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Macroprudential supervision: Hand-in-hand with long-term investors

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1. Introduction

The concept of macroprudential supervision and regulation has progressed in leaps and bounds in recent years: once nothing more than a piece of obscure specialist knowledge coveted by certain regulators, the idea has now become a much vaunted miracle cure that promises to ensure stability on the financial markets. Even the World Economic Forum has addressed the issue, publishing a short paper on the role of macroprudential supervision.[1]

This is hardly a surprising development. As monetary policy continues to flood the financial markets with liquidity, a trend that is expected to continue, at least in Europe and Japan, for the foreseeable future, concerns about the possible "side effects" of this policy are mounting across the board: there are growing fears that this cheap money will only sow new seeds of disruption on the markets and create price bubbles. In this sort of situation, macroprudential supervision and regulation, i.e. the targeted, market-wide use of regulatory tools to prevent systemic crisis, would appear to be a welcome *deus ex machina*. There are calls for a new division of labor: monetary policy would continue to focus on its main task, namely ensuring price stability – something that many monetary policymakers currently interpret as a battle against supposedly imminent deflation – and in the meantime, macroprudential supervision and regulation would tackle the unwelcome collateral damage by preventing bubbles from forming, for example on the bond and real estate markets.

It goes without saying that this sort of division of labor is destined to fail in the long run. The fact remains that not every bubble can be identified in good time and that not all measures will end up having the desired effect: rather, stringent regulations on certain transactions actually have the potential to nudge the business in question into "shadow territory" – a trend that can already be observed to a certain degree. In the long run, it will be impossible to secure financial market stability without monetary policy that gives interest rates the status they deserve as the measure of risk.

This does not, however, render macroprudential supervision and regulation a useless concept. It should, at the very least, manage to limit the scale of market distortions and create a greater awareness of excessive valuations among market participants. If this is to be achieved, however, it is crucial to understand macroprudential supervision and regulation in the broadest possible sense: not just as a correcting factor in the market that works *against* the position taken by the majority of market participants (the "herd", so to speak), but also as a policy that "urges" investors to make stability-oriented, sometimes contrary investments, to adopt positions that can be maintained even during turbulent times; basically, macroprudential supervision and regulation has to work *with* long-term investors. This sort of approach could turn macroprudential supervision into a natural ally of insurers and pension funds, in particular.

This is a relationship that would benefit both sides. For macroprudential supervision and regulation, long-term anchor investors play a crucial role in ensuring the stability of the financial markets. And for insurers and pension funds, a (reasonably) well-oiled macroprudential supervision system that could pick up on imbalances and excessive trends early on, thus preventing situations from developing into full-blown systemic crises, could restore some of that lost sense of security.

[1] World Economic Forum (2015).

After all, although not all of the contours of the new European financial market order have been clearly defined, a number of fundamental changes are already emerging: the idea of European government bonds as an investment that is as safe as houses is one that can now, in all likelihood, be considered obsolete; from now on, unsecured bank bonds are likely to switch back and forth between acting as debt securities and as equities. This will have an impact on how investments are selected in the future. First and foremost, however, it will mean that risk management will focus more on analyzing potential systemic distortions on the financial market. Insurers and pension funds will also have to adopt a macroprudential approach, which could make the European Systemic Risk Board (ESRB) a major partner.

But before this magical journey of friendship between insurers and macroprudential regulators can begin, two possible stumbling blocks have to be cleared away: the question as to whether insurers might not pose a systemic risk in themselves and, in a similar vein, the question as to how macroprudential and microprudential supervision interact. Avoiding inherent contradictions here is the name of the game.

These two aspects are discussed in greater detail below. First of all, however, we want to provide a brief overview of the role played by insurers and pension funds as investors on the European financial market, and the role they played during the crisis. At the end of the paper, we will summarize the main conclusions and provide a glimpse into the future of macroprudential supervision.

