

The changing incentive structure of institutional asset managers: implications for financial markets

MICHEL CARDONA
Banque de France

INGO FENDER
Bank for International Settlements

This article presents the principal findings of the Working Group on Incentive Structures in Institutional Asset Management set up under the aegis of the Committee on the Global Financial System (CGFS). These findings, which have recently been published in a report, aim to give the central bank community – and beyond that, the financial community – a better understanding of ongoing developments in the fund management industry and their potential implications for financial markets.

The report, based on a comprehensive literature review and extensive interviews with market practitioners, has identified various features and trends in the industry with a potential effect on the functioning of financial markets. However, as many of these effects are at least partially offsetting, the lack of reliable empirical evidence has not allowed the working group to come to a clear-cut conclusion on the aggregate effect of these various features and trends at the current juncture.

Still, one broad conclusion may be drawn from this report: ongoing and future developments in the fund management industry have the potential to change institutional behaviour in ways that can be important for financial markets. This relates to the general issue of preserving the diversity of investment behaviour, and partially results from the fact that parts of the institutional asset management industry have moved towards becoming a «commodity» industry offering investors more and more standardised investments products and approaches. Therefore, developments in the industry may require further attention by the financial community as a whole. More specifically, the report points to four broad areas where particular attention should be paid: risk management and disclosure, conflicts of interest, explicit and implicit barriers to market entry, and regulatory trade-offs.

NB: *Michel Cardona and Ingo Fender were Chairman and Secretary of the CGFS Working Group on Incentive Structures in Institutional Asset Management, respectively.*

Incentive structures – *i.e.* various features that have a bearing on decisions made by economic agents – and their impact on financial market developments are high on the agenda of those who are charged with or are otherwise involved in monitoring global financial markets. Against this background, institutional investors and the phenomenal price increases on world equity markets in the late 1990s have recently attracted particular attention.

The institutional asset management industry has grown substantially over recent years, becoming an ever more important part of financial markets, and its growth is expected to continue. As asset management activities involve a series of delegation processes, creating appropriate contractual structures is essential for aligning the incentives of those charged with the management of funds with the incentives of fund owners. As a result, structural changes in the industry, to the extent that they affect asset managers' incentives, are likely (and, in many cases, intend) to influence managers' decision making. Thus, they are bound to affect market outcomes and, potentially, market functioning. Ongoing industry trends have, therefore, an obvious

potential to change institutional “investors' behaviour” in ways that can matter for global financial markets¹.

Against this background, the Committee on the Global Financial System (CGFS), which monitors the stability of global financial markets for the G10 Governors, initiated a *Working Group on Incentive Structures in Institutional Asset Management*². To provide a foundation for its efforts, the Group started its work by surveying the relevant literature and conducting a small number of exploratory pilot interviews with investment consultants. The literature review informed the Working Group's discussions and highlighted several issues, such as the specifics of contract design for institutional asset managers and possible linkages between contractual relationships and asset managers' behaviour. These issues were further explored in two rounds of interviews with more than a hundred industry practitioners representing various sectors of the institutional asset management industry in fourteen countries. To ensure comparability of results, the Working Group employed a set of interview guidelines. This article summarises the Group's main findings, which have recently been published in a report³.

1 | Asset management: an evolving industry

1|1 Industry structure

The institutional asset management industry has become an important feature of modern financial markets, with the scale of this business readily apparent from the size of assets under management in various countries (see graph 1).

Furthermore, because the assets managed by the industry are strongly influenced by demographics, the industry's strong recent growth is expected to continue well into the foreseeable future.

Institutional asset managers are firms and professionals who construct and maintain investment portfolios on behalf of their clients, *e.g.* individual investors and companies. They are frequently categorised as *collective investment vehicles* (such as mutual funds, hedge funds), *pension funds* (*e.g.* defined contribution and defined benefit schemes) and *insurance companies* (life insurance). Assets under management include fixed income securities, equities and commercial real estate. See figure 1 for a stylised presentation of institutional investors and their activities.

