three and world GDP per capita has risen by a factor of nearly 40. There is a strong cross-country correlation between GDP per capita and AUM relative to GDP (Chart 3).

Accompanying this has been a sharp rise in the ratio of global wealth to income. Among Western economies, this ratio has roughly doubled since 1950 from around 200–300% of GDP to around 400–600% of GDP (Piketty (2014)). Among other things, this has been attributed to post-war capital market liberalisation causing an upward shift in asset prices.

[1] Estimate based on aggregate assets of insurers, pension funds and mutual funds.

Looking forward, none of these global forces – population, ageing, incomes, wealth – are likely to go into reverse in the near future. Between now and 2050, life expectancy is expected to increase 9% (to 77 years), global population to rise by a further 30% and real GDP per capita to rise almost threefold. Wealth-to-income ratios, while high, remain below their peaks in the 18th and 19th centuries and so could rise further (Piketty (2014)).

These trends will be given impetus by changes in the pattern of global growth. The fastest growing economies globally will be those where penetration of the asset management industry is lowest. Developing markets currently represent less than 20% of global personal financial assets, but represent 40% of global GDP.[2] By 2050, developing countries will represent 60% of global GDP. In China and India, personal financial assets have grown at a rate of 25% per year for the past 20 years.

All of this suggests that the global asset management industry is likely to continue its upwards march, absolutely and relative to the economy. For example, PWC recently forecast that AUM would top $100 trillion by 2020 (PWC (2014)). Simply extrapolating GDP per capita trends forward using the relationship in Chart 3, AUM could reach $400 trillion by 2050. If these trends are even roughly right, asset management may not only have come of age – we may be about to enter the Age of Asset Management.

As important as the absolute scale of the asset management sector is its composition. On the *assets* side, a number of important trends are at play. One is the rapid growth in specialist funds, often investing in less liquid asset classes. This is evident in the growth of so-called alternatives, such as hedge, private equity, real estate, infrastructure and commodity funds. These have risen from under $2 trillion AUM in 2003 to over $6 trillion by 2012, or from 5% to 10% of global AUM (Boston Consulting Group (2013)).

Accompanying that, there has been strong growth in funds active in specialist, often illiquid, markets – for example, high yield bond funds and emerging market funds. Since 2008, these funds have grown at an annual rate of around 40% per year, outpacing growth in the global mutual fund industry by a factor of four (Chart 4).[3] Also rising rapidly have been flows into US mutual loan funds, which spiked to $63 billion in 2013 having averaged $15 billion in the preceding three years.

A second striking feature has been the rise in the importance of passively managed funds, including Exchange Traded Funds (ETFs) and other index-tracking strategies. These passive or tracking funds have risen from $2 trillion in 2003 to almost $8 trillion by 2012, a rise in global market share from 5% to 13%. Within this, ETFs have been growing at an annual rate of around 30% for the past decade with AUM currently standing at $2 trillion.

A third trend – the mirror image of the first two – has been the declining share of actively managed funds operating in large-cap equity and government fixed income markets. Their slice of the global AUM pie has fallen sharply over the past decade, from two-thirds to around a half. For some institutional investors, this is part of a longer-term trend towards "de-equitisation" – a dreadful word – to which I will return.

The reasons for these shifts in portfolio allocation are not difficult to fathom. Like many advanced economies, the asset management industry is facing its own version of the "squeezed middle". Active funds operating in core markets, in the middle of the risk/return distribution, are feeling the pinch: from above, due to the rise of alternative funds and strategies seeking higher return in a low yield environment – the search for yield; from below, due to the rise of passive funds and tracking strategies delivering lower cost to investors – the quest for cost.

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[2] Personal Financial Assets are defined as financial assets that are held by households, rather than companies or other institutions

[3] The growth in AUM may be overstated by increased coverage of the source data over the period.

From an end-investor perspective, both of these trends are understandable. Yet they also potentially carry risk implications, both for end-investors and for the financial system as a whole. For example, the shift towards illiquid assets heightens market risk for investors. And the move into passive and tracking strategies increases the potential for investor herding and correlated market movements (Bolognesi and Zuccher (2008)). Both potentially have implications for financial markets dynamics and systemic risk.

Turning to the *liabilities* side of the balance sheet, here again some important trends are at play. Among the most important is the progressively greater share of investment risk being put back to end-investors, with commensurately less being borne by intermediaries and companies. One clear example is found in the pensions industry, with the structural shift away from Defined Benefit (DB) and towards Defined Contribution (DC) pensions.

Here in the UK, the proportion of DB schemes offered to new members has fallen from 31% to 14% since 2008. Contributions to DC funds have been roughly twice as large as those to DB funds since the early part of the century. And the picture is similar on the life insurance side, with virtually all of the growth in UK life insurers' balance sheets since the early part of this century coming from unit-linked products where the investment risk is borne by end-investors (Chart 5).[4]

The measures announced in the UK Budget a couple of weeks ago will add momentum to these trends. These will remove the effective requirement on most retirees to purchase an annuity with DC pension pots once retirement age is reached. This will increase the flexibility of investors' portfolio choice. But it will also tend to place a greater onus on these end-investors to manage the associated investment risk.