2. Insurers and pension funds as capital donors for sovereigns and banks

Insurers and pension funds in the euro area rank among the biggest institutional investors on the European financial market. Their total assets currently amount to around EUR 9 trillion (as at the end of 2014).[2]

Two features are characteristic of the investment behavior of insurers and pension funds: a pronounced *home bias* – around two-thirds of investments originate from the domestic market, with only 10% being invested outside of the euro area at all – and a strong preference for bonds, which make up around 40% of these assets.

Within the "bond" asset class, two issuers come to the fore: banks and sovereigns, which account for a combined total of around 80% of the bonds held (based on euro-denominated bonds). In turn, this makes insurers and pension funds some of the biggest creditors of these two issuers. They hold around 20% of the government bonds issued by the eurozone countries and just under 14% of the bonds issued by banks (both secured and unsecured).

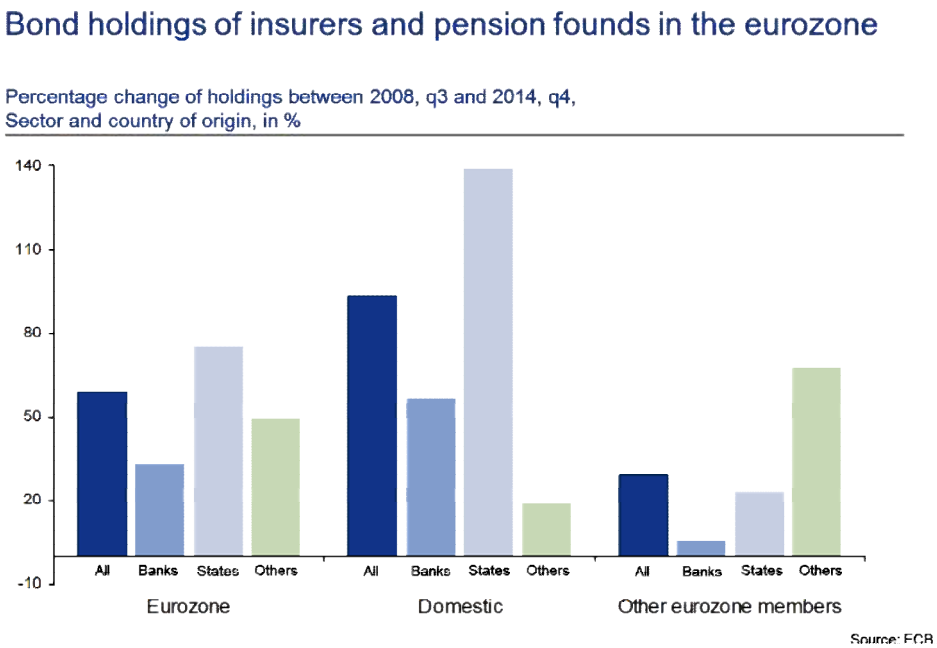
But it is not just the sheer size of their investment portfolio that makes insurers and pension funds a special investor group. The stability of their investment behavior, even in times of crisis, also sets them apart. By way of example, investments in eurozone bonds have risen by a total of 58% since the third quarter of 2008, which marked the collapse of Lehman Brothers. In the 25 quarters that have passed since then, a slight downward trend in investments has only been observed four times in total, in each case triggered by the need for valuation allowances on individual stocks (e.g. Greek government bonds). What is particularly astounding is that sovereigns and banks, which

[2] For these and all other figures, see ECB, Euro area insurance corporation and pension fund statistics und ECB, Insurance corporations and pension funds in the euro area, in: ECB, Financial integration in Europe, pp. 43 – 54.

were ultimately to blame for the crisis, also benefited from this increase, gaining 75% and 33% respectively. So on the whole, insurers and pension funds are still worthy, even in turbulent times, of their reputation as reliable and long-term investors.

At second glance, however, we can, of course, see that insurers and pension funds also did a bit of portfolio juggling during the crisis. This is confirmed by the following chart, which looks at the euro bond portfolio in greater detail, broken down by issuer and country of origin.