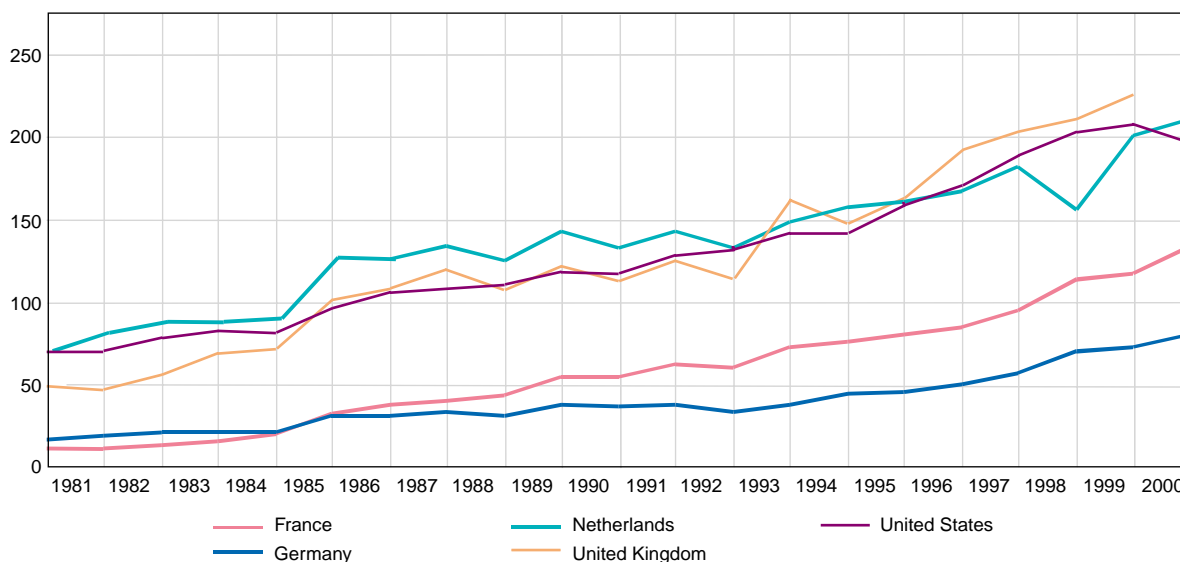
¹ See *Bank for International Settlements (1998)*

² In September 2001, the CGFS established a Working Group to learn more about the institutional asset management industry, with a view to enhancing the Committee's understanding of how various types of incentive structures affect asset managers' behaviour. The Working Group on Incentive Structures in Institutional Asset Management was chaired by M. Cardona of the Banque de France and comprised representatives from sixteen central banks (Reserve Bank of Australia, National Bank of Belgium, Bank of Canada, Banque de France, Deutsche Bundesbank, Hong Kong Monetary Authority, Banca d'Italia, Bank of Japan, Banque centrale du Luxembourg, De Nederlandsche Bank, Banco de España, Sveriges Riksbank, Swiss National Bank, Bank of England, Federal Reserve Bank of New York, European Central Bank) and a secretariat at the Bank for International Settlements.

³ The Working Group's report, CGFS (2003), can be downloaded at www.bis.org.

Graph 1
Total financial assets of institutional investors

(As a % of GDP)



Source: OECD

Figure 1: Stylised presentation of institutional investors and their activities

Type of institution/investor	Type of activity/responsibility			
	Owner of funds	Funds managed by	Monitoring and performance evaluation	Residual bearer of risk
Mutual funds (retail business)	Households	In-house asset manager	Investors, rating agencies	Households
Asset managers (Wholesale business)	Institutional investors	In-house asset manager	Investors, consultants	Institutional investors
Pension funds (defined benefit)	Plan sponsor	External asset manager	Trustees, consultants	Plan sponsor, beneficiary
Pension funds (defined contribution)	Beneficiary	External asset manager	Trustees, consultant	Beneficiary
Insurance companies	Insurance company	In-house or external asset manager	Insurance company, consultants	Insurance company, policy holder
Trusts/endowments	Trust/endowment	In-house or external asset manager	Trustees, consultants	Trust/endowment
Private investor/households	Households	Households	Households, rating agencies	Households