These trends in the contractual structure of liabilities have risk implications for end-investors and the financial system as a whole. A key question, here, is how household behaviour is likely to respond to bearing these additional risks, especially in situations of stress. Will investors ride them out or run to the hills, stick or twist? It is impossible to know for certain. But experience during the crisis is revealing.

Then, households in a number of countries exhibited acute risk-sensitivity and risk-aversion. For example, UK households responded to heightened market risk by reducing contributions to long-term savings products, such as life insurance and DC pensions. Household net contributions to life insurance and pension funds fell from £54 billion in 2006 to £11 billion in 2008. This suggests some skittishness on the part of retail investors when faced with investment risk.

In summary, over the course of the past decade or so, the asset management industry has fundamentally changed shape. It is now large and is set to get larger still. The assets it manages are increasingly being allocated into illiquid assets or indexed strategies. And the risks on these asset allocations are increasingly being borne by (perhaps trigger-happy) end-investors.

Too-big-to-fail

Given this evolving structure, what risks to financial stability might the asset management industry pose? The financial crisis alerted us to the perils of banks that are "too-big-to-fail". During the crisis, the collateral damage from big bank failure necessitated state bail-outs. These nourished the beast that had already eaten the farm. A variety of regulatory reforms are being put in place in an attempt to house-train this beast (Haldane (2012a)).

[4] Some of this is a mirror-image of trends in the pensions industry, but the pattern is also evident for non-pension savings products.

One natural question, then, is whether the asset management industry has spawned similar such behemoths. Two relevant factors here are, first, the relative degree of concentration in the industry and, second, the scale of its largest players. Table 1 shows the world's top 10 largest asset managers and banks by asset size.

The degree of concentration across the two industries is broadly similar. The top 10 asset managers account for just less than 30% of the sector, the top 10 banks a little more than 20%. Their balance sheets are also similarly-sized. In aggregate, the top ten banks and asset managers total $20 trillion and $25 trillion in assets respectively. The world's largest asset manager (Blackrock) is around a third larger than the biggest bank (ICBC). But, on the other side, nine of the top 10 banks are larger than their asset management equivalents.

On the face of it, then, the structure of banking and asset management is not too dissimilar. But the risks to these balance sheets are also quite different. As an agency function, asset managers do not bear credit, market and liquidity risk on their portfolios. Currently, Blackrock has over $4 trillion of assets under management, but has only $9 billion of assets of its own.[5] Fluctuations in asset values do not threaten the insolvency of an asset manager as they would a bank. Asset managers are, to a large extent, insolvency-remote.

They are not, however, insolvency-immune. An individual manager or fund does face operational and reputational risk – for example, arising from a Maxwell Pensioners-sized fraud or an Arthur Andersen-shaped reputational hit. We have seen examples of this in the past – the large outflows from Gartmore's funds following the departure of key staff prior to its acquisition by Henderson; or the outflows from Axa Rosenberg in 2011 following an alleged fraud.

Nonetheless, if these are the sources of insolvency, then failure of an asset manager is likely to be different than for banks. Fraud and reputational risk tend be idiosyncratic. Keynes said of sound bankers that they were ruined in a conventional way along with their fellows so that no-one could be blamed (Keynes (1932)). If Keynes was right, then asset managers may be a different breed.

Yet even if the "fail" element of too-big-to-fail is a red-herring, the "big" is not. Distress at an asset manager may aggravate frictions in financial markets, in particular frictions in market liquidity. One example would be an asset fire-sale. This might arise if assets from a failing fund were offloaded at a pace and scale that caused indigestion in the underlying market (Office of Financial Research (2013), Hau and Lai (2012)). If so, asset prices would be driven south, possibly to well below their long-term or fundamental value. Put differently, illiquidity risk premia in those markets could be driven to sub-optimally high levels.

This fire-sale friction might be fanned by the actions of investors or counterparties. Falling asset prices may be the prompt for withdrawal (in the case of open-ended funds) or sales (in the case of closed-end funds). In some respects, this would mimic a banking "run", albeit operating through non-conventional channels (Chen et al (2010)). This could itself induce a further round of asset fire sales in an amplifying loop.

The good news here is that, unlike in banking, history is not littered with examples of failing funds wreaking havoc in financial markets. The historical examples we have tend to be confined to small and isolated corners of the financial system.

But, as any self-respecting asset manager would tell us, past performance is no guide to the future. This is especially true in an industry as large and as rapidly changing as asset management, with asset portfolios becoming less liquid and more correlated and investor behaviour becoming more fickle and run-prone. Future illiquidity pressures in financial markets, generated by asset management distress or wholesale portfolio reallocation, may

[5] Figure represents total assets, adjusted for equal and offsetting liabilities and non-controlling interests and excluding intangible assets and goodwill, as of June 2013.

be larger and more potent. In other words, Black Swan risk in asset management may be real and rising (Taleb (2007)).