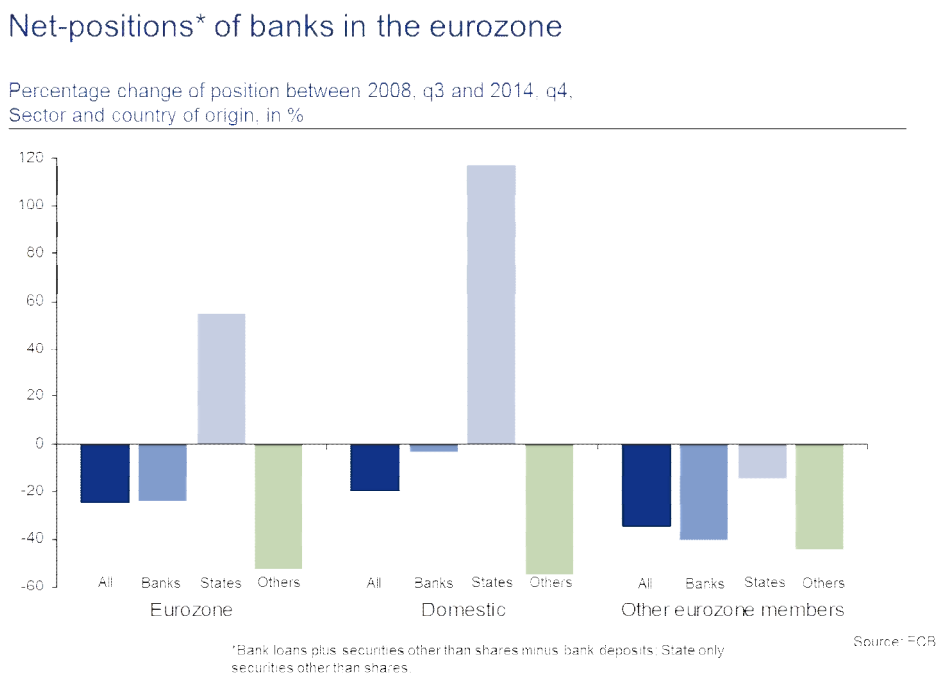
Chart 1: Insurers and pension funds: increasing *home bias*



Clear shifts can be seen in respect of both the country of origin and the sectors to which issuers belong. Let us start by looking at bond countries of origin. Since Lehman, insurers and pension funds have been focusing more on domestic issuers, a development that comes as little surprise. So it is all the more interesting to see that, during the same period, insurers and pension funds continued to increase their non-domestic euro bonds, albeit at a subdued pace; this trend even applies to bank bonds. This is in stark contrast to banks in the euro area themselves, which have slashed net lending to foreign euro banks by 40% since Lehman, playing a key role in the fragmentation of the European financial markets[3]. (see Chart 2) All in all, the shift of focus among insurers and pension funds in favor of their domestic markets cannot (yet) be described as dramatic: the proportion of foreign euro bonds has dropped back from 55% to 44% over the past six years.

[3] Between October 2008 and the end of 2014, cross-border net lending to banks in the euro area fell by around EUR 340 billion. This reversed half of the progress made in terms of financial market integration since the launch of the euro.

Chart 2: Banks: *Deleveraging*



At eurozone level, there is little change to speak of when it comes to issuers: while the proportion of government bonds in the portfolio increased ever so slightly, bank bonds lost out to the same degree; other issuers (i.e. neither sovereigns nor banks) were just about able to maintain their share of a good 18%. This overall trend, however, masks the fact that developments at home and abroad moved in completely opposite directions. On the domestic market, the portfolio share occupied by other issuers dropped by five percentage points to under 10%, with insurers and pension funds focusing clearly on bank and, in particular, government bonds when making investment decisions.[4] A look at the other eurozone countries tells a different story: here, there is a clear trend towards deliberate investment diversification, with corporate bonds, for example, benefiting more than most: the proportion of issuers that are neither sovereigns nor banks has risen by seven percentage points to just under 30%. So it is clear that, while insurers and pension funds remain keen on euro bonds outside of their domestic market, they have become more selective in their choice, also in respect of government bonds.