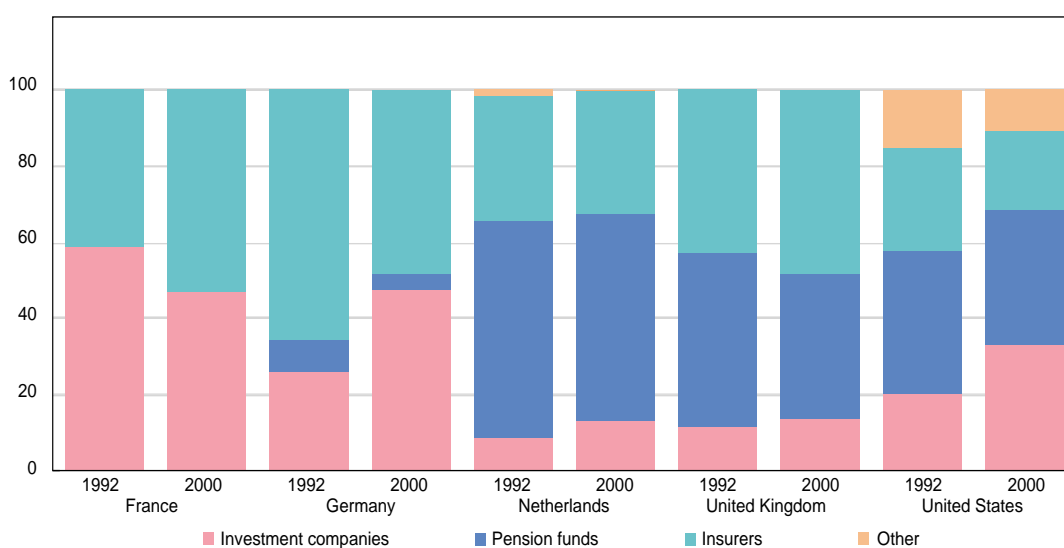
Source: CGFS (2003)

The world-wide growth of the institutional asset management industry, while being characterised by notable differences across countries, tended to be accompanied by a restructuring of the industry, that is, a changing importance of its main categories over time. It is worth noting that this evolution is not uniform across countries (see graph 2).

More importantly, this has also meant that, increasingly, the distinctions between these traditional categories no longer fully capture the most significant differences among industry players. Insurance companies, for example, have launched their own investment funds and have become involved in pensions provision, while banks are acquiring and launching money management and insurance companies.

Graph 2
Relative importance of industry sectors

(As a % of total financial assets)



NB: «Other» category defined as «Other forms of institutional saving, including foundations and endowment funds».

Sources: National data, OECD

1|2 Ongoing trends

While these changes have tended to blur differences among various industry sectors and despite continuing structural differences across countries, there are, nevertheless, a number of broad industry trends common to the entire institutional investor business.

First among these is *the increase in the number of distinct asset classes* available to investors. That is, the fact that the overall rise in professionally managed assets across industry sectors, both in absolute terms and as a share of overall financial wealth, was complemented by rising interest in non-traditional markets and instruments, including some recent growth in funds placed with unregulated asset managers and other alternative investment vehicles.

Another important trend is the *increasing popularity of “passive” management strategies*, i.e. index-based portfolios, which has been driven by the development of capitalisation-based benchmark indices and the recognition that, in the largest, most efficient markets, returns to information gathering are low and scale effects large. Until recently, these developments were further supported by rising stock markets, as passively managed portfolios presented a cost-effective way of assuming equity exposure in a bull market environment.

The third broad trend is the industry's tendency towards *increasing consolidation and specialisation*. Due to the scale economies⁴ involved in managing financial assets, particularly for closely-indexed funds, consolidation in the industry has been encouraged. In addition, increased indexing

⁴ Scale economies in fund management arise, for example, from the practice of crossing (i.e. the offsetting sale and purchase of assets by clients of the same asset manager) or from the fact that passive fund management avoids the possibility of churning (unnecessary trading activity to generate commissions), both of which will save transaction costs for the client.