Pro-cyclicality

In practice, such adverse financial market dynamics are more likely to arise from asset managers behaving in a correlated fashion, perhaps because they face a common set of constraints or sources of stress. In this respect, it is possible to identify a set of market-wide conventions or regulatory practices which have the potential to drive common behaviour among asset managers and their institutional client base. These have the potential to turn idiosyncratic market frictions into systemic market failures.

Around a year ago, the Bank began working with some academics and industry practitioners to explore these dynamics. In particular, it focussed on evidence of pro-cyclicality among insurance companies and pension funds (ICPFs) – their potential to amplify, rather than damp, the risk cycle through their portfolio choices. A report from this group will be published later in the year.

Academic and industry evidence points to at least three channels through which ICPF behaviour could generate pro-cyclicality:

Market Conventions: Investors face an acute information problem when judging the performance of their fund manager (Rajan (2005)). One way of mitigating that problem is by benchmarking fund performance, either to others in the industry or to an industry-wide index. That is an important reason why relative return benchmarking and index-tracking is commonplace. There is also evidence that investors adjust their portfolios on the basis of these relative metrics – for example, with stronger inflows into funds whose relative performance has been superior (Chevalier and Ellison (1997), Feroli et al (2014)).

These market conventions have the potential to amplify pro-cyclical swings in asset prices and investor flows. For example, in market upswings fund managers are likely to try and juice-up returns by searching for yield in an attempt to outperform their benchmark. The reverse occurs in the downswing when there will be a quest for safety to boost relative return rankings.

But if everyone is playing this game, the result will be pro-cyclical pressures on asset prices, adding exuberance to the upswing and pessimism to the downswing. This increases the potential for mis-pricing in asset markets – by turns, risk premia becoming first too thin and then too fat. Relative return benchmarking creates, in effect, a Red Queen Race for the asset management industry (Ridley (1993), Haldane (2012b)).

Other asset management conventions may also generate pro-cyclical swings. For example, index-tracking strategies, including through ETFs, will tend to increase asset correlations and herding in investment flows (Bolognesi and Zuccher (2008)). The use by asset holders of a small pool of consultancies for investment advice may also generate correlated investment strategies. And the use of short-term performance mandates for fund managers is also likely to amplify pro-cyclical swings in asset allocation and asset prices.

Accounting Rules: The 2000s saw the introduction of Financial Reporting Standard (FRS) 17 in the UK and Statement of Financial Accounting Standard (SFAS) 158 in the United States. This fundamentally changed companies' accounting practices in respect of their pension obligations. In particular, companies were required to value pension assets at fair (that is, mark-to-market) values, with liabilities typically discounted using a corporate bond rate. Pension surpluses and deficits then needed to be recorded on balance sheet.

This change in accounting rules reshaped company and pension fund behaviour. For example, in a downswing, risky asset prices and safe rates tend to fall, raising measured deficits. Faced with this, pension funds will have an incentive to sell risky assets and purchase bonds to better match their assets and liabilities (Amir et al (2010)). But this will

itself tend to drive down yields further, boosting market-valued liabilities and thereby encouraging further matched bond purchases in a pro-cyclical spiral (Plantin et al (2008)).

A similar dynamic affects insurance companies. Between them, FRS 26 and 27 specify valuation conventions for measuring insurers' assets and liabilities. Some of these involve marking assets to market and discounting liabilities at a risk-free rate. This, too, has the potential to generate pro-cyclical loops, with sales of risky assets whose prices are already falling and purchases of risk-free assets which in turn increases the market value of liabilities and the incentives to hedge further.

Regulatory Rules: Risk-based regulatory rules can contribute further to these pro-cyclical tendencies. For example, consider a pension fund or insurance company operating close to its risk-based capital or funding requirement and whose bond portfolio is downgraded and suffers a drop in price. This has the effect of both reducing measured solvency due to marking to market and raising required risk-based capital requirements – a double whammy.

In response to this, ICPFs may have an incentive to sell their downgraded assets to de-risk their portfolio. But this will tend to depress further asset prices in a pro-cyclical spiral. Merrill et al (2012) provide evidence of just this dynamic at work. Following downgrades of non-agency RMBS in the US, insurance companies had an incentive to sell their downgraded securities to reduce their capital requirements. Merrill et al show that this selling occurred at lower prices among those insurance companies marking-to-market.

What additional evidence do we have of such pro-cyclicality? One piece comes from looking at investment allocations by institutional investors over time. As an example, Chart 6 plots growth in the S&P 500 against the change in the portfolio allocation to equities among US life insurers between 1996 and 2012. It shows a high correlation, with rises in equity prices inducing reallocations into equities.