A comparison with bank lending practices in the post-Lehman era is also revealing: banks have cut their lending to non-banks (i.e. including sovereigns) in other eurozone countries by 30% or EUR 360bn since Lehman. Developments in the period leading up to the end of 2014 are even more revealing of the scale of this trend, as the situation has already eased again somewhat in recent months. This applies in particular to government bonds: in the two or so years between the manifest outbreak of the Greek crisis (April 2010) and Draghi's famous "Whatever it takes" speech of July 2012 alone, banks reduced their foreign euro-denominated government bond holdings by 44% or EUR 290bn.

[4] A more in-depth analysis of the significant preference for domestic government bonds, in particular, extends beyond the scope of this paper. Given the phenomenon of "financial repression", which is currently the topic of much debate, this would not, however, seem to be an entirely unproblematic development. The figures could be seen as an indication that, in some places, insurers and pension funds are being used as "captive investors" to stabilize the market.

This comparison of bank behavior lends further credence to the theory that insurers and pension funds acted as anchors of stability during the crisis.[5] Even in turbulent times, when the risk of European monetary union disintegrating was considered to be much higher, they remained visibly committed to the idea of an integrated cross-border financial market. Unlike banks, they did not make any rash decision to retreat back behind their borders.

3. Insurers as a systemic risk?

The fact that insurers have had a stabilizing influence in recent years does not, however, mean that they can rest on their laurels. Although financial crises usually follow a similar script, the main protagonists tend to change. Insurers have already experienced this first-hand. The fact that they were able to avoid hefty losses during the most recent crisis is partly also thanks to the painful lessons they were forced to learn when the "tech bubble" burst at the start of the last decade. These lessons prompted insurers to beef up their risk management systems considerably – a move that is now paying off.

There is another factor at play here, too: the paradigm shift that is emerging in terms of how crises are managed. Sovereigns and banks were at the center of the European debt crisis. Nevertheless, their creditors have escaped largely unscathed – with the exception of cases like Greece, and those of Icelandic and Cypriot banks. The risks were transferred to the public sector – primarily via the EFSF/ESM rescue funds and via the ECB. This method of crisis management at taxpayers' expense was largely the result of ad hoc measures that cannot be repeated due to their financial and political costs. So the efforts to establish a more stable eurozone architecture are aimed not only at preventing future crises, but also at putting other rescue mechanisms in place to ensure that, should such crises arise, burdens are spread more widely ("fairly"). In other words: creditors will have to expect to bear a much larger chunk of the costs associated with combating crises in the future. Instead of a *bail-out,* the buzzword of the future could be *bail-in*.

This has a knock-on effect on insurers and pension funds, too: in the new world of inclusive crisis management, might it not be the case that they actually end up exacerbating financial crises?[6] This is a crucial point, because one of the most important lessons learned from the financial crisis is that systemic crises do not originate from a single event and the resulting losses, but rather from the collective market reaction to this event, commonly referred to as "contagion". The Lehman Brothers insolvency was not the cause of the systemic crisis that ensued, but merely a catalyst. The systemic crisis emerged because the uncertainty created by the collapse of Lehman triggered a market run on banks. Anyone who wants to prevent future systemic crises has to be able to prevent this run, not the insolvency that preceded it. After all, insolvencies should (once again) be a constituent element of any functioning market economy. The challenge lies in dealing with insolvencies, from their announcement to the realization of any assets, in a way that does not give rise to panic. The behavior of insurers and pension funds, one of the largest investor groups, plays a key role in this respect.

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[5] See also the ECB: "[…] the ICPF sector [insurance corporations and pension funds] was a stabilizing factor within the financial sector during the crisis […]", in: ECB, Insurance corporations and pension funds in the euro area, in: ECB, Financial integration in Europe, p. 46.

[6] The question as to whether insurers themselves might be able to trigger a systemic crisis is not addressed here in any further detail - this question has already been answered extensively, and with a resounding "no", in several studies: the tenor here is that insurers do not pose any systemic risk insofar as they are involved in the conventional insurance business. AIG failed because it was involved in activities similar to those of an investment bank, which serves to confirm the rule. Cf. e.g. The Geneva Association, Systemic risk in insurance, The Geneva Association, Considerations for identifying systemically important financial institutions in insurance, International Association of Insurance Supervisors, Insurance and financial stability.