– characterised by low fees – has also heightened pressures on assets under management by active fund managers, a tendency that has tended to reduce the fee income for the firms managing these traditional portfolios. As a result, intra-group concentration has also been pushed forward.

Finally, due to the industry's branching out into research-intensive and non-core asset classes, specialisation has been very pronounced among the remaining active asset managers. As a result, the number of highly specialised, non-traditional asset management firms has grown rather rapidly.

2| Industry features with a possible bearing on manager behaviour

The broad, underlying trends reviewed above, beyond their immediate impact on the industry and its structure, have tended to also be reflected in changing incentive structures for institutional asset managers (*i.e.* the contractual components that make up their incentive framework and the ways they are combined

with each other). These changes are, potentially, of particular importance for financial market outcomes, as they concern the core of the asset management industry, *i.e.* the separation between ownership and control of financial wealth (see box below).

Delegation, principal-agent relationships, and incentive structures

The separation between ownership and control of wealth implies that delegated asset management involves "layered" principal-agent relationships, for example between individual fund managers and the fund management firm and, in turn, the fund management firm and the ultimate investor.

The existence of these agency relationships, and costs from monitoring the agents charged with managing financial holdings, have encouraged certain contractual arrangements that seek to ensure prudent behaviour on the part of the asset manager. As differences across industry sectors imply differences in agency relationships, this will, at least in theory, imply very different, potentially complicated contractual relationships. In practice, however, investment mandates tend to be based on sets of simple, easily verifiable rules enabling the ultimate investor to monitor the asset manager, who is in turn operating within the boundaries of certain constraints. Fund management contracts, therefore, tend to be characterised by three core components, various combinations of which are used in an attempt to align incentives across agency layers. These are:

- a profit sharing rule/fee structure (*to align incentives in terms of returns for fund managers and owners*);
- a relative performance component measured against a benchmark (*to monitor performance, make returns comparable, and control for common uncertainty*);
- and checks on risk taking (*such as maximum allowable tracking error, reporting requirements and constraints on available investment choices*).

Several main developments can be identified and are covered below.

2|1 Tiering and narrowing of investment mandates

Historically, fund owners had left both strategic asset allocation and tactical decisions in the hands of fund managers. Over recent years, however, investment mandates have become more stringent as a result of a double shift:

- first, strategic asset allocation has increasingly been «delegated back» to owners of funds away from fund managers (*e.g.* the shift from defined benefit to defined contribution pension funds where, in principle, investors keep the discretion to choose the type of assets they invest in);
- second, at the tactical level, rules laid down in investment mandates have become more tightly defined and fund management mandates have become narrower (*e.g.* the increasing specialisation of investment strategies proposed to investors).

Overall, these tendencies have increasingly blurred the dividing line between active and passive mandates. This has led to sizeable amounts of funds that are being managed on a passive or near-passive basis and a tiering and narrowing of investment mandates, which is mainly characterised by:

- a move from traditional funds (broadly-based portfolios) towards more specialised mandates focused on specific asset classes and investment “styles”;
- the narrowing of permissible tracking error (*i.e.* the portfolios' return divergence) around a given market benchmark. These limits on deviations from performance targets are imposed by investors in order to control the level of risks taken by their asset managers; the lower the tracking error, the lesser the discretion for asset managers *vis-à-vis* the benchmark.

2|2 Relative performance measurement

Against the background of the tiering and narrowing of investment mandates, there have also been changes in the way managers' performance is measured. The main feature of these changes is the progressive shift from the use of peer group benchmarks towards the use of market indices. While the former measures the performance of a given fund against the performance of an explicitly defined group of peers (*e.g.* a category of funds investing in the same asset class and/or following the same investment “style”), the latter measures the success of a given fund manager relative to the performance of a given market, as defined by an established index.

During the Working Group's interviews, it was generally recognised that directly basing each fund manager's performance on the performance of a peer group of other fund managers is a potential recipe for copy-cat behaviour. The increased use of market indices as benchmarks of performance was therefore seen as an improvement. However, interviewees also stressed that, in the absence of counterbalancing effects, the combination of tight limits on tracking error and the use of only a relatively small range of core market indices might lead to convergence of investor behaviour, which might then affect market prices.