This suggests a potentially significantly pro-cyclical swing in portfolio behaviour. For example, a 10% rise in the S&P on average increases the equity portfolio share by over one percentage point – or around $70 billion given the scale of US life insurers' balance sheets.[6] If done quickly, this could be a potent procyclical amplifier. Similar patterns are evident among life insurers in other countries.

A second piece of indirect evidence comes from the behaviour of regulators. There have been several incidences over recent years of regulators loosening regulatory constraints to forestall concerns about pro-cyclical behaviour in a downswing. For example, UK regulators loosened regulatory constraints on insurance companies in the early 2000s following the bursting of the dotcom bubble. This was due to fears of selling pressure on equities being amplified as insurance companies de-risked their portfolios as they neared regulatory constraints. Pension fund regulators have taken similarly-motivated actions recently due to depressed real yields boosting the market value of liabilities.

A third piece of evidence comes from analysing the impact of ICPF asset allocation decisions on asset prices. In particular, at the Bank we have analysed the impact of purchases of long-term UK indexed-linked debt by UK ICPFs since the early 1990s (Zinna (2014)). Over this period, the combination of accounting and regulatory rules led to large cumulative purchases of long-term government debt by ICPFs. At the same time, long-term real yields fell from around 4% to around –1%.

Controlling for other factors, such as the supply of government debt, research at the Bank has sought to identify the impact of ICPF purchases on the yield curve. It finds the impact to be material, especially at the longer end of the yield curve. Over the period 1990 to 2010, it finds that pension funds purchases lowered the two-year real yield by around 70 basis points

[6] Data are adjusted to remove impact from re-valuation effects.

and 20-year real yields by around 165 basis points, with the price pressures most acute during the period 1996 to 2004.

For insurance companies, the bulk of the buying pressure comes somewhat later (2006 to 2010) and the impact is somewhat smaller (30 basis points and 75 basis points respectively). Nonetheless, if these ready-reckoners are even roughly right, they suggest a very significant impact of ICPF portfolio allocation on yields, and hence on incentives to hedge further, in a pro-cyclical spiral.

This evidence, while far from conclusive, provides some important clues. There are indications of correlated, pro-cyclical swings in asset allocation and asset prices induced by asset managers' and their clients' behaviour. Like bankers, institutional investors have risen and fallen with the herd. Keynes' bankers and today's asset managers may not after all be such different beasts.

Patient capital

There is a second, long-term, set of risks and opportunities posed by the asset management industry. Perhaps the defining feature of the sector is the long-term nature of its liabilities, especially for institutional investors like ICPFs. This makes the sector a potentially important source of long-term financing to households, companies and governments – for example, in the form of equity and long-term debt.

Yet the data tell a different tale. Chart 7 plots the portfolio allocation of UK ICPFs over the past quarter-century. The most striking trend is the erosion in ICPFs' direct holdings of UK equities, where the portfolio share has fallen from around 50% in the late 1980s to less than 10% today. Their shares of the UK stock market have mimicked this path. There has been a huge "de-equitisation" of portfolios. Although this pattern is not found universally across countries, it is also evident in, for example, Japan and France.[7]

There is no single cause of these portfolio trends in the ICPF sector. Some explanations are benign. For example, as the population ages and a larger chunk near or reach retirement, pension liabilities mature. We would then expect to see pension funds switching into lower-risk, shorter-duration assets, such as fixed income securities. And this is indeed what has occurred.

But this seems unlikely to have been the sole explanation for de-equitisation. In particular, regulation and accounting appear to have played a significant role. Take the UK. In 1995, the Pensions Act introduced a Minimum Funding Requirement (MFR) – the ratio of assets to liabilities – of 90%.[8] The discount rates on liabilities were linked to UK government bond ("gilt") yields. This drew trustees to gilts, and away from equities, as a matching asset to their liabilities.

The Pensions Act 2004 abolished the MFR and replaced it with a scheme-specific funding requirement that further embedded the market-value approach to liability valuation. At around the same time, FRS 17 required publication of corporates' pension fund surpluses or deficits. This also had the effect of encouraging companies and fund managers to avoid volatile assets, such as equities, and purchase low volatility government securities to avoid large published swings in pension surpluses and deficits.

These changes in regulatory and accounting rules are not unique to the UK. There have been a number of empirical studies of their consequences in other countries which point

[7] This trend towards "de-equitisation" has been analysed, in a broader context, by McKinsey Global Institute (2011).

[8] If a scheme's solvency dropped below 90%, the employer had to restore it to 90% within one year; if a scheme's solvency was between 90 and 100%, it had to be restored to 100% within five years.

clearly to them having encouraged a secular switch from equities into lower-duration fixed income securities, in particular government securities (Greenwood and Vayanos (2010)), Amir el al (2010), Andonov et al (2013)).

Yet the consequences of de-equitisation, for the financial system and the wider economy, may be just as dreadful as the word itself (Furse (2014)). Equity does a much better job than debt of sharing risk between borrowers and lenders as repayment terms adjust automatically with servicing capacity. Equity is also better able to support the financing of long-term investment projects because it is perpetual. So a world without equity is likely to be one with poorer risk-sharing and weaker long-term investment.