So the decisive question that macroprudential supervision has to answer is: could the future financial collapse of a bank (or a state) conceivably trigger a large-scale exit from this asset class by insurers and pension funds? There are three reasons why the answer to this question is "no".

First of all, insurers and pension funds are long-term investors that can only liquidate their positions early if they are prepared to accept hefty losses.

The investment decisions made by insurers and pension funds are *liability-driven*, i.e. they invest in long-term assets to cover their long-term liabilities. This means that a "run" on a certain asset class is only possible by liquidating long-term positions before they mature – which automatically sends prices plummeting, resulting in major losses. This is a completely different matter to the "traditional" runs of short-term investors, such as bank depositors and money market funds, which can reduce their investment without incurring any losses, e.g. by withdrawing their deposits or opting not to roll over commercial papers (as they otherwise would).

Secondly, insurers and pension funds cannot, in turn, be forced by their creditors to liquidate positions: there is no such thing as an "insurance run".

The regular premium payments made by policyholders mean that the investments made by the insurer to cover the latter's insurance benefits are *pre-funded*: so insurers' investments are not "leveraged". The insurance benefits themselves, i.e. the payments made to policyholders, are linked, in the P&C insurance segment, to the occurrence of a specific event, which generally does not correlate with a financial crisis, e.g. accidents, natural catastrophes and the like. There is only a link, and even then only a *potential* one, in a few smaller lines of insurance such as credit insurance or D&O insurance (liability insurance for managers). This means that the possibility of large-scale payment obligations arising in reaction to a financial shock (e.g. a bank insolvency) can be ruled out in the P&C insurance segment due to the nature of the business and the structure of the policies.

In the life insurance segment, this is at least a theoretical possibility, because policyholders have the option of terminating life insurance policies prematurely. This sort of early termination does, however, go hand-in-hand with considerable deductions, meaning that policyholders who exercise this right have to forgo a large portion of their savings income. This explains why life insurance cancellation rates are consistently low, coming in at less than four percent in Germany for years now, irrespective of any economic and financial turbulence. The vast majority of cancellations are motivated by personal reasons such as unemployment or divorce, as opposed to being a reaction to a financial crisis.

Third, even in the (unlikely) event of an individual financial shock causing an insurer to become insolvent, there would be no chain reaction in the insurance sector.

The liquidation of an insurer is an unspectacular process that does not result in any increased strain on other companies in the sector. Insurers are far less interconnected than banks are, even if reinsurers are included in the equation: less than five percent of global gross written premiums are passed on to reinsurers. Most importantly, however, past experience has shown that insurers can be liquidated as part of an orderly process

that does not result in any turbulence. Although a "run off" can last years due to the long-term nature of the business, this is also precisely the reason why there is no contagion, for example via distress sales.[7]

These considerations lead to only one conclusion: even in the future, insurers will not act as crisis catalysts, but will continue to take on the role of shock absorbers. They do not create any systemic risk and their behavior does not serve to exacerbate financial shocks.

4. Interplay between macroprudential and microprudential supervision

In their role as institutional investors, insurers and pension funds should benefit from macroprudential supervision and regulation. Greater financial market stability is in their fundamental interest. As investors with a long-term focus, which tend to hold their investments until they reach final maturity, they do not reap any benefits from temporary price hikes. Insurers and pension funds are interested in reliable and regular cash flows, not in quick wins from market excesses. A world without boom and bust cycles would make their investment decisions much easier.

But it works the other way round as well: macroprudential supervision benefits from the existence of predictable long-term investors. Anchor investors like these can make a considerable contribution to financial market stability. Consequently, macroprudential supervision should have a vested interest in further strengthening this role played by insurers and pension funds.

This is where the concept of microprudential regulation, which is currently being completely revamped in Europe under the banner of Solvency II, comes into play. Solvency II aims to achieve something of a quantum leap in the further development of insurance supervision, implementing a full, cohesive and strictly rule-based regulation concept. As this in turn implies difficult and complex details, the introduction of the system has been repeatedly postponed. Despite these difficulties, however, the general superiority of a systematically rule-based approach to calculating solvency requirements should not be called into question. This is the only way to set the right incentives for measuring and managing risk.