It was noted, for example, that overvalued assets/stocks tend to find their way into major indices, which are generally capitalisation-based and, thus, more likely to include overvalued securities than undervalued securities. Asset managers may therefore be forced to buy these assets even if they regard them as overvalued; otherwise they risk violating agreed tracking errors⁵. For the same reason, once a given asset is included in an index, scope for underweighting is also limited. Both effects together lead to a trade-off between the risk of increased tracking error and the risk of holding overvalued securities. The problem is most severe for more narrowly defined indices that may be dominated by a relatively small number of individual securities.

⁵ Alternatively, asset managers can be forced to sell assets they might have liked to hold on to in cases where benchmark indices, as is common with bond benchmarks, are based on rating-related criteria, such as the exclusion of sub-investment grade bonds. A downgrade to below investment-grade would thus remove the respective issue from the index, though with a certain lag, triggering a rebalancing of investment portfolios and the forced selling of the downgraded bond. Similar effects can occur if asset managers' mandates contain ratings-based investment constraints.

However, such effects may be subject to negotiation between asset manager and client, who might agree on some degree of customisation, *e.g. via* limits on particular assets.

2|3 Investment constraints

Furthermore, asset manager behaviour tends to be subject to regulatory or client-imposed investment constraints. The list of these constraints can be rather long, depending on the type of institutional investor and the regulatory environment it is operating in.

Constraints can include:

- limits on the holding of certain types of assets (*e.g.* equities, international assets, fixed income investments ⁶, or derivatives);
- mandated investments in specific securities (*e.g.* forced diversification rules);
- limits on certain investment strategies (*e.g.* limits on leverage or short-selling).

While such investment constraints aim to protect fund owners and help to align the incentives of individual wealth owners with those of their funds' managers, they also tend to limit the discretion left to the asset managers subject to these investment constraints. This, in turn, may affect overall investor behaviour to the extent that restrictions on asset managers' decision making on the tactical level are not compensated by more active strategic reallocations on the level of the individual investor. However, it is important to stress that not all fund managers are subject to such constraints; for instance, alternative fund managers tend to have more discretion in taking their investment decisions than other categories of fund managers.

2|4 Performance review and investment process

Regular performance reviews are known to potentially induce asset managers to shorten their investment horizons in the event of underperformance.

However, the criteria applied in selecting asset managers – notably by investment consultants – have begun to increasingly focus on reproducible investment processes and investment style consistency. That is, growing attention is paid to procedural aspects of the fund managers' activities (*e.g.* risk control, risk management) which are viewed as leading to reproducible performance. As a result, historical performance, although part of the evaluation process, is (at least in the wholesale business, which increasingly relies on consultants) no longer regarded as the sole driving factor in manager evaluations. On the one hand, this trend may have fostered higher uniformity among asset managers and the ways in which they execute their investment strategies (not to mention the increased use of portfolio management software packages). But, on the other hand, reliance on investment processes may help alleviate pressures on managers in time of underperformance that could result from frequent performance reviews. Indeed, the emphasis on defined investment processes may help investors realise that performance can be influenced by external events and may lead investors to assess performance over rolling multi-year periods, which would allow fund managers to maintain their investment strategy.

2|5 Performance-related compensation schemes

While explicitly performance-driven fee structures are on the decline ⁷, the industry (excluding hedge funds and other alternative investment vehicles, with their focus on absolute returns) increasingly favours compensation schemes in which management fees are a fixed percentage of assets under management, with fee levels differing across management styles and asset classes.

Although not performance-based as such, these schemes reward the relative performance of asset managers in an indirect manner, through fund inflows. That is, the best-performing fund managers are likely to attract new mandates or more mutual fund investments to manage, therefore increasing their fee income. Although indirect, this link between performance and fees is known to generate incentives for asset managers to react to recent portfolio performance. In particular, the fear that

⁶ It is common, for example, for fixed income investment mandates to limit a fund manager's investment choices to investment grade credits. This serves to limit monitoring costs, while defining a broad maximum level of risk for the portfolio. Ratings downgrades may therefore trigger mandated asset sales.