To illustrate these costs, consider the portfolio behaviour of pension funds around the financial crisis. At this time, global equity prices fell sharply and risk appetites evaporated. These are precisely the circumstances in which pension funds, as long-term investors, could play a stabilising, counter-cyclical role. In particular, those pension funds with stronger balance sheets might be expected to bear greater risk when its price is cheap – for example, by buying equities.

In fact, the evidence suggests quite the opposite happened. We have looked at the portfolio behaviour of over 2000 corporate pension funds between 2006 and 2012, splitting them into those with "strongest" and "weakest" balance sheets. Strongest is defined here by the net funding position (ratio of assets to liabilities) of the pension fund. Chart 8 shows the changes in equity portfolio allocations of the strongest and weakest pension funds, together with the FTSE All-Share index, over that period.[9]

Both the strongest and the weakest pension funds began the period with a similar equity allocation. As equity prices started to fall in 2008, however, the allocations of strongest and weakest funds diverged sharply. The strongest pension funds reduced significantly their allocation, effectively cutting it in half, while weak funds maintained or increased their allocation. By the end of the period, the strongest funds had half the equity allocation of the weakest.

At one level, these portfolio reallocations made sense – the strongest protecting their surpluses by de-risking, the weakest trying to close their deficits by re-risking. Yet, from a longer-term or societal perspective, these reallocations are troubling. To cushion the risk cycle, we would wish to see stronger long-term investors purchasing risk when it was cheap. That would benefit both investors and the economy. Capital that can afford to be patient should be patient.

But those funds with the strongest shoulders appear instead to have ducked for cover, while the weakest appear to have engaged in a gamble for resurrection. In the longer-term, this type of behaviour is likely to worsen returns to investors. It will also amplify cycles in the financial system and economy by draining risk-taking when it is already weak. Patient capital ought to part of the solution to the long-term financing puzzle. In practice, it may have been part of the problem.

Regulatory policy

That naturally begs the question of what, if any, policy response might best deal with the risks and opportunities asset management poses. From a potentially long list, I will focus on three areas.

First, *Too-Big-to-Fail*. Here, the jury is still sitting. In January, the Financial Stability Board (FSB) published a consultation paper on its proposed methodology for identifying non-bank, non-insurer globally systemically important financial institutions – or, in what may represent a

[9] Data are adjusted to remove impact from re-valuation effects.

new high-water mark for impenetrable financial acronyms, NBNI G-SIFIs. Asset managers are being considered among this class. Based on the consultation results, the FSB will report to the G20 later this year.

Views on that consultation will be interesting and I am sure at least some of you here will be offering some. We are in the intellectual foothills when understanding and scaling the transmission channels through which asset managers could generate systemic risk. And given the recent changes in the scale and structure of the industry – a world of less liquid assets and runnier liabilities – these channels may be more potent tomorrow than they were yesterday. Against this backdrop it may be premature, and probably imprudent, to be ruling out future sightings of asset management Black Swans.

At the same time, as regulators we should avoid tarring all birds with the same brush. For example, even if the financial market externalities associated with asset management failure were found to be potentially large and damaging, some of the conventional too-big-to-fail solutions may not be the right ones. For example, because asset managers are essentially unlevered, leverage or capital-based tools may be the wrong tool to tackle market failures. Tools which act on liquidity risk – minimum liquid asset requirements, restrictions or gates on liability redemptions – may be more suitable.

Second, *procyclicality*. Asset management has at least the potential to amplify pro-cyclical swings in the financial system and wider economy. If so, it may contribute to the mis-pricing of risk with risk premia undergoing cycles of feast and famine. That still leaves some big questions begging. How large are these mis-pricing cycles? How do they affect risk-taking in the financial system and activity in the wider economy? And, if so, how best can public policy modulate those cycles?

At present, we do not have good empirical answers to any of those questions. Jeremy Stein at the Federal Reserve Board has recently offered some answers (Stein (2014)), drawing on work by Feroli et al (2014). He notes that portfolio adjustments by asset managers can cause abrupt and asymmetric adjustments in risk premia which may have a significant impact on economic activity and systemic risk. On that basis, he makes a case for monetary policy leaning against financial market vulnerabilities, even when they are not sourced in leverage.

The evidence here is fully consistent with Stein's and Feroli et al's: the behaviour of unlevered asset managers may have the potential to induce pro-cyclical swings in portfolio allocation and in risk premia, with damaging consequences for systemic risk and economic activity. But whereas Stein discusses the role of monetary policy, a natural first line of defence against such swings is so-called macro-prudential policy.

It is early days for macro-prudential policy. It marks a radical departure from the past because it gives prudential tools an explicit role in managing the risk-taking cycle and activity in the wider economy (Haldane (2014)). To date, the focus of macro-prudential policy has been on the risks arising from leverage on the balance sheet of banks – the quantity of risk. That is why existing macro-prudential tools have tended to focus on bank capital and other bank balance sheet ratios.