Naturally, however, there is also a risk of misdirected incentives. Exaggerated capital requirements are just as likely to distort investment decisions as excessively low risk weightings are. Unfortunately, the Solvency II provisions are not without their flaws in this respect.

The fact that euro-denominated government bonds, for example, are still to be classed as generally risk-free as standard, even after the Greek crisis, no longer reflects the European reality. The clear preference given to sovereign debt – which is similar to that set out in the regulatory provisions for banks (Basel III) – could be seen as a subliminal form of financial repression: institutional investors are required to buy government bonds in order to keep interest rates low and, as a result, to keep sovereign debt affordable.

If nothing else, however, the provision does include a positive reference to the role these investors have to play in keeping the financial markets on an even keel. Forcing institutional investors to make an exit from government bonds would only throw things out of kilter, particularly in the current situation. This is not a desirable situation in the

[7] For detailed information on the liquidation of insurance companies, see, by way of example, Geneva (2015).

longer term, either – and hopefully it will not be necessary, because, especially in the eurozone, there is now a dense institutional network in place to prevent any excessive trends in this area, i.e. rampant government debt. Nevertheless, the fact that state regulators are imposing more lax risk management requirements on sovereign debt than they are on other asset classes leaves something of a bad taste in the mouth.

A potentially positive effect on financial market stability cannot, on the other hand, be construed for other problematic Solvency II provisions. This applies, in particular, to the consistent discrimination against long-term investments: the longer the term, the greater the increase in capital requirements. This is both illogical considering the business model of insurers and pension funds (which hold their investments to maturity) and counterproductive in terms of achieving stability. The regulations provide insurers with an incentive to invest more in short-term stocks; the duration gap between liabilities (policyholder claims) and receivables (fixed assets) ends up widening. This is a rather questionable approach, even if we just consider the stability of individual companies. When it comes to the stability of the financial market as a whole, the implications could be much more serious.

This short-term bias could ultimately mean that the main debtors of insurers and pension funds, namely banks and sovereigns, are, in turn, forced to take out shorter-term financing. This would then blatantly contradict the objectives of the bank regulatory system. But most importantly, it would make destabilizing runs on individual asset classes all the more likely in the future. After all: the shorter the term, the easier it is to exit a market. The dramatic upheaval witnessed on the US commercial paper market in 2007/08 serves as a good example of this.

This sort of scenario would also undermine the "shock absorber" role played by insurers and pension companies. Shorter terms not only clear away some of the obstacles standing in the way of an exit, they also make an exit all the more compelling from a risk perspective, because they limit the ability to "sit out" temporary valuation losses on volatile markets.

As a result, there are glaring inconsistencies between these regulatory provisions and the objective of greater financial market stability, meaning that these inherent contradictions between macroprudential and microprudential supervision should be resolved. Both sets of rules can only bear fruit in full if they are coordinated and do not counteract each other in the background. The view that financial market stability means more than the sum of individual companies that are stable in themselves does not appear to have been given adequate consideration in the drafting of the microprudential regulatory provisions. And this despite the fact that the most recent financial crisis only served to show that supposedly generous capital buffers offer scant protection in the event of a systemic crisis. True stability can only be achieved if the interplay between individual behavior patterns and its impact on the market as a whole is also considered.

As a result, macroprudential supervision should not merely be seen as a form of ex-post market supervision that is aimed at pinpointing possible distortions as early on as possible and standing in their way. Rather, in order to be successful, the objectives of macroprudential supervision have to be included in the provisions at micro level, i.e. incentives have to be designed in such a way that the resulting behavior remains focused on general financial market stability. This is the "categorical imperative" of financial market stability.

5. Summary and outlook

Insurers and pension funds have high hopes when it comes to macroprudential supervision. As long-term investors, they are natural allies in the battle to ensure the stability and security of the financial markets. Effective and successful macroprudential supervision makes it easier for them to make investment decisions and to manage risk in challenging financial market conditions.