⁷ Industry practitioners tend to highlight possible adverse incentive effects inherent, in particular, in asymmetric performance fees. In addition, asset managers appear to have themselves actively discouraged explicit performance fees as these tend to induce high earnings volatility.

underperformance may lead to cash outflows or loss of mandates tends to create incentives to avoid positions that can result in large deviations from

portfolio benchmarks. That is, the nexus between performance, fund inflows and fees acts as an implicit incentive mechanism⁸.

3| Potential implications for the functioning of financial markets

The efficiency of financial markets relies on the capacity of certain investors to act on, and correct, seeming asset «pricing errors». Investors will tend to sell or short overvalued securities while taking an offsetting long exposure in close substitutes of these securities in order to hedge their risks. However, such arbitrage operations are inherently risky, as mispricings can become worse before disappearing. That is, even when prices ultimately converge with certainty, such trades may generate substantial temporary losses for the investor. Under risky arbitrage, therefore, efficient markets require the existence of investors with enough capital and sufficiently long investment horizons to maintain a given position until all available information is fully incorporated into prices⁹.

It is a traditional view to consider institutional investors to be well placed to play this role, as their existence is expected to favour a faster, more comprehensive and thorough investment process, ranging from improved information gathering and analysis to more consistent decision-making. According to this view, arbitrage by large institutional investors should, hence, stabilize asset prices by making sure that prices do not substantially deviate from fundamentals. Along the same lines, given their relatively long investment horizons, institutional investors would be expected to serve as structural providers of market liquidity, particularly in times of stress.

This, however, raises the question of whether there are features in the incentive structure of institutional asset managers that might affect the ability of these investors to use their size and, in principle, relatively long investment horizons to serve the various functions outlined above, thereby contributing to efficient and smoothly functioning financial markets. For example,

if the effective investment horizon of institutional investors were to be limited, prices may not converge early enough for their contrarian investments (*i.e.* risky arbitrage positions) to be sustained, which would prevent or delay the correction of any misalignments.

One often-cited theory of why this might happen is based on the observation that, in many cases, fund managers end up being evaluated against each other¹⁰. To avoid falling behind their peer group, they may then have incentives to herd, *i.e.* close an existing or refrain from establishing a new arbitrage position, to avoid the reputational risk of acting differently from their peers. Such effects can occur for portfolios that formally rely on peer groups in terms of reviewing performance, but can also be compensation-based, in case fee structures contain relative performance elements. Accordingly, fund managers can become most constrained precisely when they have the best opportunities to profit from contrarian positions, *i.e.* when the mispricing they are trying to adjust widens further. The fear of this happening will make asset managers more cautious in the first place, *i.e.* when putting on their initial trades. As a result, arbitrage-based incentives might be particularly ineffective in extreme circumstances (*i.e.* when the mispricing widens).

Against this background, the above-mentioned features of the institutional asset management industry offer a number of potential implications for financial markets, which fall into three broad areas. While the absence of fully convincing empirical evidence on each of these implications, including potentially offsetting effects, makes judgements on these issues difficult, it is still possible to single out a number of influences emanating from changing structural features in the asset management industry.

⁸ The rise of the so-called core-satellite approach illustrates all of the industry trends described above. Under this approach, institutional portfolios typically consist of a passively managed core component, where an active management strategy is deemed to promise only marginal risk-adjusted excess returns, and a peripheral component, which is meant to offer extra returns. The latter component, which may include a substantial portion of overall assets, is divided among actively managed, satellite funds specialising in particular asset classes. Active and passive mandates are strictly separated and, in many cases, handled by different asset managers.