Yet if risk in the financial system, and activity in the wider economy, are shaped importantly by asset management behaviour and associated pro-cyclical swings in risk premia, then this focus may be too narrow. Macro-prudential action may be justified even when leverage is not present and when banks are not at the scene of the crime. Modulating the price of risk, when this is materially mis-priced, could be every bit as important as controlling its quantity.

This is the next frontier for macro-prudential policy – whether, and if so how best, to moderate excessive swings in risk premia across financial markets which risk damaging the financial system or wider economy. This will require new analytical techniques to measure risk premia and their impact. And it will require fresh thinking on new policy tools to moderate movements in these risk premia. This is, in effect, an agenda for the second-generation of macro-prudential policy frameworks.

Third, *portfolio allocation*. Over the past few years, there has been increasing interest in the financing of long-term investment. In 2013, the G30 produced a report on "Long-term Finance and Economic Growth" and the European Commission produced a Green Paper on "Long-term Finance of the European Economy". Most recently, the G20 has this year taken as one of its signature projects stimulating longer-term investment.

All of this has a direct link to the portfolio choices of long-term savings institutions. Their behaviour over recent years, de-equitisation and all, jars uncomfortably with this emerging agenda. Financial capital, even among long-term institutional investors, has become restless at just the time the economy requires patience.

In response, a number of fledgling initiatives are underway which could begin to turn the tide. For example, a week ago the European Commission issued a second communication on long-term financing. Among the ideas in there are a reconsideration of the regulatory rules for banking (the Capital Requirements Regulation) to ensure they are not serving as a disincentive to long-term financing.

A second set of initiatives concern securitisation. The very word securitisation has become tainted by the crisis. Pre-crisis, there were too many examples of over-opaque, over-complex, under-collateralised products delivering nasty surprises to end-investors. But, slowly, the market is being rehabilitated and reconstructed in a different image, helped by public and private sector initiatives to improve transparency.

One element of this would be the creation of a new class of securitisations which clearly differentiate themselves from the mistakes of the past. A "high-quality" securitisation product might comprise much simpler structuring of payoffs and high and transparent underwriting standards. So-designed, such a lower risk securitisation might benefit from preferential regulatory treatment. Work is underway both internationally and in Europe to design criteria for high-quality securitisations fitting this bill. With international colleagues, the Bank intends to support actively these important initiatives.

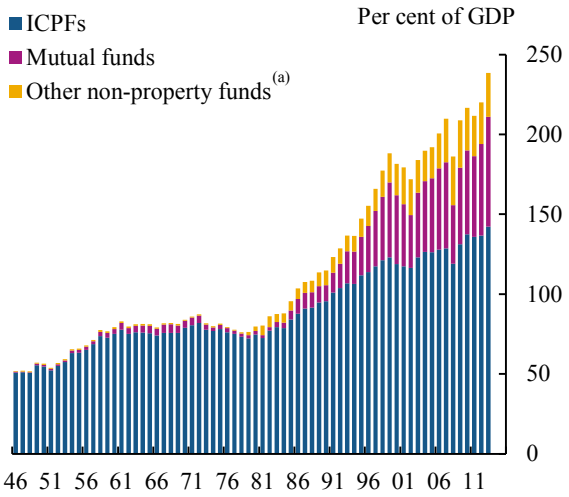
If successful, the prize for regulators and asset managers is a big one. For regulators, it would enable non-bank investors to do more of the heavy lifting when financing the wider economy. This is particularly important in Europe where, at present, companies are very bank-reliant for their financing. For asset managers, it would have the potential to offer both duration and yield, thereby helping them meet the needs of end-investors.

Conclusion

It is often said that banks are special. Compared to banks, asset managers generate a completely different risk and opportunity set. But they, too, are special both for the financial system and the wider economy. As they grow in scale and importance, that specialness is likely to increase further. The Age of Asset Management may be upon us.

Academics, practitioners and regulators have been studying banks, their behaviour and failure, for several centuries. Analysing and managing the behaviour of asset managers is, by contrast, a greenfield site. The risks and opportunities asset management poses, while different, could be every bit as important. To avoid the pitfalls of the banks, this greenfield site will need to be cultivated carefully.