Smooth interplay between microprudential and macroprudential supervision and regulation, however, is a prerequisite in order to achieve this. The shock-absorbing role played by insurers and pension funds – one that they have impressively demonstrated over the course of the latest euro crisis – should not be jeopardized by the new Solvency II regulations, and efforts should be made to ensure that measures that help to stabilize the system are not put at a disadvantage. Within this context, the increasing capital requirements for long-term investments, in particular, are not appropriate.

In the future, it might also be possible to further intensify the relationship between macroprudential supervision on the one hand, and long-term investors like insurers and pension funds on the other. Whereas today's understanding is that macroprudential supervision is aimed primarily at preventing excessive trends by making certain forms of investment – for example property loans or loans denominated in foreign currencies – more difficult, the opposite could be applied to long-term investors: targeted relief and incentives for assuming risks in order to stabilize the markets. Today, this role is one performed by the central bank alone.

The biggest enemy of financial market stability is the sheep-like behavior of investors. As long as the markets are characterized by a plurality of investment ideas and styles, they are immune to any one-sided excesses. Nevertheless, euphoria and panic can turn a heterogeneous group of investors into a homogenous mass. Contrarian investors are crucial for maintaining a sense of equilibrium on the markets, or indeed restoring it in the aftermath of a shock. The experience of the financial crisis has shown that a "bet" against the prevailing market opinion can certainly prove beneficial in the long run. In some cases, the fad of branding certain investments "toxic" has proved to be just as short-lived as their previous reputation as a "safe investment".

It goes without saying, however, that this sort of active macroprudential supervision would also give rise to new problems. Measures aimed at exerting a positive influence over the markets by creating incentives to buy start to increasingly resemble the *price keeping operations* (PKO) (ab)used by state banks and pension funds in countries like Japan in the past to prop up the stock market. As is currently the case with monetary policy, it would then no longer be possible to rule out a scenario in which macroprudential supervision becomes increasingly politicized in order to achieve certain market results.

So for the time being, the focus should be on creating macroprudential supervisory structures and regulatory tools that actually work. The system must be in a position to perform two key roles:

- Protection and promotion of long-term investors as a sort of insurance against pro-cyclical sheep-like behavior on the part of investors

- Prevention of inherent contradictions with other regulatory regimes, i.e. including stability objectives in supervision and regulation at micro level, too

Under a system of macroprudential supervision and regulation that works *hand-in-hand* with long-term investors, the system's natural allies in the quest to achieve stable financial markets, insurers and pension funds would rank among the clear winners of the new European supervisory architecture.

6. Literature

Committee on the Global Financial System, Fixed income strategies of insurance companies and pension funds, CGFS paper, 2011.

ECB, Insurance corporations and pension funds in the euro area, in: ECB, Financial integration in Europe, Frankfurt am Main 2011, pp. 43 – 54.

ECB, Euro area insurance corporation and pension fund statistics, http://sdw.ecb.europa.eu/reports.do?node=1000002773.

Haldane, Andrew, Rethinking the financial network, Bank of England 2009.

International Association of Insurance Supervisors, Insurance and financial stability, 2011.

Klein, Robert, Principles for Insurance Regulation – an evaluation of current practices and potential reforms, The Geneva Papers on Risk and Insurance, GPP/IIS Awards Edition, 2011.

Liedke, Patrick/Monkiewicz, Jan (ed.), The future of insurance regulation and supervision – a global perspective, Palgrave Macmillan 2011.

Swiss Re, Facing the interest challenge, sigma 4/2012.

The Geneva Association, Systemic risk in insurance – an analysis of insurance and financial stability, Geneva 2010.

The Geneva Association, Considerations for identifying systemically important financial institutions in insurance, Geneva 2011.

The Geneva Association, US and Japan Life Insurers Insolvencies Case Studies – Lesson Learned from resolution, Geneva 2015.

World Economic Forum, The Role of Financial Services in Society. Statement in Support of Macroprudential Policies, World Economic Forum 2015.

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