⁹ See Shleifer (A.) and Vishny (R. W.) (1997)

¹⁰ See Scharfstein (D. S.) and Stein (J. C.) (1990)

3|1 Market efficiency and volatility

Implications in this area relate to institutional investors' incentives and their ability to engage in strategies that seek to profit from making informed judgements about long-term asset price relationships. Some of the ongoing developments suggest that this ability might be reduced, thereby *increasing the potential for market misalignments*:

- *investment mandates have become more stringent*. The combination of narrowing and tiering investment mandate, relative performance measurement against market benchmarks, standard compensation structures, and the tightening of allowable tracking error could discourage managers from taking contrarian positions;
- *benchmarks tend to be chosen from a limited number of established market indices*. In such a context, underperformance together with a comparable group of asset managers will tend to be less damaging than the risk of being singled out after a contrarian position fails to perform in the short-run. In addition, compensation based on relative performance can lead to a shortening of managers' effective performance horizons;
- *the increasing concentration of funds in specialised portfolios (e.g. single asset class portfolios) together with the tendency of individual investors to invest based on past performance* can give rise to mechanisms that might feed asset price momentum (e.g. new cash inflows in a particular assets class will tend to be invested with those managers adopting the investment style with the highest recent performance); these mechanisms may be amplified by possible feedback effects resulting from partially replicated benchmarks;
- market efficiency might also be reduced if *industry consolidation* and the associated consolidation of research activity were to affect the process of information gathering and aggregation performed by institutional asset managers.

These trends lead to the well-known hypotheses that first, ongoing industry trends might unduly affect aggregate market efficiency and volatility; and that

second, institutional investors might systematically contribute to large-scale asset price misalignments. At the same time, however, other developments suggest *counterbalancing effects* (i.e. trends reducing the potential for market misalignments):

- *the reduced reliance on peer-based benchmarks* (resulting in reduced incentives for copy-cat behaviour). Whether reliance on market benchmarks may result in similar copy-cat behaviour depends partially on how quickly fund underperformance feeds into fund withdrawals (this issue is further discussed in the report);
- *the increased number of asset class choices* broadens the range of investment strategies available to ultimate investors, a development that goes with the «retailisation» of asset management (i.e. the shift towards fund management for retail customers). Altogether, this might have reduced the potential for highly correlated investment behaviours;
- *the shift of responsibilities for strategic asset allocation* towards the owners of funds. The idea is that diversity of behaviours will tend to be enhanced, as large numbers of individual investors make independent investment decisions on the strategic asset allocation level;
- finally, the increased *emphasis on investment process* (quality of the decision making and managers' ability to stick to the agreed management style) may lead to lengthen or maintain effective performance assessment periods and help managers resist pressures due to short-term underperformance.

Given these at least partially offsetting effects, neither of the two hypotheses set out above has attracted clear-cut empirical support. It is, therefore, uncertain whether and to what extent changes to the incentive structure of institutional asset managers have affected their ability to counter asset pricing errors. Nevertheless, short-lived misalignments along these lines appear to be supported by observed data and certain idiosyncratic effects at the level of individual securities have been documented in empirical studies ¹¹.

¹¹ See, for example, Mitchell (M.), Pulvino (T.), and Stafford (E.) (2002), and Geczy (C. C.), Musto (D. K.), and Reed (A. V.) (2002)

3|2 Other potential implications

Market liquidity

A similar reasoning applies to any effects on market liquidity. While, in theory, trends in institutional asset management could constrain the behaviour of institutional investors in ways that might consistently limit their ability to provide market liquidity, the working group was not able to document such an effect. On the contrary, institutional asset management may have fostered issuance activity and securitisation in various non-core markets, with consequences for the relative trading liquidity of the respective assets. In addition, assets included in prominent market indices are likely to find their liquidity enhanced once institutionally managed funds, whose performance is benchmarked against these indices, include those assets into their trading activities.

4| Policy-related findings

In the light of the argument set out above and standing clear of more specific regulatory issues, a number of policy-related recommendations can be made. Many of these recommendations are, in turn, related to the general issue of preserving the diversity of investment behaviour and are based on the conclusion that ongoing and future developments in the fund management industry have the potential to change institutional behaviour in ways that can be important for financial markets.