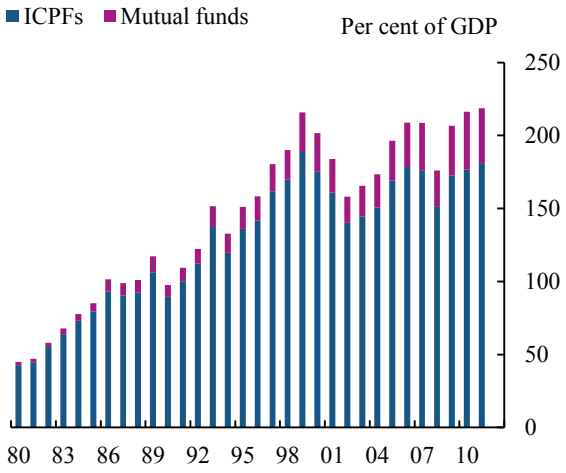
Chart 1 Total AUM of US insurance companies, pension funds, mutual funds and other funds, 1946 – 2013



Source: US flow of funds

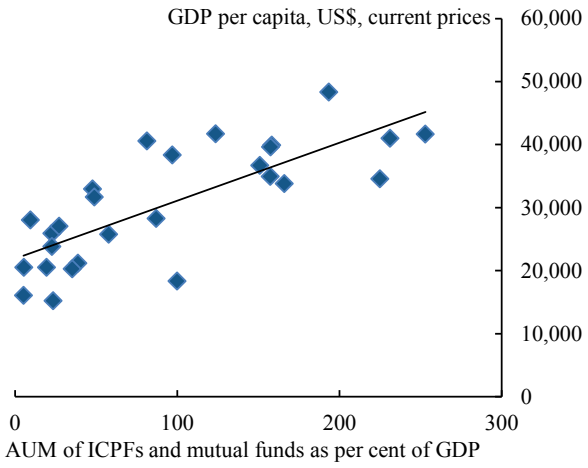
(a) Other non-property funds include closed-end funds, exchange-traded funds and money market mutual funds

Chart 2 Total AUM of UK insurance companies, pension funds and mutual funds, 1980 – 2012



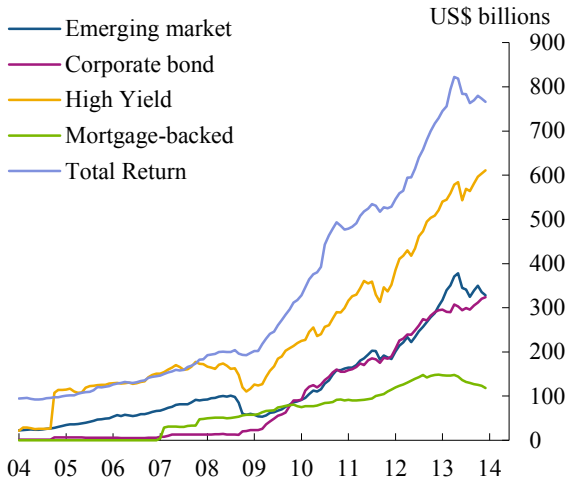
Source: OECD, ONS, Investment Management Association and Bank calculations

Chart 3 Relationship between GDP per capita and managed assets



Source: OECD Statistical database and Bank calculations.

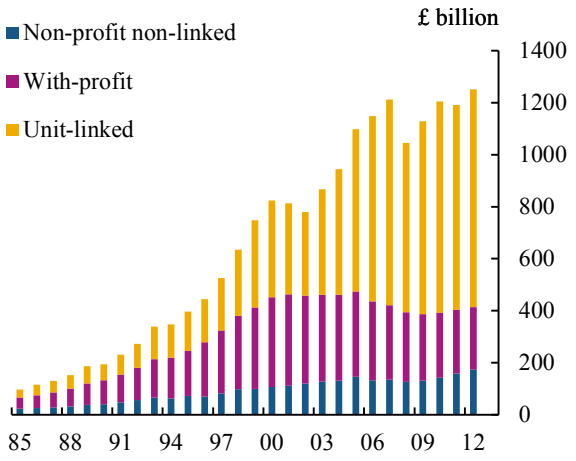
Chart 4 Global assets under management in selected specialised mutual fund types(a)



Source: Emerging Portfolio Fund Research Global and Bank calculations.

(a) Changes in assets under management may partly reflect changes in sample coverage.

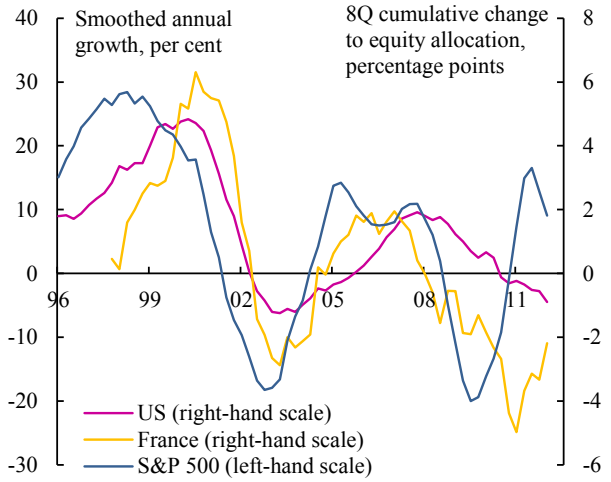
Chart 5 UK life insurance liabilities by type[(a)]



(a) Technical reserves net of reinsurance

Source: S&P SynThesys (regulatory returns) and Bank calculations.