A first implication is the need to ensure that, going forward, ongoing industry trends do not result in developments that could ultimately affect the functioning of financial markets.

Therefore, providing ultimate investors with as large a choice of potential investment vehicles and strategies as possible seems to be key in diversifying the behaviour of asset managers. This, in turn, calls for promoting an environment in which ultimate investors can take informed decisions about investment strategies and about how these strategies could best be implemented by asset managers. Against this background, a set of more specific recommendations arises, which fall into four broad and somewhat overlapping categories.

Risk management

In addition to these implications for overall financial market performance, several developments in the industry suggest an increasing emphasis on ultimate investor decision-making and risk-taking (e.g. the shift from defined benefit to defined contribution schemes or the trend towards specialised funds and away from broad-based funds). This, in turn, is likely to increase the structural demand for risk transfer instruments and guaranteed investment products. As a result, the need for risk management capabilities on the part of those offering such investment products would increase. Providers of such products would need to accurately assess the costs involved and to ensure correct pricing as well as put aside appropriate resources to reserve against possible losses.

Encouraging improved risk management and disclosure

Many of the trends highlighted above suggest that risk management demands on both the asset manager and household levels are bound to increase. Improvements in this area are therefore likely to be beneficial. In addition, benefits can be expected from enhancing the transparency of alternative investment vehicles, particularly when offered to retail clients. Similarly, the more risk is being transferred back to the final investor, the more important the need for asset managers to provide investors with clear information on the characteristics of the products they are offered.

Awareness of conflicts of interest

Potential conflicts of interest are an inherent feature of financial delegation processes. While transparency, disclosure and a competitive environment can go a long way in terms of restraining or avoiding conflicts of interest, certain features of the institutional asset management industry could potentially bias the decisions of ultimate investors. Against this background, the incentive structures of investment consultants, index providers, rating

agencies, and fund managers' sales networks are likely to gain more attention going forward ¹².

Avoidance of explicit and implicit barriers to market entry

To support market efficiency and liquidity, care should be taken to maintain an environment that encourages market entry by pooled investment vehicles in general and by specialised investment pools seeking to exploit arbitrage opportunities in particular. A similar reasoning applies to other parts of the institutional investment industry, particularly if characterised by a high degree of concentration and potential conflicts of interest.

Awareness of regulatory trade-offs

Regulatory actions and accounting rules can affect the efficiency and dynamics of financial markets. In addition, regulation can hamper market development by imposing constraints on the activities of institutional asset managers. Regulation, therefore, tends to involve a trade-off between the underlying rationale for regulating financial markets, *e.g.* investor protection, and the costs imposed on other market participants. Moves towards further regulation should therefore be carefully evaluated against the background of these trade-offs, while current regulation might be reviewed in the light of these effects.

¹² Recent research based on retirement savings plan data, for example, suggests that individual portfolio choices might be unduly influenced by the menu of funds offered to plan participants, which may result in inappropriate risk-return profiles. See Benartzi (S.) and Thaler (R. H.) (2001).

Bibliography

Bank for International Settlements (1998): "Asset prices and the asset management industry", *68th Annual Report*, Basel, p. 76-97

Benartzi (S.) and Thaler (R. H.) (2001): "Naive Diversification Strategies in Defined Contribution Plans", *American Economic Review* 91, p. 79-98

Committee on the Global Financial System (2003): "Incentive structures in institutional asset management and their implications for financial markets", Bank for International Settlements, Basel

Geczy (C. C.), Musto (D. K.), and Reed (A. V.) (2002): "Stocks are Special Too: An Analysis of the Equity

Lending Market", *Journal of Financial Economics* 66, p. 241-69

Mitchell (M.), Pulvino (T.), and Stafford (E.) (2002): "Limited Arbitrage in Equity Markets", *Journal of Finance* 57, p. 551-84

Scharfstein (D. S.) and Stein (J. C.) (1990): "Herd Behavior and Investment", *American Economic Review* 80, p. 465-79

Shleifer (A.) and Vishny (R. W.) (1997): "The Limits of Arbitrage", *Journal of Finance* 52, p. 35-55