Chart 6 Change in equity allocation of US and French life insurers over time[(a)]

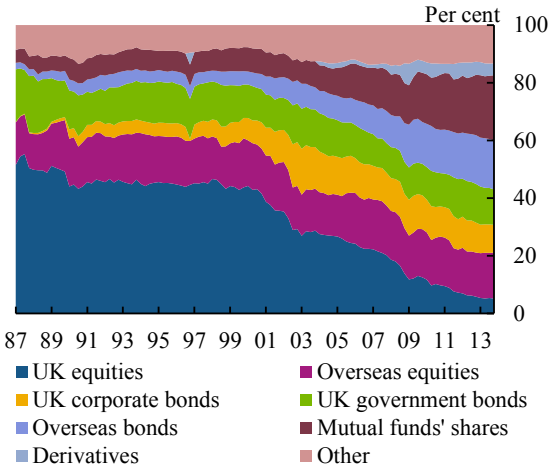


Source: National flow of funds

(a) The 8Q cumulative change to equity allocation is calculated using an 8 quarter moving-sum. Reallocation into equities is calculated as the difference between the allocation in equities at time t and allocation into equities at time t-1, measured in percentage points. Thus a negative number indicates a reduction in percentage allocation to equities, and may not indicate a reduction in total exposure to equities (if total flows have been large). Reallocation is calculated using data on quarterly flows into (or out of) equities in order to adjust for the impact of revaluation effects.

The S&P 500 is smoothed by taking the growth of the 8 quarter average on the 8 quarter average a year earlier.

Chart 7 Asset allocation of UK insurance companies and pensions funds



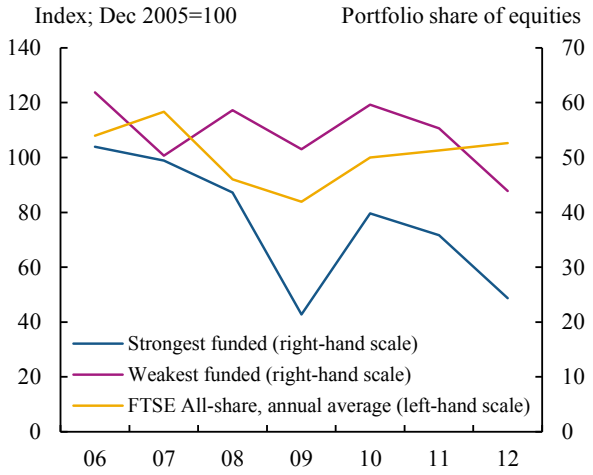
Source: ONS and Bank calculations

(a) Bonds includes money market instruments, medium and long term bonds. The split of overseas bonds by issuer is not available.

(b) Other includes currency, deposits, loans, other accounts receivable and insurance technical reserves.

(c) Derivatives data begin in 2004, but prior to 1997 are included in corporate bonds.

Chart 8 Portfolio share of equity of the UK DB PFs split by funding strength[(a)]



Source: Pension Protection Fund and Bank calculations

(a) The chart plots top 25% and bottom 25% funds each year given the strength of their funding positions. The funding position is calculated as a percentage of assets relative to liabilities, with higher percentage indicating a stronger funding position. The allocation to equities is taken as a proxy for the riskiness of a scheme (i.e. a higher allocation to equities indicating a more risky investment strategy). The sample includes all observations from the PPF dataset, for which the asset allocation reported was calculated in the reporting year or no earlier than 13 months prior to that. The values of asset holdings have been deflated using appropriate price indices for each asset class to illustrate the changes in asset allocation due to active re-allocation decisions rather than valuation changes

Table 1 Largest banks (by assets) and asset managers (by assets under management), end 2012

Bank	Country	Assets ($bn)	% of total	Manager	Country	AUM ($bn)	% of total
ICBC	China	2,789	2.5%	BlackRock	US	3,792	5.6%
Mitsubishi UFJ Financial	Japan	2,709	2.4%	Allianz	Germany	2,448	3.6%
HSBC Holdings	UK	2,693	2.4%	Vanguard	US	2,215	3.3%
Deutsche Bank	Germany	2,655	2.4%	State Street	US	2,086	3.1%
Credit Agricole	France	2,649	2.4%	Fidelity	US	1,888	2.8%
BNP Paribas	France	2,516	2.2%	AXA	France	1,475	2.2%
JP Morgan Chase & Co	US	2,359	2.1%	JPMorgan Chase	US	1,431	2.1%
Barclays	UK	2,351	2.1%	Bank of New York Mellon	US	1,385	2.0%
China Construction Bank	China	2,221	2.0%	BNP Paribas	France	1,303	1.9%
Bank of America	US	2,212	2.0%	Deutsche Bank	Germany	1,247	1.8%
TOP 10		25,154	22.4%	TOP 10		19,270	28.3%

Sources: The Banker Database “Top 1000 World Banks ranking” (2013), Towers Watson "The World's 500 Largest Asset Managers" (2012) and Bank calculations

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